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# Investigation of service provision for children with cochlear implants

Tara Ann Gjerstad  
*University of Iowa*

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INVESTIGATION OF SERVICE PROVISION  
FOR CHILDREN WITH COCHEAR IMPLANTS

by  
Tara Ann Gjerstad

A thesis submitted in partial fulfillment  
of the requirements for the Master of  
Arts degree in Speech Pathology and Audiology  
in the Graduate College of  
The University of Iowa

May 2011

Thesis Supervisor: Professor J. Bruce Tomblin

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Graduate College  
The University of Iowa  
Iowa City, Iowa

CERTIFICATE OF APPROVAL

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MASTER'S THESIS

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This is to certify that the Master's thesis of

Tara Ann Gjerstad

has been approved by the Examining Committee  
for the thesis requirement for the Master of Arts  
degree in Speech Pathology and Audiology at the May 2011 graduation.

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To my parents, Jay and Marlys Gjerstad who have loved and supported me throughout the years. I love you.

Every one of us is different in some way, but for those of us who are more different, we have to put more effort into convincing the less different that we can do the same thing they can, just differently.

Marlee Matlin  
Deaf actress

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## ABSTRACT

*Objective.* As a result of newborn hearing screenings, an increasing number of infants are being identified with a hearing loss at birth or within a few months of life. The literature supports that early identification in conjunction with early intervention services have led to drastic improvements in speech and language outcomes for children who have received a cochlear implant (CI). The purpose of this study was to investigate the amount, type, and quality of services that young children with CI(s) are receiving.

*Methods.* Participants in this study included 22 teachers of the deaf/hard of hearing (T/DHH), 7 speech-language pathologists (SLP), and 4 early childhood interventionists (ECI). All of the service providers were serving at least one child with a CI(s) at the time of the study. Three on-line service provider surveys were modified from the *National Early Intervention Longitudinal Study (NEILS)* in order to address the concerns and interests of service provision for children with CIs. The three surveys addressed the birth-3, preschool, and school-age populations.

*Results.* Results from the birth-3 and preschool populations with CIs were analyzed. The school age population was not analyzed due to the low response rate from that age group. Findings from this study revealed that the T/DHH is the primary service provider for the birth-5 population with CIs. In addition, other service providers (i.e. SLP, ECI) reported that they do not feel completely comfortable working with the CI device (i.e. troubleshooting, utilizing the Ling Six Sound test). Another area of concern was the child's compliance in wearing the CI on a full-time, daily basis. Collaboration and education among professionals and the families of children with CIs must be stressed in order for early intervention services to effectively facilitate the child's speech, language, and educational development.



*Conclusion.* The results revealed characteristics specific to both the child (i.e. services the child has received in the past 6 months as part of his/her intervention program) and the service provider (i.e. amount of professional education concerning children with CIs). More research, however, is needed in order to assess the relationship between the amount and quality of service provision and the child's speech and language performance to ensure that children with hearing impairments are receiving appropriate early intervention services.

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## INTRODUCTION

Research has shown that there are two major factors that contribute to age-appropriate developmental speech, language, and cognitive skills as well as social and emotional development for children with hearing loss. These two factors are early identification of the hearing loss and implementation of early intervention services. This past year, the Early Hearing Detection and Intervention (EHDI) Act of 2010 was signed into law by the federal legislature and addressed these two factors explicitly. Within this law, amendments to the public health service act as well as the definition of “early intervention” were revised. One such revision was to ensure that there would be “an adequate supply of qualified personnel to meet the screening, evaluation, and early intervention needs of children (NEILS, 2011).” Inclusion of quality service provision is of particular interest in the current study.

At the state level, Iowa requires universal newborn hearing screenings and mandatory reporting of the hearing results (screening, re-screening, diagnostics) to the Iowa Department of Public Health for any child under the age of 3 (Iowa, 2011). In addition, national statistics have shown that approximately 120 children in Iowa are born each year with a permanent hearing loss. If these children are not identified until after 6 months of age, their language skills at 3 years of age will be half that of their normal developing peers (Iowa, 2011). Clearly, early identification of the child’s hearing loss is one major factor in the child’s ability to acquire normal language development. While it is important to identify all types and severity of hearing loss, children who have a severe-profound hearing loss and are candidates for cochlear implantation will be investigated in the current study.

The literature has revealed that early intervention services, the second major factor, are crucial for children with hearing impairment. In 1998, Yoshinaga-Itano, Sedey, Coulter, and Mehl found that children with hearing loss who were identified early

and received early intervention services had significantly better language development than those who were identified later. Because the two groups of children (early identified and later identified) did not significantly differ on several other variables commonly associated with language ability in deaf and hard-of-hearing children, the difference in language development was attributed to the age at identification and enrollment in early intervention services. In addition, the authors of this study argued that identification of the hearing loss alone is unlikely to lead to improved language development unless it is followed by early intervention services (Yoshinaga-Itano et al., 1998). Because the first year of a child's life is crucial for normal language development, previous studies have found that children who are identified and receive early intervention, including hearing aid usage during the first 6 months of the child's life, will "significantly increase the level of language development, speech intelligibility, and emotional stability as compared with children with later identification and intervention" (Waltzman & Roland, 2005, p. 487). With the advent of universal newborn hearing screening in place and the reported evidence for the social and linguistic advantages of early intervention, the service provision model for children with cochlear implants (CIs) must be closely evaluated.

For the past couple of decades, cochlear implantation has been a method of auditory (re)habilitation for children and adults with profound sensorineural hearing impairment. A cochlear implant (CI) consists of an electrode array that is surgically inserted into the cochlea. Acoustical signals are picked up by an external microphone and transformed into electrical signals, which are then sent to the electrode array. The array stimulates the auditory nerve, in effect replacing the transducer function of damaged hair cells in the cochlea. Through this stimulation, most individuals with CIs have awareness of sound, usually demonstrate audiometric thresholds in the mild hearing loss range (20 to 40 dB HL), and have improved speech understanding and the ability to orally communicate. With advances in technology and early identification, there are new

opportunities, as well as challenges, that lie ahead for the child, the family, and the team of professionals who provide services to these children (Waltzman & Roland, 2005).

In order for children who receive a CI to get the maximal benefits, it will require intensive listening and spoken language facilitation. In most settings, the teacher of the deaf/hard of hearing (T/DHH), the speech-language pathologist (SLP), and/or the early childhood interventionist (ECI) are the key professionals who possess the knowledge and skills to provide this facilitation.

One way to begin to understand the dynamics involved in facilitating speech and language skills for this population and to educate the public on the types of services that these children are receiving is to administer questionnaires to service providers. A recent study conducted by Compton, Tucker, and Flynn (2009) surveyed the preparation and perceptions of school-based SLPs working with children with CIs. A questionnaire, *University of North Carolina Greensboro Survey of Professionals Working with Children Wearing Cochlear Implants*, was distributed to 190 school-based SLPs serving school-aged children with CIs. The survey included 4 sections: 1) Demographics; 2) Preparation and Training; 3) Profiles of caseloads and clients/students; 4) Resources. In regards to the SLPs' confidence in managing CI technology or providing services to children with CIs, the study found that the majority (79%) of SLPs reported that they had little or no confidence in managing CI technology or providing services to children with CIs. This study sheds light on the need for SLPs to become more confident in providing services to the growing number of young children receiving CIs. This study also acknowledged the need for administering surveys to other professionals (i.e., T/DHH) who work closely with the child in order to evaluate the professional(s) that will best serve this population and identify any areas of improvement across and within professions.

Due to the limited amount of research available and the evidence of the positive impact that early intervention services have for children with a hearing impairment, we determined that further investigation concerning the services provided for young children

with CIs was needed. The current study aims at investigating the amount, type, and quality of services that young children with CIs are receiving. An on-line service provider questionnaire was modified from the *National Early Intervention Longitudinal Study* (NEILS) in order to specifically address the concerns and interests of service provision for children with CIs. The parents of 27 children with CIs, birth to five years of age, signed a consent document that allowed the research team to contact the child's service provider(s)—the T/DHH, the SLP, and/or the ECI. Three surveys which addressed the birth-3, preschool, and school-age populations were created in order to assess characteristics specific to both the child (i.e. services the child has received in the past 6 months as part of his/her early intervention program) and the service provider (i.e. amount of professional education concerning children with CIs).



## METHODS

### Instrument Development

#### NEILS

The *National Early Intervention Longitudinal Study* (NEILS) is a longitudinal study that began in 1998 and documented the effects that early intervention services had on children with various disabilities and their families (NEILS, 2003). This study followed more than 3,338 children from early intervention to early elementary school. The NEILS study included information about the characteristics of children and their families, the services they have received, and the outcomes that they have experienced. Five different data collection instruments were created in order to obtain information about each child and the child's family. The instruments included: a family interview via the telephone, a service record questionnaire, a service provider survey, a program director survey, and a kindergarten teacher survey. The instrument that is of interest in this study is the service provider survey. Questions about the service provider's background, training, and service delivery were documented. The NEILS service provider survey was modified for the Outcomes for Children with Hearing Loss (OCHL) study to address children with a mild-moderate hearing loss. Subsequently, the OCHL survey was then modified for the current study to address the population of children with a severe-profound hearing loss who wear a cochlear implant.

#### OCHL

In 2009, the NEILS service provider survey was adapted by the Outcomes of Children with Hearing Loss (OCHL) study for purposes of collecting information from service providers on children with mild-to-severe hearing loss. OCHL is a longitudinal study which examines the constellation of factors that support the development of speech, language, cognitive, and psychosocial skills for children with mild-to-severe hearing loss.

In the realm of service provision, the OCHL study investigates the amount of variation and effectiveness in services provided to children with hearing aids. The data collected will enable investigators to determine barriers to service access or other factors that may hinder the auditory and/or linguistic experiences that are critical for this subgroup of children in an educational setting.

The surveys used for OCHL underwent extensive modification from the original NEILS service provider survey in order to make the questions specific and relevant to children with hearing loss. These modifications included adding information about the service provider's caseload, personal preparation, and professional experience in working with children with hearing aids. Additionally, questions about the family's knowledge and confidence regarding their child's hearing aid and FM system were added to the survey. Questions such as the number of years the service provider was involved in early intervention services and information regarding the Individualized Family Service Plan (IFSP), for example, remained the same. However, questions concerning the amount of paid and unpaid hours of work in early intervention services, for instance, were removed from the modified OCHL survey as they were not relevant to the specific aims of the OCHL project. After the initial modifications were made, the survey underwent layers of peer review and was pilot tested with service providers at test centers in Omaha, NE, Chapel Hill, NC, and Iowa City, IA. The service providers' input was then used to make the final modifications to the survey.

The original NEILS service provider survey consisted of 27 questions that were presented in an open and closed format of the multiple choice and Likert-scale type. The survey was divided into the following four sections: 1) client; 2) early intervention services provided by the service provider; 3) local area; and 4) demographic information about the service provider. After OCHL's modifications, the service provider survey was divided into three separate surveys based on the age of the child: 1) birth-3 years; 2) preschool; and 3) school age. Each service provider survey (SPS) yielded a total of

approximately 51 questions divided into 10 sections. These sections include: 1) indentifying information; 2) services provided; 3) service frequency, participation, and location; 4) current caseload; 5) personal preparation, 6) professional experience, 7) family-centered practices, 8) professional role with the child, 9) hearing aid and FM use, and 10) family's knowledge and confidence regarding hearing aids and FM systems.

### Current Study

For purposes of this study, the OCHL project's version of the SPS were further modified by the primary investigator and two other members of the University of Iowa Hospitals and Clinics (UIHC) Cochlear Implant Team to be relevant for children with CIs. Modifications primarily consisted of replacing the term "hearing aids" with the term "cochlear implants" and removing options that were specific to hearing aids (e.g., loaner hearing aids) and thus not applicable to our particular population. After consulting with audiologists at the UIHC who regularly see these children, it was decided to include questions concerning a FM system as they indicated that some children may be using FM systems at home or in school.

After careful review and analysis of the three versions of the SPS from the OCHL study, an additional three surveys for the same age groups were designed to assess the services provided for children with CIs. The surveys included approximately 50 questions divided into the same 10 sections identified in the OCHL study's SPS. The questions were presented in open and closed formats, including multiple-choice and Likert-type scales. Likert-type scales were used for questions relating to professional experience. Multiple-choice and fill-in-the blank formats were used for all other sections. See Appendices B-D for versions of the cochlear implant SPS.

### Test Procedures and Protocols

Another important modification from the original NEILS survey was the method in which the surveys were collected. NEILS collected paper-based surveys via the USPS

mail. OCHL, on the other hand, created three on-line versions of the surveys using the website, websurveyor.com. Service providers for the OCHL study were notified about the study via the USPS in which they were sent information about how to access the on-line survey. This on-line format was preferred in order to facilitate easier completion of the surveys by the service provider and to augment a more efficient return rate.

For the purposes of our study, the same distribution format as the OCHL study was used. Three on-line surveys were collected and analyzed through websurveyor.com (survey.uiowa.edu). Websurveyor, created by Vovici, is a free on-line tool for building, distributing, collecting and analyzing web-based surveys. Features of this tool include: MS office style interface, question library, response templates, and HTML display templates. All surveys were coded using a numeric identifier that was specific to each child. For example, the code “CIXX020B” was used to indicate the following: the child had a cochlear implant (CI), the child’s initials (XX), the number of children in each subgroup (020), and birth-3 years survey (B). The other codes used to identify which survey was filled out on the child’s behalf included “P” for preschool and “S” for school age. This system was designed in order to ensure confidentiality of the children’s identity and to systematically organize the data for later analysis.

### Participants

#### CI Children

Initially 34 children were identified who met the qualifications to participate in this study. These children were chosen based on their chronological age and current participation in the University of Iowa cochlear implant research project. Because all of the children in this study were under the age of 18, the parents were contacted in order to obtain consent for release of information about their child. This allowed the research team to contact the child’s service provider. Parents were contacted directly during a scheduled clinic visit or indirectly via the USPS mail. The parents received a letter which

explained the study and the extent of their child's participation. The parents were also sent an IRB approved informed consent document which outlined their child's rights as a research subject. By signing this document, the parent(s) were consenting to have their child participate in the study. The child's participation was limited to obtaining permission to gather information from the service providers. Once the consent document was signed, the child's participation was complete. In addition, the parents were asked to sign an authorization for release of information to the UIHC Cochlear Implant Project. This form granted the research team permission to obtain information about the child from their service provider. A pre-addressed and pre-stamped envelope were enclosed along with a note explaining which papers to keep for their record and which ones to sign and return, if interested in participating.

All of the parents who did not return the two forms after two weeks were contacted via phone or e-mail. After three unreturned messages, no further attempts were made and the child was dismissed as a possible study participant. Six children were dismissed due to unreturned phone and/or e-mail messages. Of these six children, two families indicated that they had misplaced the consent forms and new forms were sent immediately. However, both of these children were dismissed after an additional three unreturned phone and/or e-mail messages. One additional child was dismissed from the study after the parents indicated that the child was not receiving any services. Thus, of the 34 children who were eligible to participate, the IRB informed consent document and the consent to obtain information document were retained for 27 children. Table 1 (see Appendix A) illustrates the demographic characteristics of the 27 children who were eligible to participate in this study.

#### Service Providers

A total of 42 service providers were identified to participate in this study. The service providers were primarily identified via parent report. However, only 9 of the 27

parents who were contacted were able to provide both the name of the service provider(s) and the complete address of the agency or school for which the provider(s) worked.

Therefore, further investigation by the research team was conducted in order to find the names and addresses of the providers serving the additional 18 children. The names were searched primarily via the on-line Area Education Agency (AEA) and employee statewide directories as well as the UIHC cochlear implant database. After the search was completed, 42 providers were found to be appropriate candidates for this study.

Each identified service provider was sent a letter which explained the purpose of the study, the child's name for which they were identified as providing services, the URL address to the on-line survey, and the child's identification code. Each code was unique to the child and was used to access the on-line survey. The letter also described the information regarding the confidentiality policy and explained that by choosing to complete the survey they were consenting to participate in the research study. If service providers chose not to participate in the study, they were given instructions on how to have their names removed from participation. If there was no response from the provider after 10 days upon receiving the letter, they were contacted in order to inquire about their interest in participation. Additionally, the signed consent form for release of information from the parent was included with the letter outlining the study.

Of the 42 identified service providers, 7 provided services for more than one child in this study. A total of 49 letters were sent to the identified service providers with an overall return rate of 40 surveys, or an 82% response rate. Seven professionals completed more than one survey for different children with a total of 33 professionals participating. Of the service providers who did not complete the survey, one provider reported that she was no longer providing services for that particular child; one provider had recently moved out of the state; one provider reported that the child was not receiving any services; and the remaining six providers failed to return phone calls and/or email messages in regard to their participation. Participants in this study included 22

teachers of the deaf/hard of hearing, 7 speech-language pathologists, and 4 early childhood interventionist specialists. All service providers were from Iowa except two who provided services from another state.

## RESULTS

The results were analyzed separately for the birth-3, preschool, and school age surveys. Responses to the surveys were filtered and analyzed through the report generating function in websurveyor. A separate HTML version of the analysis was generated for each group of identified professionals for all three versions of the survey. Due to the low response rate of the school age survey (responses from one SLP and one ECI), results were not further analyzed as it was determined that it would be difficult to make generalizations based on the response from only two service providers.

The results from the birth-3 and preschool surveys were first analyzed with all three types of service providers—SLPs, T/DHH, and ECIs—in order to reveal facts about the service characteristics for these populations. Next, the surveys were filtered by profession in order to analyze the provider characteristics separately. The median was chosen as an appropriate measure of central tendency to best represent the data from the two surveys. This measure was preferred over the mean because the distribution of responses to the surveys contained a significant amount of variance, which often skewed the mean. The results from the birth-3 and preschool surveys are documented below. The children with a CI in the birth-3 survey will be referred to as “birth-3” and the children with a CI in the preschool survey will be referred to as “preschoolers.”

### Birth-3 & Preschool SPS

#### Services Provided

The professionals who participated in this study indicated that both the birth-3 and preschoolers were currently enrolled in early intervention services with the majority of children receiving public services (82.4% and 93.1%, respectively). The median length of time it took for early intervention services to begin after the child received his/her cochlear implant was 1 month with a range of 1 to 4 months for birth-3 and 1 month, with



a range of 1 to 12 months, for the preschoolers. Results shown in Figures A1 and A2 indicate that the primary service provider is the T/DHH for the majority of children in both cohorts (59% and 79%, respectively). However, the primary service provider chosen the least for birth-3 was the ECI (12%) and the SLP (7%) for preschoolers. In addition, service providers reported that in an average month, services were provided for birth-3 approximately two times per month for 45 minutes. On the other hand, preschoolers were reported to receive services more frequently at eight times per month for 45 minutes.

### Cochlear Implant Use

The service providers confirmed that all of the children in this study had received a CI. However, the amount of time the child was wearing the CI varied considerably between the two groups of children. Figure A3 shows a breakdown of the frequency that the birth-3 population was wearing his/her CI and Figure A4 shows the breakdown for the preschool population. The service providers for the birth-3 population reported that over half of the children (63%) were wearing his/her CI on a full-time, daily basis. However, 31% were removing their device periodically throughout the day and 6% resisted the CI even being placed on his/her head. There doesn't seem to be as much of a compliance issue with the preschoolers in that 78% are reported to easily accept the CI and are wearing it on a full-time, daily basis. The remaining 22% were reported to remove their device periodically throughout the day and no child was reported to completely resist wearing the CI.

### Family's knowledge and confidence regarding the CI and

### FM

Service providers were asked to assess the family's knowledge and confidence regarding the child's CI and FM system. In regards to the CI, service providers reported that the majority of parents of birth-3 and preschoolers felt both knowledgeable (88% and

67%, respectively) and completely confident (81% and 68%, respectively) in managing their child's device (Figures A5-A8). Based on these results, it appears that the families in the birth-3 cohort felt more knowledgeable and confident about managing their child's CI than families in the preschool cohort.

In regards to the FM system, the service providers for the birth-3 and preschoolers indicated that most of the children are not using an FM system at home (88% & 91%, respectively). Therefore, questions regarding the family's level of knowledge and confidence in managing their child's FM system were not applicable.

#### Development of the Individualized Family Service Plan (IFSP) and Individualized Education Plan (IEP)

A variety of questions concerning the development of the IFSP/IEP and level of family involvement were included in the survey. Figure A9 illustrates the distribution of responses concerning the amount of progress the birth-3 population has made in the past 6 months towards outcomes specified in their IFSP. Providers could choose from the following five options: 1.) Achieved more goals than expected. 2.) Achieved about as many goals as expected. 3.) Achieved fewer goals than expected. 4.) Don't know. 5.) Prefer not to answer. Providers reported that about half of the birth-3 population (52%) were making as much progress as expected in the past 6 months and 18% were making more progress than expected. Similarly, Figure A10 shows the breakdown of the providers' responses concerning the amount of progress the preschoolers have made in the past 6 months towards outcomes specified in their IEP. It was reported that 36% of preschoolers were achieving more goals than expected, twice that of the birth-3 (i.e. 18%) group. In addition, 26% of preschoolers were achieving as many goals as expected. Questions specific to the IEP were also investigated that pertain to the preschool population only. It was reported that the majority of preschoolers (87%) were primarily eligible to receive services for reasons specifically related to their CI device. In addition,

Figure A11 shows the frequency that formal speech and language assessment measures were taken. Service providers indicated that 48% of preschoolers had their speech and language skills formally assessed more than once a year and 35% of preschoolers had their skills assessed 1-2 times per year. Only 13% of preschoolers were reported to have their speech and language abilities formally assessed every 3 years or more and 4% of service providers preferred not to answer.

### Service Provider Characteristics

The following sections of the survey were specific to the provider's professional and personal characteristics and were subsequently analyzed by profession. First, the SLPs characteristics will be revealed followed by the T/DHH, and finally the ECI.

#### Speech-language Pathologist (SLP)

##### Current Caseload

A total of five SLPs completed the birth-3 SPS and two SLPs completed the Preschool SPS. The SLPs serving the birth-3 population reported that they were serving a median of 51 children, with a range of 20-52 children. The median number of children reported to have a CI on their caseload was 3 children, with a range of 2-4 children. In contrast, the SLPs serving the preschoolers reported that they were serving an average of 16 children, with a range of 2-30 children. The mean number of children reported to have a CI on their caseload was 5 children, with a range of 1-9 children. It should be noted at this time that the mean, rather than median, was used to interpret the data from the two SLPs serving the preschool population. This was chosen as a more appropriate measure of central tendency due to the number of SLPs who participated.

##### Personal Preparation

In regards to education, all seven SLP's indicated that they have received a master's degree in speech-language pathology and were certified in the area for which

they were currently employed. All of the SLPs indicated that they have received additional professional education concerning children with CI(s). The five SLPs serving the toddlers indicated the following: 1) a day-long workshop/short course and “personal research”; 2) one-two weeks of specialized instruction; 3) one-two weeks of specialized instruction and “self-learned instruction”; 4) a half-day in-service, day-long workshop/short course and 5.) a half-day in-service. The two SLPs serving the preschoolers indicated that one had attended a half-day inservice and the second had participated in a semester-long course.

### Professional Experience

In regards to their professional experience, the birth-3 SLPs reported that they have worked in early intervention for a median of 27 years, with a range of 6-29 years. The questions were slightly different for the preschool survey in that the SLPs were asked to indicate the number of years that they had worked with a preschooler with a CI, rather than the number of years they worked in early intervention. The two SLPs reported that they had worked with a preschooler with a CI for an average of 5 years, with a range of 2-8 years. The SLPs were also asked to indicate their level of comfort related to working with children with A CI in regards to a variety of speech and language areas. Their comfort level was measured using an ordinal scale of none (0), very little (1), moderate (2), and expert (3). According to figures A12 and A13 both groups of SLPs do not feel comfortable troubleshooting the hearing device and using the FM system effectively. In addition, the SLPs serving the preschoolers indicated that they are not comfortable using the Ling Six Sound test or in the development of the child’s sign language skills. The SLPs indicated that their highest level of comfort (i.e. “expert”) was in developing the child’s oral skills, carryover of speech/language activities to the home, promoting early literacy, and assessing speech and language development.

In regards to the frequency of communication with other professionals, the SLPs serving birth-3 indicated that they communicate with the child's audiologist 3-4 times/year and "other" service providers "frequently." When asked to specify the frequency, responses varied from "weekly" to "monthly" to "bi-monthly" to "at the visits." On the other hand, the SLPs serving the preschoolers indicated that they communicate less frequently with the child's audiologists (i.e. 0-2 times/year) and "other" service providers (i.e. 3-4 times/year).

### Teacher of the deaf and hard of hearing (T/DHH)

#### Current Caseload

Eight T/DHH completed the Birth-3 survey and reported that they served a median of 16 children on their caseload, with a range of 7 to 22 children. Fourteen T/DHH completed the preschool survey and reported that they served a median of 12 children, with a range of 6-60 children. They also reported that 3 children with CIs, with a range of 2-20 children, would be on their typical caseload. Children in both cohorts (birth-3 and preschoolers) were reported to have received a CI.

#### Personal Preparation

Figures A14 and A15 shows the breakdown of the highest degree earned for both groups of T/DHH. The service providers indicated their degree from a list of choices which included: Associate's degree, Bachelor's degree, Master's degree, Doctoral degree, Other, and Prefer not to answer. The majority of T/DHH serving both birth-3 and preschool indicated that their highest degree earned was a Master's degree. In addition, all of the T/DHH who completed the birth-3 survey indicated that they received their degree in the area of education of the deaf and hard of hearing. Interestingly, two of the ten also indicated that they received their degree in special education and one indicated speech-language pathology. Eleven out of the fourteen T/DHH who filled out the

preschool survey reported that they earned their degree in the area of “education of the deaf and hard of hearing.” Of those eleven, eight indicated additional areas for which they earned their degree. Three indicated early childhood education, one indicated early childhood education and early childhood special education, one indicated special education, and three indicated elementary or general education. Interestingly, the three individuals who did not specify “education of the deaf and hard of hearing” chose “speech-language pathology” and one indicated “with an emphasis in oral deaf education.” All of the T/DHH reported that they are certified in the area for which they are currently employed.

In regards to professional education, all 22 T/DHH indicated that they have participated in additional educational opportunities for working with children having a CI. First, six of the eight birth-3 T/DHH reported that they had participated in a day-long workshop or short course. Of those six, four had completed “other” educational experiences that were not included on the survey (i.e. on-line classes, year-long classes, multiple workshops, etc.). In addition, two of the eight indicated that they had only completed one-two weeks of specialized instruction.

Next, the 14 T/DHH who participated in the preschool survey reported that 9 had participated in day-long workshops or short courses. In addition to completing a day-long workshop or short course, these nine providers also checked the following options: half-day in-services (n=3), one-two weeks of specialized training (n=2), a semester-long course (n=3), and “other” educational opportunities (i.e. on-going webinars, conferences, etc.) (n=1). Three additional T/DHH specified only “other” and two clarified what this opportunity was. One indicated that she had attended a 6-week full-day training at the Children’s Hospital in Philadelphia and the other specified that she had specialized in cochlear implants while completing her Master’s degree. Lastly, two T/DHH specified they had attended a half-day in-service along with a day-long workshop and “other” education.

## Professional Experience

In regards to professional experience, the birth-3 T/DHH reported that they have worked in early intervention for a median of 19.5 years, with a range of 2 to 38 years. The preschool T/DHH also reported that they have spent a median of 5 years, with a range of 2 to 20 years, working with preschoolers with a CI. The T/DHH indicated their level of comfort related to working with children with a CI in a variety of speech and language areas. Their median comfort level was measured using an ordinal scale of none (0), very little (1), moderate (2), and expert (3). Figures A16 and A17 illustrate these results. Both groups of T/DHH indicated moderate-expert levels of comfort on all speech, language, and hearing tasks for a child with a CI. Unlike the SLPs, these results show that the T/DHH feel completely (“expert”) comfortable in most tasks specific to the child’s hearing impairment (i.e. utilization of the Ling Six Sound test, developing auditory curricula). The areas in which the two groups of T/DHH differed included the following: using FM effectively, daily checks of the CI, carryover of speech activities to the home, and developing sign language skills. The birth T/DHH indicated an “expert” comfort level in all of those areas whereas the preschool T/DHH indicated a “moderate” comfort level.

In regards to the service provider’s communication with other professionals, all of the T/DHH reported that they communicate with the child’s audiologist and “other” service providers “frequently.” When asked to specify the frequency, responses ranged from weekly to monthly.

## Early Childhood Interventionist (ECI)

### Current Caseload

One ECI completed the birth-3 survey and reported that she served a total of 6 children, all with a cochlear implant(s). In addition, three ECIs completed the preschool

survey and reported that they typically served 47 children, with a range of 15-50 children. A median of 2 of these cases was reported to be with a child with a CI.

### Personal preparation

In regards to education, the birth-3 ECI indicated that the highest degree she earned was her Bachelor's degree in the area of education of the deaf and hard of hearing. In contrast, all three preschool ECIs reported that a Master's degree was the highest degree they had earned. All three also indicated that they held a license in speech-language pathology. In addition, all of the ECIs stated that they were certified in the area for which they were currently employed.

Three of the four ECIs reported that they had participated in additional professional education concerning children with a CI. These experiences ranged from half-day in-services to semester-long courses to "other" opportunities not otherwise specified. More specifically, the birth-3 ECI reported that she had completed a variety of educational opportunities. These experiences included: half-day in-service, day-long workshop or short course, one-two weeks of specialized instruction, a semester long course and "other" professional education which was not otherwise specified. Additionally, the three preschool ECI reported the following: one had participated in a half-day in-service, one indicated "other" education, and one "preferred not to answer."

### Professional Experience

In regards to professional experience, the birth-3 ECI reported that she has worked in early intervention for 1 year and the preschool ECIs reported that they have worked with preschoolers with a CI for a median of 5.5 years. Figures A17 and A18 illustrate the ECIs median level of comfort when working with a child with a CI during speech, language, and hearing tasks. Comfort level was measured using an ordinal scale of none (0), very little (1), moderate (2), and expert (3).



The birth-3 ECI reported that she felt she was an “expert” in all of the areas specific to the cochlear implant device (i.e. troubleshooting device, utilization of Ling Six Sound test, daily checks of the CI, etc.). She also indicated that she was completely comfortable (“expert”) in assessing the most appropriate communication approach, developing the child’s sign language skills, designing appropriate intervention goals, and incorporating language development into daily activities.

The preschool ECIs, on the other hand, indicated a median level of “very little” comfort in all of the areas specific to the cochlear implant device. They did, however, feel “moderate-expert” level of comfort in expanding the child’s vocabulary and incorporating language development into daily activities through toys and play activities. It may be noted again that the results from the birth-3 ECI reflect the comfort level of only one ECI and therefore these results cannot be generalized to all ECIs serving children aged birth-3 with a CI.

In regards to the service provider’s communication with other professionals, the birth-3 ECI reported that she communicates with the child’s audiologist and “other” service providers at least once monthly or every other month. In contrast, the preschool ECIs indicated that they have less frequent contact with the child’s audiologist, only communicating a median of 1-2 times/year. Communication with “other” service providers such as the itinerant teacher, early childhood special education (ECSE) teacher, classroom teacher, and sign language interpreter were typically held on a weekly basis. <sup>1</sup>

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<sup>1</sup> The complete Birth-3, Preschool, and School Age Services and Provision Surveys are located in Appendices B-D, respectively.

## DISCUSSION

This study examined two surveys designed for service providers of the birth-3 and preschool population with CIs. The school age population was not analyzed due to the low response rate from only one SLP and one ECI. The surveys addressed characteristics specific to both the child (e.g., services the child has received in the past 6 months as part of his/her early intervention program) and the service provider (e.g., amount of professional education concerning children with CIs). Previous research has shown that children who are identified with a hearing loss early and receive early intervention services have language scores that fall into the normal range when they were 1 to 5 years-old (Yoshinaga-Itano, et al., 1998). In 2000, Moeller conducted a study which examined the relationship between the age of enrollment in intervention and language outcomes at 5 years of age in a group of deaf and hard-of-hearing children. She found that children who were enrolled in early intervention services by 11 months of age performed significantly better on tests of vocabulary and verbal reasoning skills at 5 years-old than did children who were enrolled in services later.

Children in the birth-3 subgroup were implanted at a mean age of 14 months and children in the preschool subgroup were implanted at a mean age of 21 months with early intervention services beginning a median of 1 month after the child received his/her CI for both groups. Educationally, the majority of children in this study were reported to be making as much progress or more progress than expected on their IFSP or IEP goals. While this is not a direct measure of language development, it does support the positive educational impact that early implantation and early intervention services has on young children with a CI.

The amount of published research is limited in the realm of service provision for children with a CI. To date, there is one published study that documented the service provision of school-based SLPs, for children between the ages of birth-18 years-old with

CIIs (Compton et al., 2009). Due to the paucity of research and the importance of early intervention, the current study investigated service provision across multiple disciplines (i.e. SLPs, T/DHH, ECI) with a focus on children age birth-5 years of age.

### Clinical Implications

This study demonstrated that the majority of children age birth-5 years old in Iowa receive public services for their hearing impairment with the T/DHH as their primary service provider, rather than the SLP or ECI. One explanation for this finding may be attributed to the fact that service providers were allowed to choose only one “primary service provider.” Therefore if they felt that there was equal service provision by more than one profession they could not delineate this situation. In a phone conversation with an SLP serving the birth-3 population, she indicated that she felt that there was an equal amount of service provision between the SLP, T/DHH, and ECI for the child with a CI on her caseload. In addition, she indicated that the “primary” service provider might be chosen based on his/her current caseload size or the knowledge and/or skills of working with a child with a CI that the professional possesses. In light of this conversation, our results do support the fact that the primary provider for children age birth-5 with CIIs should be the T/DHH. This is based on their overall comfort level in speech/language/hearing tasks, their educational background, and their reported frequent collaboration with other providers serving the child, such as the audiologist.

A second explanation as to why the T/DHH was chosen as the primary service provider could be due to the comfort level of working with a child with a CI. In this survey and in conjunction with the survey distributed by Compton et al. (2009), it was revealed that the SLP is not completely confident or comfortable working with a child with a CI. Specifically, in both surveys, the SLPs reported very low confidence levels in working with the child’s CI device (i.e. daily checks and troubleshooting). Because it is essential for the CI device to be working properly in order to receive maximal benefits of

oral speech and language therapy, it is essential that SLPs receive training in the technical and functional aspects of the CI.

In regards to additional education and resources, 75% of the SLPs in Compton's study (2009) reported that they did not have access to workshops, printed materials, and in-service training in aural (re)habilitation. In contrast, all of the SLPs in the current study reported that they had received additional professional education specific to children with a CI. These experiences ranged from day-long workshops, in-services, one-two weeks of specialized instruction, and a semester-long course. However, it would be important to inquire what topics were covered during those workshops, in particular the technical aspect of the device. In addition to workshops and in-services, there are also a variety of free resources that might be useful to SLPs who have never worked with a child with a CI or do not feel confident in assessing the device. Compton et al. (2009) mentioned various on-line resources such as: "The Hearing Journey" by Advanced Bionics Corporation (<http://www.hearingjourney.com>) and the "HOPE" on-line learning seminar by Cochlear Corporation (<http://hope.cochlearamericas.com>). In addition, many CI companies have staff audiologists who are available to help with troubleshooting problems with the device. Due to the growing number of young children with CIs entering the public school system and the valuable impact of early intervention, it is critical that the American Speech-Language and Hearing Association (ASHA) and state-wide organizations and agencies publicize these (and other) valuable resources.

### Collaboration

In order to examine the collaboration that service providers have amongst each other, they were asked to indicate the frequency of communication that they have with the child's audiologist and "other" professionals. Results of this investigation revealed that the majority of T/DHH, ECI, and SLPs serving the birth-3 population communicate with both the child's audiologist and "other" providers on either a weekly or monthly

basis. However, the SLPs serving the preschoolers reported that they communicate with “other” providers only 3-4 times/year and the child’s audiologist even less frequently (i.e. 0-4 times/year).

The last finding is in accordance with the results from Compton et al. (2009) in that the school-based SLPs in North Carolina reported very little contact with the child’s audiologist or T/DHH when confronted with difficulties with the CI. Because of the very low comfort levels of using the device that were reported by the SLPs both in Iowa and North Carolina, it is necessary to re-visit ASHA’s position statement on the roles of SLPs and T/DHH in serving children who are deaf or hard-of-hearing. According to ASHA, both the SLP and T/DHH should use each other’s knowledge and expertise as a valuable resource while working collaboratively towards the development of the child’s optimal communicative and linguistic competence (ASHA, 2004). In order to develop the child’s communicative competence, defined by ASHA (2004) as “the ability to understand and use one or more languages effectively in a variety of sociocultural contexts,” early intervention services must focus on facilitating the child’s speech and language development through different communication modalities and strategies. It is the responsibility of both the SLP and T/DHH to have an understanding of how cognitive and linguistic factors interrelate with the child’s hearing loss and additional social factors (i.e. family, education, culture) in order to provide effective and quality early intervention services. Collaboration must also occur with the child’s ECI, which our study revealed to be another key player in service provision for children with CIs. The results from this survey highlight the need for school-based SLPs in Iowa to have more interaction with the team of “other” providers serving the child. In addition, it is recommended that future surveys specify “other” by adding specific professionals (i.e. T/DHH, ECI, etc.).

### Cochlear Implant Use

The results of this investigation reveal that there is a compliance issue in wearing the CI for the birth-3 population. It is concerning that 31% of these children are removing their device periodically throughout the day and an additional 6% of the children are resisting the CI being placed on his/her head. Consistent and regular use of the device is critical for oral speech and language development. While this statistic may seem alarming, the chronological age of the child must be kept in mind. Most of the children in this group were between the ages of 2-3 years-old and resistance to cooperating with a new habit is not uncommon in this age group.

Furthermore, there was reported to be less of a compliance issue for the preschool population. Only 22% of the children were reported to remove their device periodically and none resisted the implant. Therefore, the majority (78%) of preschoolers were reported to easily accept the device and wear their CI on a full-time, daily basis. This difference in compliance may, in part, be explained by the age at which the child took part in the study as well as the length of CI use. It might be harder to get a one or two-year-old child, versus a four or five-year-old, to wear their device consistently. In this study, the mean chronological age of the children in the birth-3 group was 2 years, 5 months and the mean age in the preschool group was 4 years, 4 months. Additionally, the children in the birth-3 group had been implanted, on average, for 1 year whereas the preschool group had been implanted for an average of 2 years, 4 months at the time that the survey was completed. Furthermore, these statistics might be skewed because they are being reported from the child's service provider, who may only see the child one time/month for a short duration of time (i.e. 45 minutes). It is also plausible that the service providers are over-reporting the child's CI use, making these statistics even more alarming. Due to these variables, the accuracy of the results is unknown.

### Limitations

Four factors were identified as limitations of this study. One factor was the number of service providers who participated in this study. The majority (66%) of service providers who participated were T/DHH. Therefore, the perspectives reported may be skewed by the T/DHH and do not represent all three professions equally.

A second limitation was that this study focused on service providers primarily from the state of Iowa. Inclusion of a larger geographical area may reveal different trends in the preparation and comfort level of service provider's for children with CI(s). In addition, the service provision model and the primary service provider may also be different. Other regional variables such as access to additional educational opportunities may not be readily accessible in other regions of the United States. Therefore, inclusion of a larger geographical region may reveal a deficit in cochlear implant instruction and/or professional preparation.

Another limitation was the limited age range of the children with CIs. Because only one school-age child participated, responses from only two service providers were obtained for this population. It is recommended that future studies address the preparation and confidence of service providers for this older population.

A final limitation of this study was the overall number of service providers and children who participated. Due to time constraints and the limited number of subjects involved in the UIHC Cochlear Implant Project, it was difficult to recruit a large sample size. Recruiting subjects who are not explicitly part of this project may serve to increase the sample size as well as the diversity of service provision.

### Future Directions

Another population of interest is children who have a mild-moderate hearing loss, who would not qualify to receive a CI. It is thought that this group of children may be overlooked due to the nature and/or degree of their hearing loss and may not be receiving

appropriate services. This could potentially have a negative impact on their speech, language, and academic development (Iowa, 2011). Currently, there is limited research that examines their educational needs.

In contrast, all of the children in the current study presented with a severe-profound hearing loss, qualifying them to receive a CI. While both groups of children have a hearing loss, their profiles and functional ability to acquire expressive and receptive language may be very different. This difference has important implications for early service provision. In order to better understand the services these children are receiving, information from on-line surveys may be compared between service providers of children with a CI and children with hearing aids. In addition, standardized speech and language scores may also be compared in order to determine the child's educational needs for appropriate service provision. By comparing these two groups of children with different hearing loss severity and treatment (i.e. hearing aid vs. CI), it will yield insight into establishing an appropriate service delivery model for each group of children.

### Conclusion

This study examined characteristics of service providers' preparation and training as well as characteristics specific to children with CIs who were on their caseload. Findings in this study revealed that the T/DHH, who are primarily providing services to birth-5 children with CIs, are well prepared and comfortable in assessing and treating an assortment of speech, language, and hearing areas. The SLPs and the preschool ECIs, on the other hand, report that they are not completely comfortable in areas that are specific to the function of the CI device. The results of this study also highlight additional areas of concern, such as the child's compliancy level in wearing the CI device and the frequency of collaboration with other professionals. Due to the increasing number of young children receiving CI(s) who will be enrolled in public schools, collaboration amongst professionals must be established. In addition to increasing collaboration,



offering extra educational opportunities (i.e. in-services and workshops) and promoting on-line resources (i.e. “HOPE”) may also have a considerable impact on the overall comfort level of clinicians working with this population. More research is needed to assess the relationship between the amount and quality of service provision and the child’s speech and language performance to ensure that this population is receiving appropriate early intervention services.

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## APPENDIX A

## TABLE AND FIGURES

Table A1. The CI Characteristics of the Birth-3 and Preschool Subjects.  
(simul=simultaneously; seq=sequentially; AD=right ear; AS=left ear;  
subject code with “P”=Preschool; subject code with “B”=Birth-3)

Subject Code	Gender	Unilateral/Simul or Seq Bilateral	Pre- vs Post-lingual deafness	Age at Implantation (months)
CIXX012P	F	Simul Bilateral	Pre	12
CIIXX08P	M	Simul Bilateral	Pre	15
CIXX006P	F	Unilateral	Pre	16AD
CIXX010P	M	Simul Bilateral	Pre	14
CIXX029P	M	Simul Bilateral	Pre	14
CIXX013P	M	Seq Bilateral	Pre	20 AD 42 AS
CIXX015P	M	Simul Bilateral	Pre	11
CIXX003P	F	Unilateral	Pre	36 AD
CIEG011P	M	Unilateral	Pre	31 AD
CIXX024P	F	Seq Bilateral	Pre	39 41
CIXX028P	M	Simul Bilateral	Pre	12
CIXX016P	M	Seq Bilateral	Pre	12 AD 36 AS
CIXX030P	F	Unilateral	Pre	18 AD
CIXX021P	F	Unilateral	Post	39 AD
CIXX002B	F	Seq Bilateral	Pre	11 AS 17 AD
CIXX005B	F	Simul Bilateral	Pre	12
CIXX007B	M	Seq Bilateral	Pre	15 29

Table A1 continued.

CIXX017B	F	Simul Bilateral	Pre	12
CIXX018B	F	Simul Bilateral	Pre	13
CIXX020B	M	Simul Bilateral	Pre	13
CIXX022B	F	Simul Bilateral	Pre	12
CIXX023B	F	Simul Bilateral	Pre	12
CIBR026B	F	Simul Bilateral	Pre	13
CIXX027B	F	Unilateral	Pre	20 AS
CIXX034B	F	Seq Bilateral	Pre	12 AD 21 AS
CIXX035B	M	Simul Bilateral	Pre	11
CIXX036B	M	Simul Bilateral	Pre	13

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Note: “Pre-lingual” and “Post-lingual” deafness were defined as hearing losses that occurred between 0-12 months of age or after 36 months of age, respectively. “Perilingual” deafness was defined as hearing loss which occurred between 13-36 months of age and was not applicable to any of the subjects in our study.

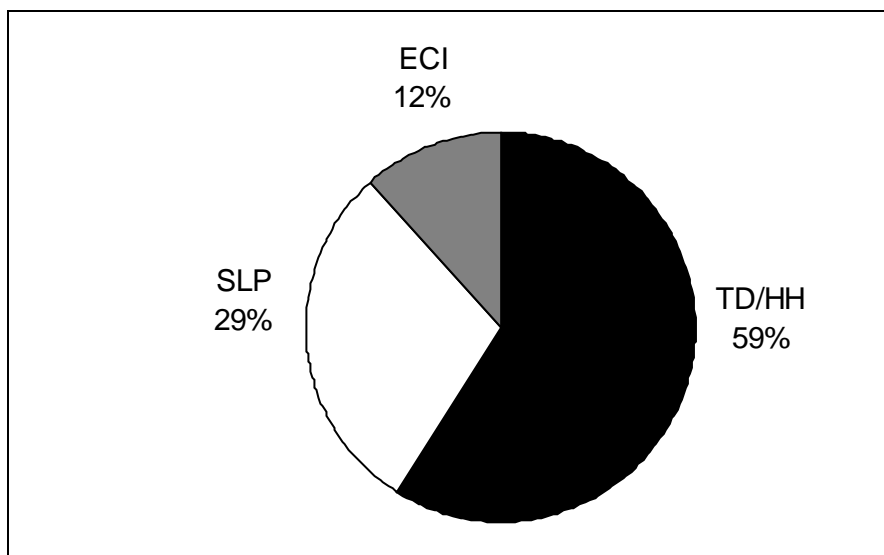


Figure A1. The distribution of primary service providers for the birth-3 population.

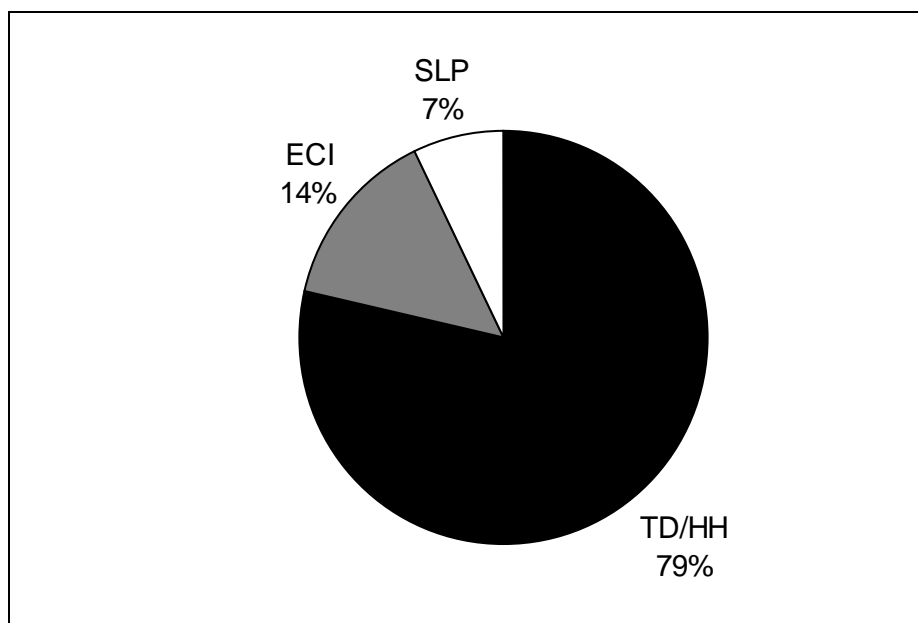


Figure A2. The distribution of primary service providers for the preschool population.

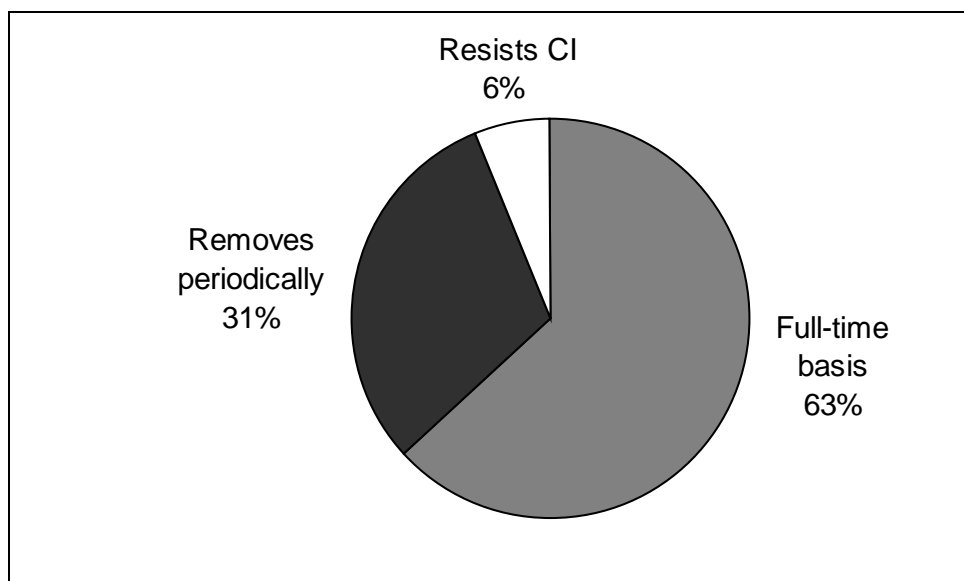


Figure A3. Birth-3: The amount of time the child wears his/her CI.

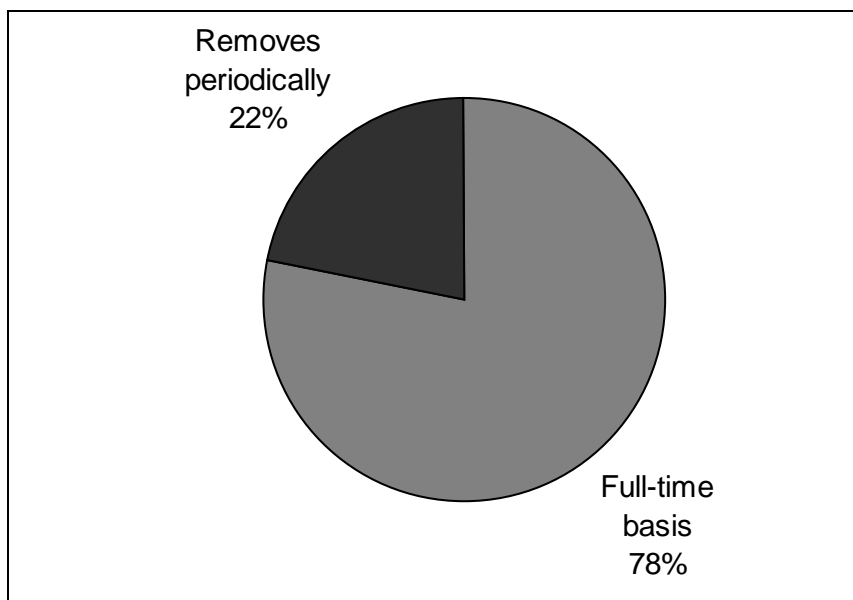


Figure A4. Preschool: The amount of time the child wears his/her CI.

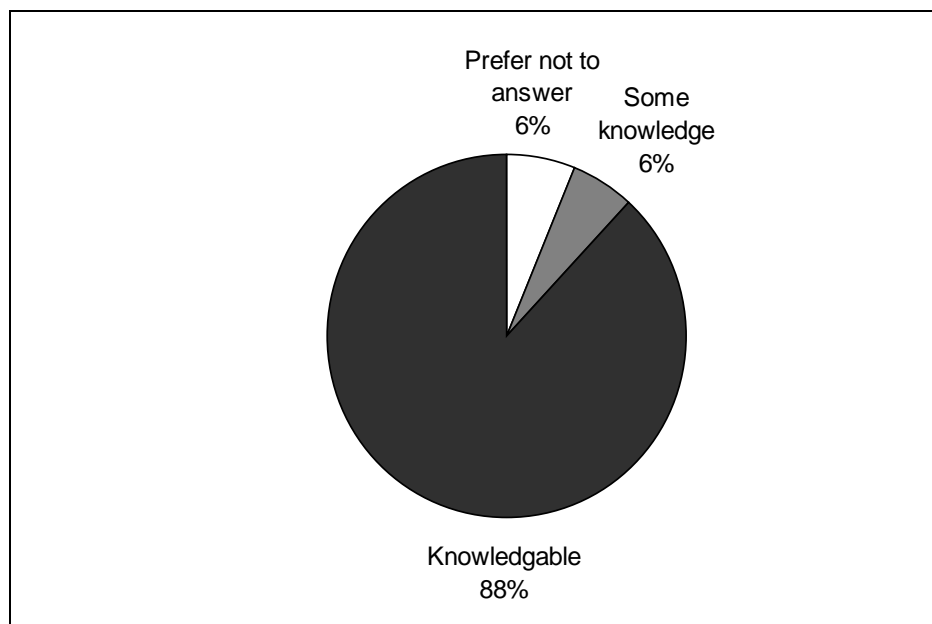


Figure A5. Birth-3: The family's level of knowledge in managing their child's CI.

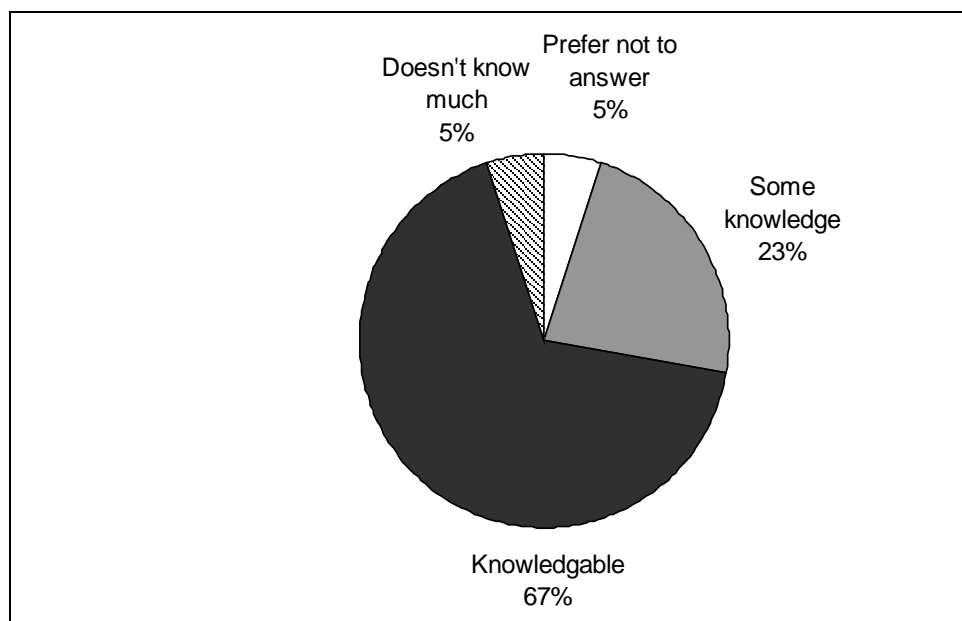


Figure A6. Preschool: The family's level of knowledge in managing their child's CI.

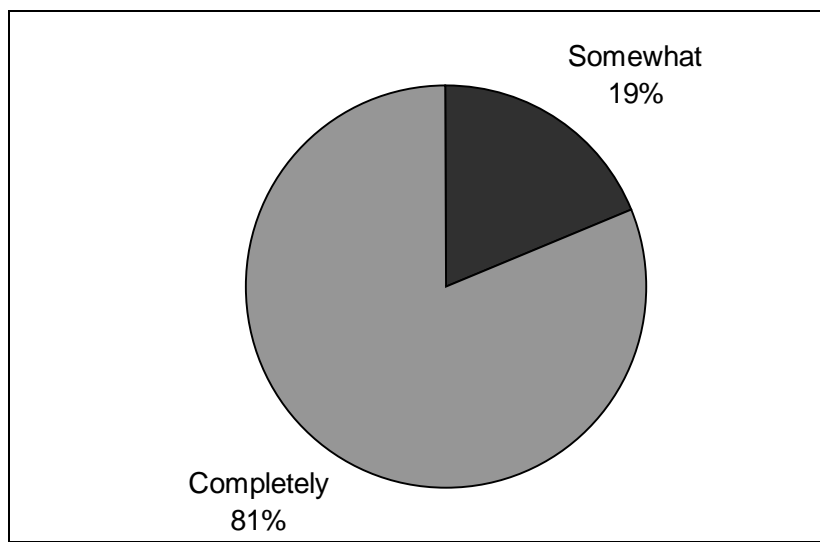


Figure A7. Birth-3: The family's level of confidence in managing their child's CI.

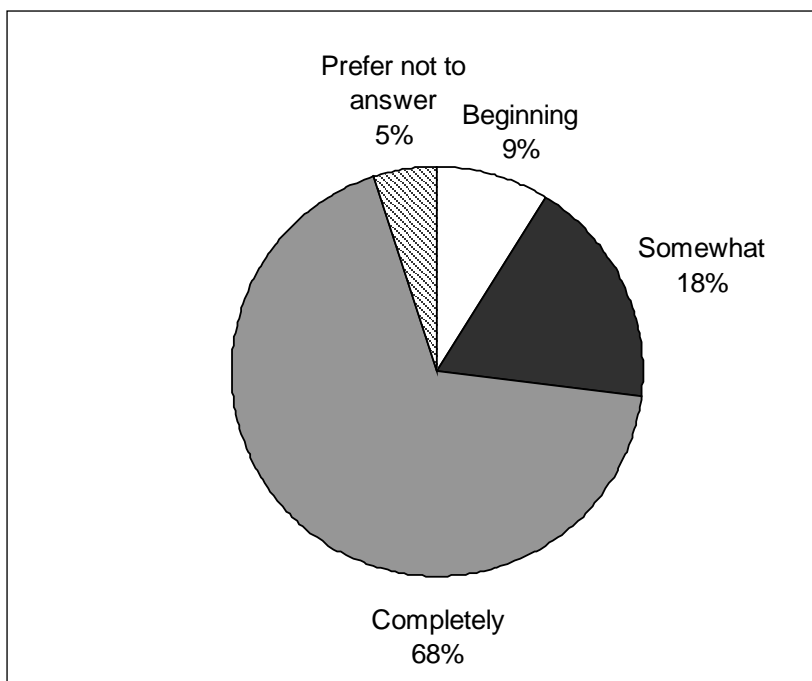


Figure A8. Preschool: The family's level of confidence in managing their child's CI.



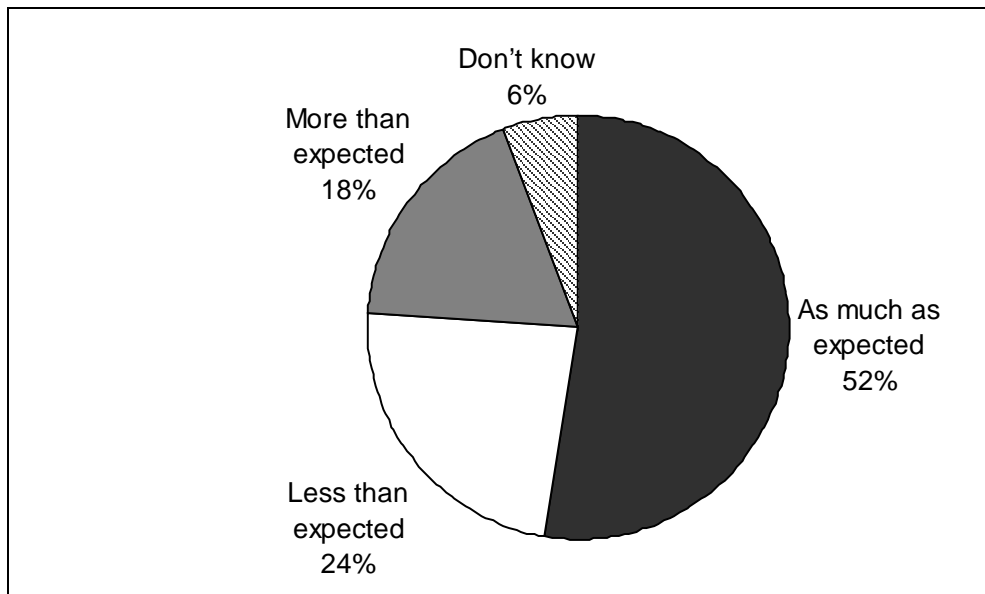


Figure A9. Birth-3: The progress the child has made in the past 6 months towards outcomes specified in his/her IFSP.

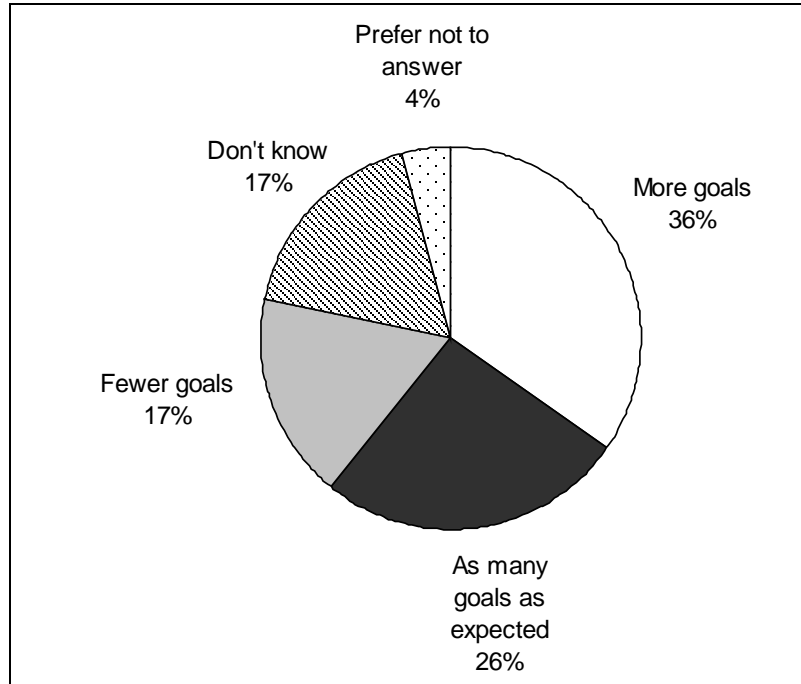


Figure A10. Preschool: The amount of goals the child has met in the past 6 months towards their expected IEP goals.

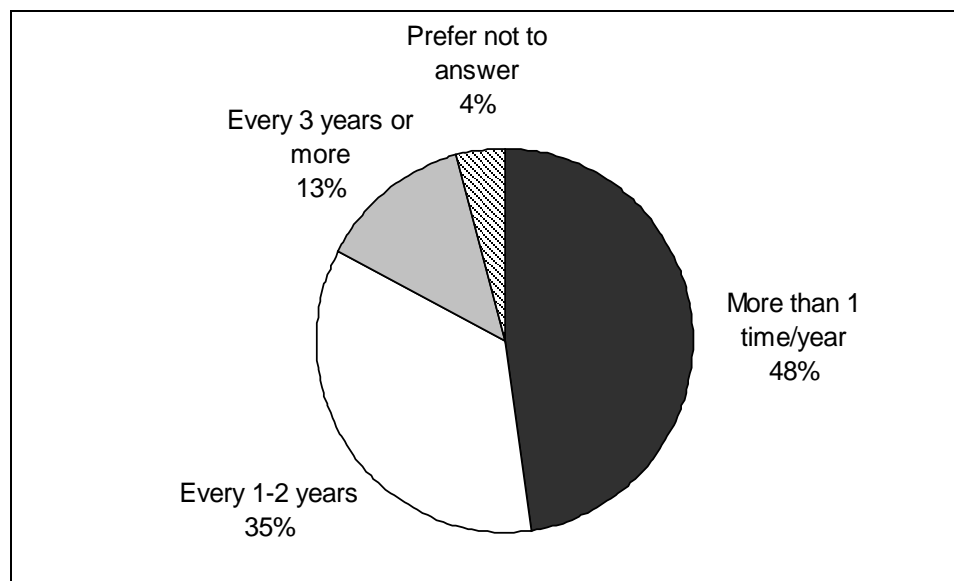


Figure A11. Preschool: The frequency of formal speech and language assessment.

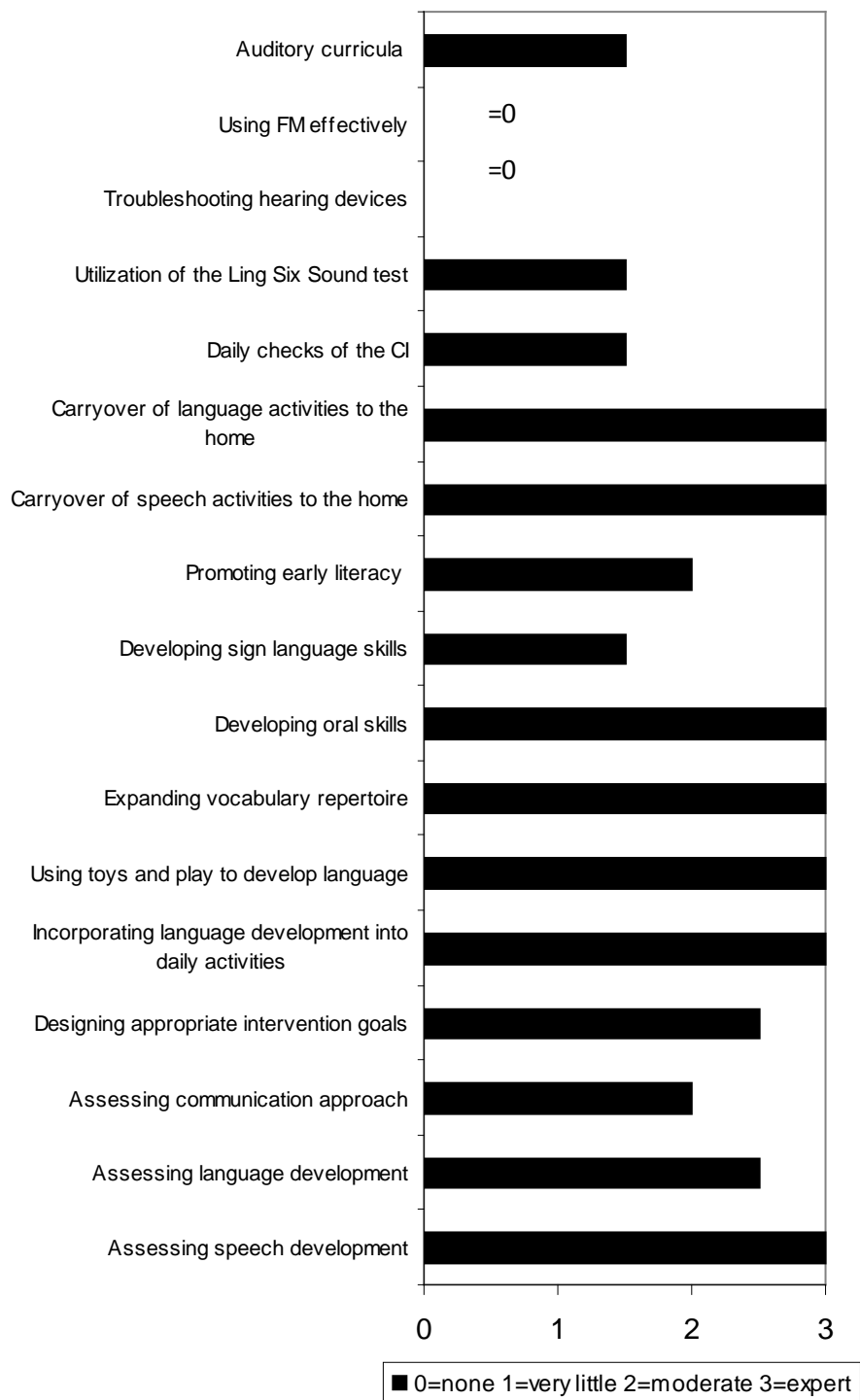


Figure A12. Birth-3: The SLP's median comfort level in speech, language, and hearing tasks for a child with a CI.

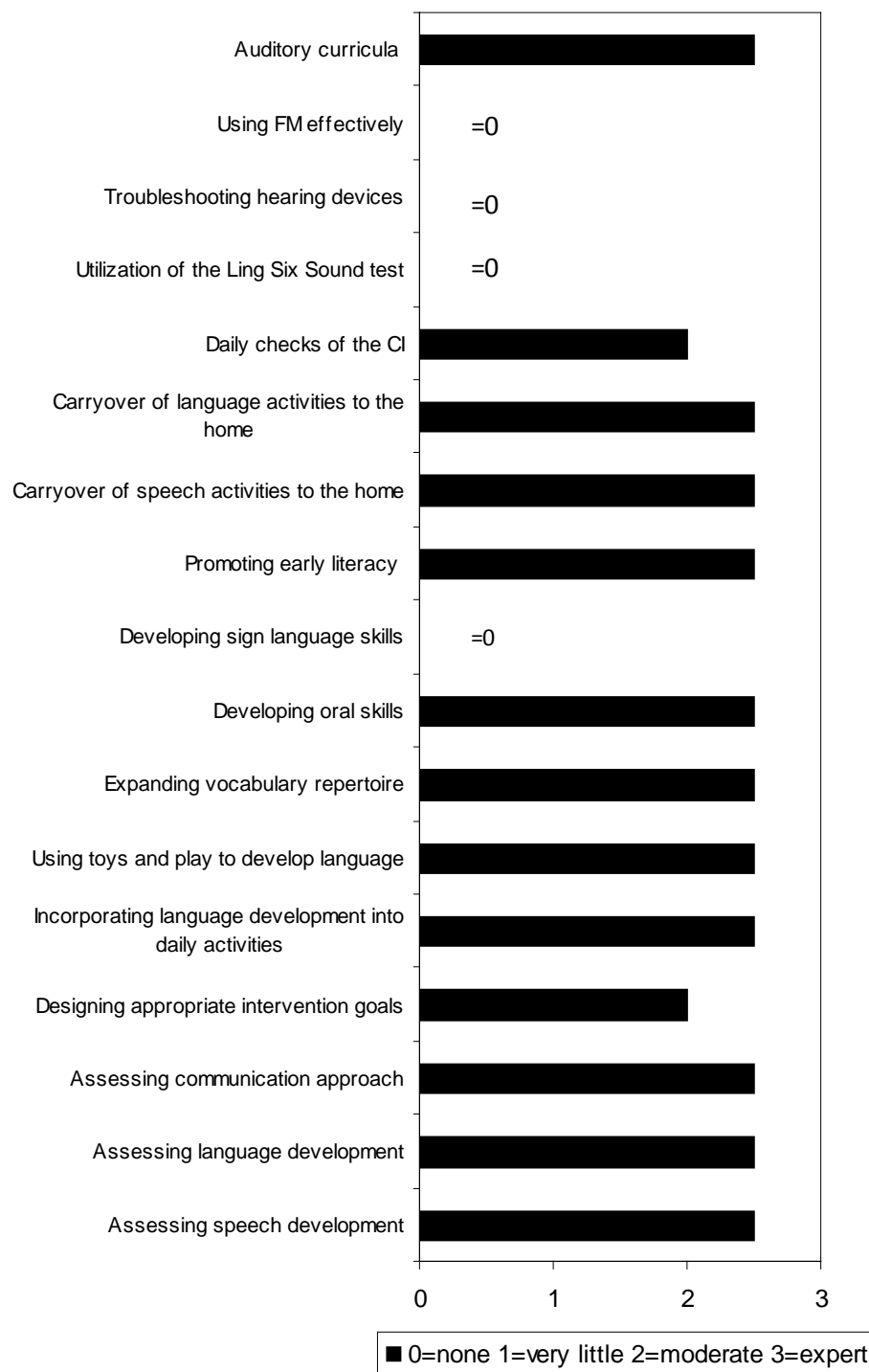


Figure A13. Preschool: The SLP's median comfort level in speech, language, and hearing tasks for a child with a CI.

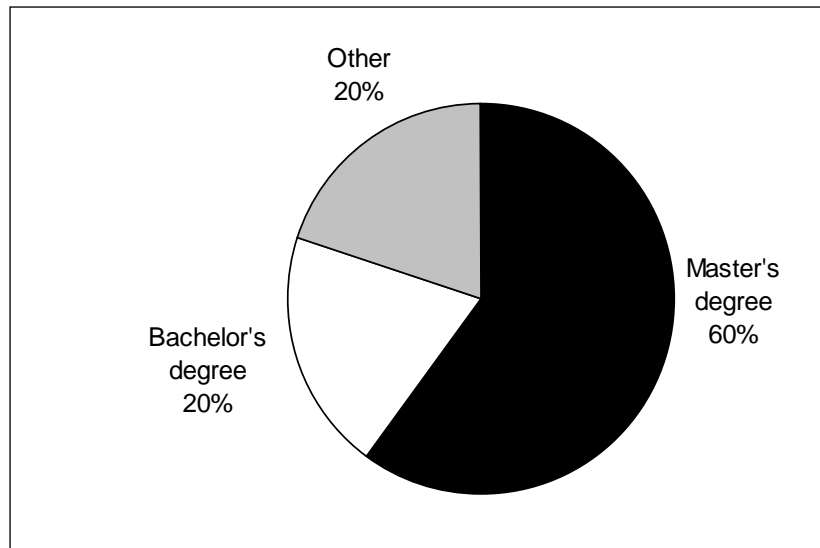


Figure A14. Birth-3: The T/DHH highest degree earned.

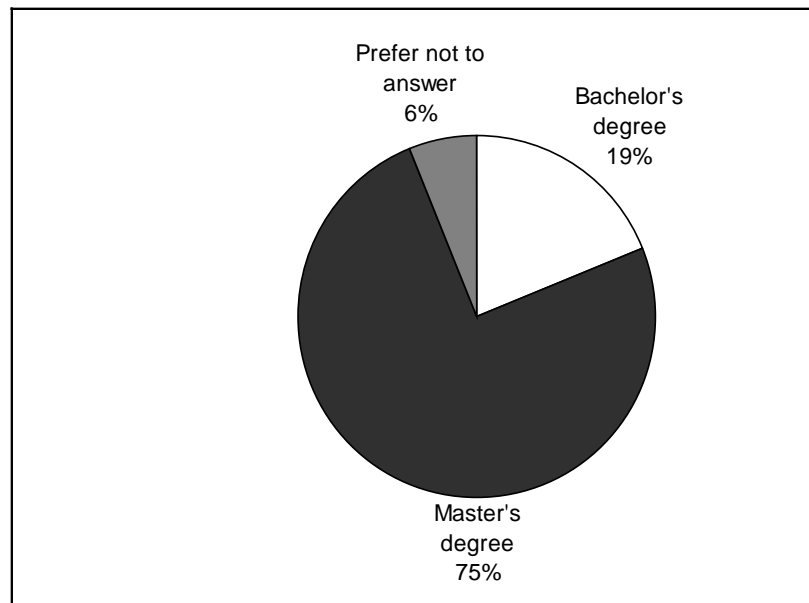


Figure A15. Preschool: The T/DHH highest degree earned.

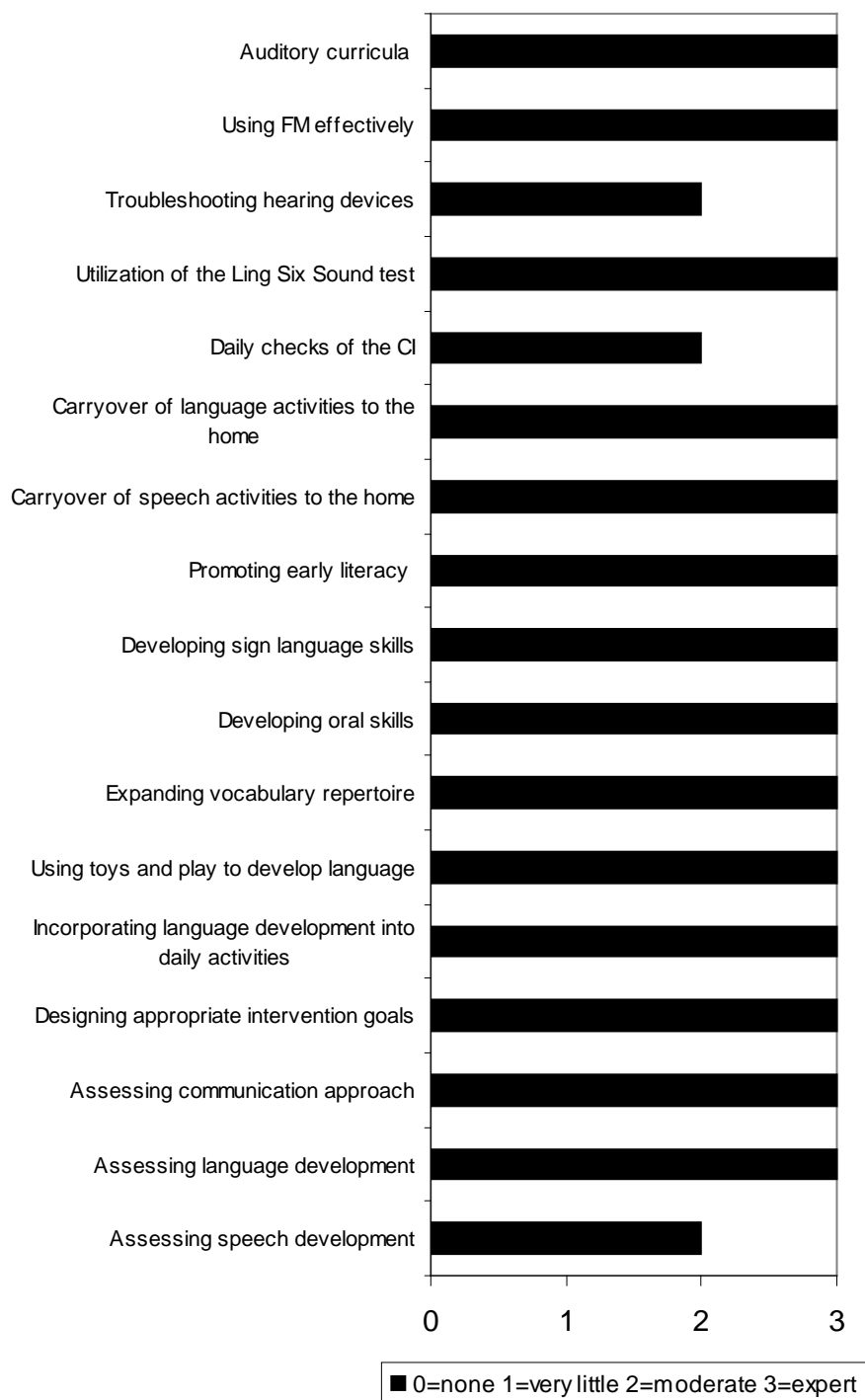


Figure A16. Birth-3: The T/DHH median comfort level in speech, language, and hearing tasks for a child with a CI.

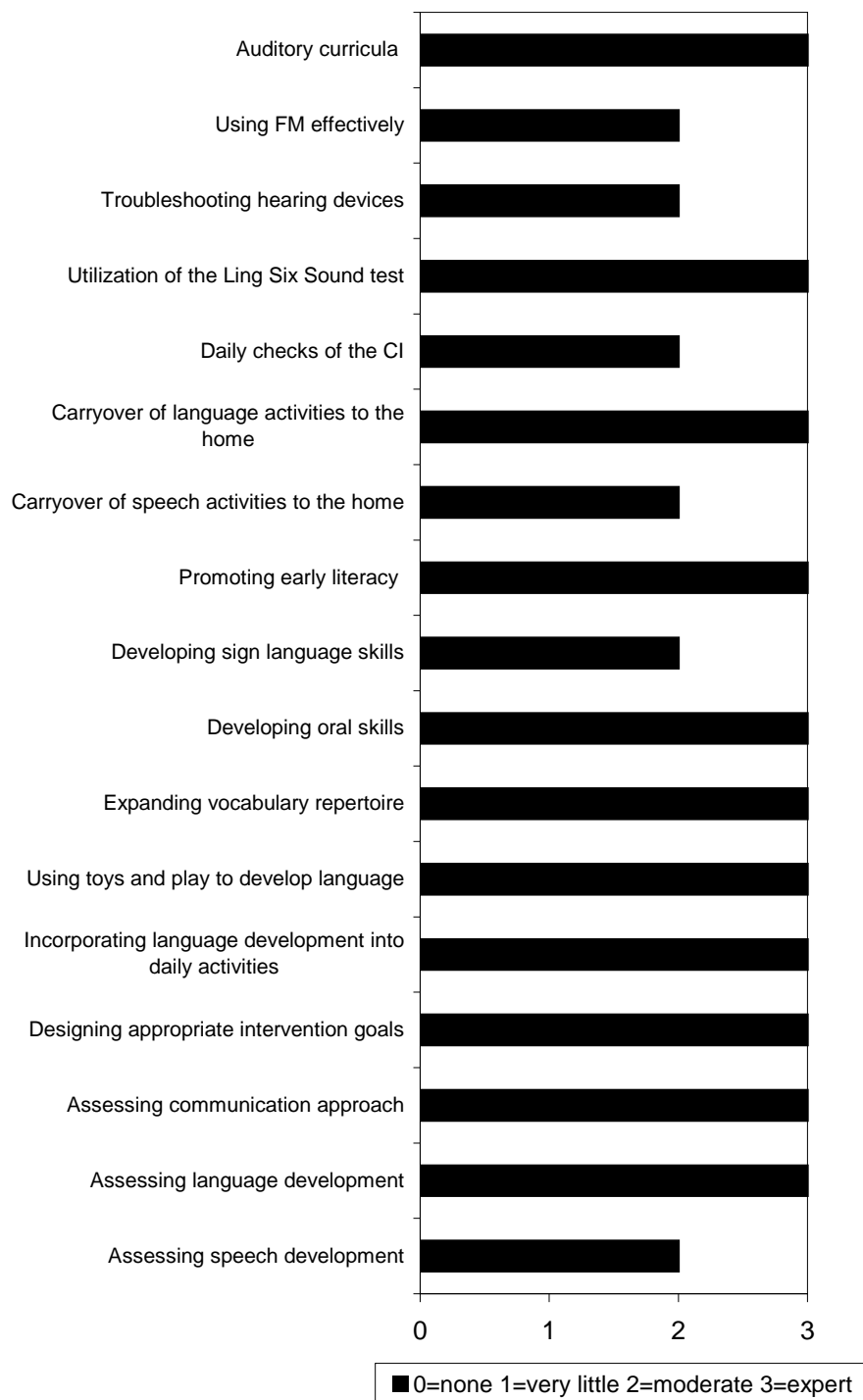


Figure A17. Preschool: The T/DHH median comfort level in speech, language, and hearing tasks for a child with a CI.

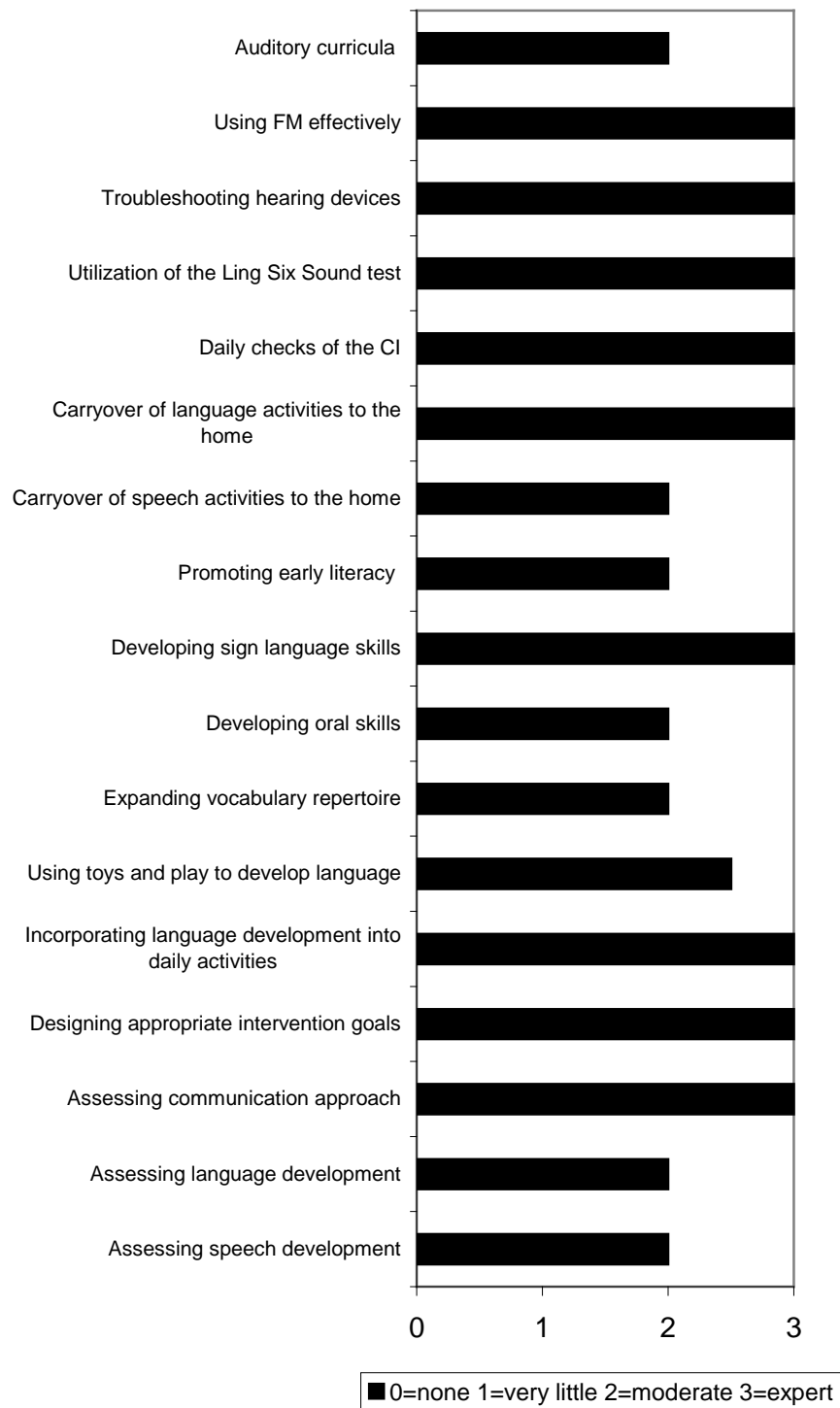


Figure A18. Birth-3: The ECI median comfort level in speech, language, and hearing tasks for a child with a CI.



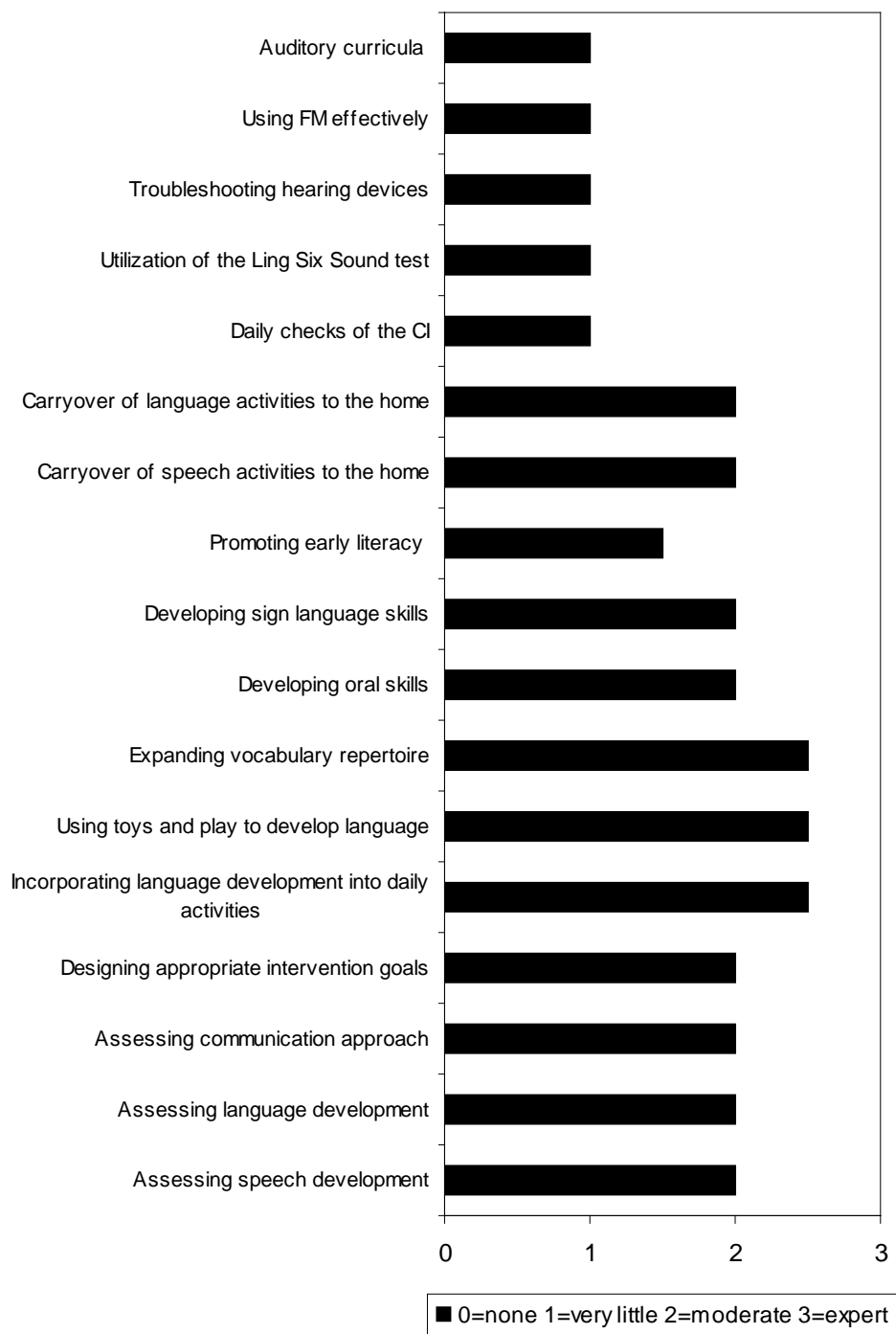


Figure A19. Preschool: The ECI median comfort level in speech, language, and hearing tasks for a child with a CI.

APPENDIX B

BIRTH-3 SERVICE PROVIDER SURVEY

Investigating Service Provision in Children  
with  
Cochlear Implants

**Services and Provider Survey (SPS)  
Birth to 3 Years**

**Questions? Please contact Tara Gjerstad at 319-353-6582**

## SERVICES AND PROVIDER SURVEY (SPS)

I choose to:  complete the survey  not complete the survey

### Identifying Information

Enter the child's name given to you in your letter: \_\_\_\_\_

Today's Date: \_\_\_\_\_

First name of professional completing form:

\_\_\_\_\_

Last name of professional completing form:

\_\_\_\_\_

Professional's phone number:

\_\_\_\_\_

Professional's email address:

\_\_\_\_\_

Agency name:

\_\_\_\_\_

Agency address:

\_\_\_\_\_

This program is:  Public  Private  Other  Prefer not to answer

1. Is the child currently enrolled in early intervention services?

- Yes  Unknown  
 No  Prefer not to answer

### If no...

2. What was the approximate date of the child's or family's last early intervention service?

\_\_\_\_\_

3. What was the main reason for leaving early intervention? (check all that apply)

- Family moved away. Please indicate any available new location information for the family below.  
 Family discontinued service (e.g. no longer interested). Please give reason below.  
 Child changed household or custody (e.g. changed foster family). Please give new address below if you have it.  
 Family had transportation barriers  
 Repeated attempts to contact family were unsuccessful

- Child was no longer eligible for service
  - Child is deceased
  - Don't know
  - Prefer not to answer
  - Other (please specify below)
- 

4. If you selected that the child is no longer eligible for service, please indicate why:

- Based on assessment results
- Based on attainment of goals
- Due to both assessment results and attainment of goals
- Prefer not to answer

5. About how long did it take after the child received a cochlear implant(s) for early intervention services to begin?

\_\_\_\_\_ months

6. How would you best describe this child's environment, Monday through Friday? (please choose all that apply)

	<b>Full Time</b>	<b>Part Time</b>	<b>Prefer not to answer</b>
At home with parent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the home of a family member (other than the parent)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public/Regular (school district) preschool setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private preschool setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Center-based preschool for deaf or hard of hearing children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Center-based preschool program (multi-categorical/special education)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daycare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Another setting (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Services Provided

7. You have been identified as the professional who sees this child most frequently in relation to their hearing loss and the IFSP. From the following list, in the first column please select the profession that best describes yours. In the second column please identify other professionals who provide services to this child/family.

<b>Check appropriate boxes to indicate which providers are serving the child and indicate if they serve in a primary role or a support role.</b>	<b>Your Profession  (check only one)</b>	<b>Other Professionals  (check all that apply)</b>	<b>Prefer not to answer</b>
Early intervention specialist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Early childhood special education teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speech language pathologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teacher of the deaf and hard of hearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Certified auditory-verbal therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Audiologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family counselor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Genetic counselor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occupational therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ophthalmologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENT physician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Service Coordinator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social Worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Please identify the location(s) where this child received early intervention services. Check the location where services were received most frequently and second most frequently. (check no more than two)

	<b>Most frequent location</b>	<b>Second most frequent location</b>	<b>Prefer not to answer</b>
In the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Home of a care provider (what was relationship, if any, to child)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Regular daycare environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private preschool setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specialized center-based early intervention program (multi-categorical)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic or office (therapist's office)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specialized center-based preschool for the deaf or hard-of-hearing children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Another setting (e.g. extended family or neighbor's home) (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. In your opinion, was the location in which services were most frequently provided conducive for implementing intervention goals?

- Good
- Fair
- Poor
- Prefer not to answer

10. If the setting was rated as poor or fair, what factors contributed to this rating?

- Noisy
- Visually distracting
- Frequent interruptions
- Other (please specify) \_\_\_\_\_
- Prefer not to answer

11. Please identify all of the services the child has received in the past 6 month time period as a part of his/her early intervention program. (check all that apply)

- None
- Amplification and/or Assistive devices
- FM
- Cochlear implant(s)
  - unilateral
  - bilateral
- Consultation to daycare providers
- Family-to-family support/parent group
- Translation (interpreter services)
  - Sign Language
  - Foreign Language
- Sign language instruction
- Ancillary private therapies (i.e., AVT or speech therapy) \_\_\_\_\_ times/week
- Sensory integration therapy
- Transportation
- Other (please specify) \_\_\_\_\_
- Prefer not to answer

### Service Frequency, Participation and Location

12. In an average month, how frequently and for what amount of time did you provide services for this child/family?

Example: Two times a month for 30 minutes per session.

\_\_\_\_\_ times per month for \_\_\_\_\_ minutes per session

13. In an average month, how often were visits missed?

Approximately \_\_\_\_\_ sessions per month  
(number)

14. Which of the following caused this child to miss services? Please select the most common reason and the second most common reason.

Reason	Most Common	Second Most Common	Prefer not to answer
No services were missed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasons related to the child (e.g. child was sick)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasons related to the family (e.g. transportation, parent forgot about appointment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasons related to the service provider (e.g. provider illness, staff not available)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Don't Know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Which family members participate in at least one-half of the sessions?

	Yes	No	Prefer not to answer
Mother (stepmother)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Father (stepfather)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Siblings: list number of sibs typically present _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grandmother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grandfather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family members do not participate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. If services were received in a center-based daycare setting, were the services provided to the child alone or to the child in a group?

- Child alone
- Child in a group (indicate number of children in the group \_\_\_\_\_)
- Both alone ( \_\_\_\_\_ percent) and in a group ( \_\_\_\_\_ percent)
- Not applicable
- Prefer not to answer

17. If services were provided in a center-based setting, how would you describe the other children in the group? (check all that apply)

- Children with hearing loss
- Children with a cochlear implant(s)
- Children with normal hearing
- Children with other special needs
- Not applicable
- Prefer not to answer

18. If you could change two things about this child's services, what would they be? Please explain in the comment box below.

### **Current Caseload**

19. About how many children/families do you serve? (e.g. your typical caseload, give your best estimate)

\_\_\_\_\_ Number of active children/families in your caseload

20. About how many of these cases are children with a cochlear implant(s)?

\_\_\_\_\_ (please give your best estimate)

21. Of the children with a cochlear implant(s) on your caseload, approximately what percentage have additional disabilities?



22. In addition to children with a cochlear implant(s), which of the following are included in the population of infants and toddlers currently served by your program?

	Yes	No	Prefer not to answer
Behavioral/emotional disorders, including autism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developmental delays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health Impairment/medically fragile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiple impairments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthopedic impairment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vision loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor impairments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Personal Preparation

23. Please indicate the highest degree you have earned:

- Associate's degree
- Bachelor's degree
- Master's degree
- Doctoral degree
- Other (please specify) \_\_\_\_\_
- Prefer not to answer

24. Please indicate the area in which you earned your degree(s). (check all that apply)

- Education of the deaf and hard of hearing
- Early childhood education
- Special education
- Early childhood special education
- Speech-language pathology
- Audiology
  - Masters
  - Au.D.
- Other (please specify) \_\_\_\_\_
- No degree in this area
- Prefer not to answer

25. What certifications or licenses do you hold? (check all that apply)

- Teacher of the deaf and hard of hearing
- Early childhood education
- Special education teacher



vocabulary repertoire						
Developing a child's oral skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing a child's sign language skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Promoting early literacy for a child with hearing loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carryover of speech activities to the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carryover of language activities to the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daily checks of the child's cochlear implant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utilization of the Ling Six Sound test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Troubleshooting hearing devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using FM effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing a child's ability to listen (auditory curricula)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. How frequently do you communicate with the child's audiologist?

- Never
- 1 – 2 times per year
- 3 – 4 times per year
- Frequently (please specify) \_\_\_\_\_
- Not applicable
- Prefer not to answer

31. How frequently do you communicate with the child's other service providers?

- Never
- 1 – 2 times per year
- 3 – 4 times per year
- Frequently (please specify) \_\_\_\_\_
- There are no other service providers
- Not applicable because \_\_\_\_\_
- Prefer not to answer

## Family Centered Practices

### The Individualized Family Service Plan

An Individualized Family Service Plan (IFSP) is a written plan that families and professionals develop together. The purpose of the IFSP is to identify services and people who can help families reach their goals.

32. Did the child have a multi-disciplinary evaluation?

- Yes
- No
- Prefer not to answer

33. Did you develop an IFSP with the family?

- Yes
- No
- Prefer not to answer

**For the questions in this section, please think about the period of time when the IFSP was being developed.**

34. When the IFSP was developed:

	Yes	Sometimes	No	Prefer not to answer	Comments
The family had time to get to know me before we began to write the IFSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The family decided who should participate on the IFSP team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The family decided what would be written based on their priorities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

35. Whether an IFSP was developed or NOT,

	Yes	Sometimes	No	Prefer not to answer	Comments
The family was allowed to make decisions at their own pace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The family was an equal partner in planning the goals and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The family had someone to help them coordinate the services they needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The family had a choice about how often their child & family received services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The family had a choice about the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

location of the services (e.g. home vs. center)					
The family had a choice about how much they would participate in the services with their child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Family routines were considered when services were scheduled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
When we disagreed about what was best for their child, the family's opinion was given more weight	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

36. Which of the following statements best describes the progress this child has made in the past 6 months toward the outcomes specified in the IFSP? (check one)

The child has:

- Made more progress than expected toward the outcomes in the IFSP.
- Made about as much progress as expected toward the outcomes in the IFSP.
- Made less progress than expected toward the outcomes in the IFSP.
- Don't know
- Prefer not to answer

Comment: (please comment on observations you have made about factors influencing this child's progress)

### Your Professional Role with this Child

37. Regarding the child's family, did you:

	Yes	Another Service Provider Assisted	No Assistance Provided	Uncertain	Prefer not to answer
Help with filling out forms, if assistance was needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the parents contact parents of other children with hearing loss?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the parents feel more confident in their ability to parent this child?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the family find funding for services or equipment, if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encourage the family to be the major- decision maker about their child?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the family become knowledgeable about the hearing technology their child uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motivate the family to communicate with their child?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Show the family how to incorporate language into their daily routines like dressing & bathing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the family prepare for the child's next therapeutic/educational setting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

38. During sessions with the family, what is the approximate time that you spend on the following? (estimate the **number of minutes** in a one hour session)

\_\_\_\_\_ Observing and guiding the caregivers as they interact with the child

\_\_\_\_\_ Modeling strategies for the caregivers

\_\_\_\_\_ Providing language and speech stimulation for the child

\_\_\_\_\_ Educating family members

\_\_\_\_\_ Working with siblings

- \_\_\_\_\_ Evaluating outcomes
- \_\_\_\_\_ Providing family support
- \_\_\_\_\_ Other (please specify)
- \_\_\_\_\_

### Cochlear Implant and FM Use

39. Does this child wear his/her cochlear implant(s)?

- Yes
- No (skip to #45)
- Don't know (skip to #45)
- Prefer not to answer (skip to #45)

40. Which statement best describes this child's **current use** of his/her cochlear implant(s)?

	<b>CHECK ONE</b>
Easily accepts the cochlear implant(s) and wears them on a full-time, daily basis	<input type="checkbox"/>
Allows the cochlear implant(s) to be placed on his/her head but removes them periodically throughout the day	<input type="checkbox"/>
Resists the cochlear implant(s) being placed on his/her head and it is a struggle to keep it on for any extended period of time	<input type="checkbox"/>
Seldom uses the cochlear implant(s)	<input type="checkbox"/>
Probably never uses the cochlear implant(s)	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

### Family's knowledge and confidence regarding the cochlear implant(s)

41. How would you describe the family's **level of knowledge** about managing their child's cochlear implant(s)? (conducting listening checks, trouble-shooting, changing batteries, etc)

	<b>CHECK ONE</b>
Doesn't know very much about how to manage the cochlear implant(s)	<input type="checkbox"/>
Has some knowledge but wants to learn more about managing the cochlear implant(s)	<input type="checkbox"/>
Has learned how to manage the cochlear implant(s)	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

42. Which of the following best describes the family's current **level of confidence** in managing their child's cochlear implant(s)?

	<b>CHECK ONE</b>
Not yet confident managing the cochlear implant(s)	<input type="checkbox"/>

Beginning to be confident managing the cochlear implant(s)	<input type="checkbox"/>
Somewhat confident managing the cochlear implant(s)	<input type="checkbox"/>
Completely confident managing the cochlear implant(s)	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

43. Does this child use an FM system at home?

- Yes
- No (skip to #50)
- Don't know (skip to #50)
- Prefer not to answer (skip to #50)

44. Which best describes this child's current FM system use **at home**?

	<b>CHECK ONE</b>
Regularly uses the FM system in a variety of situations	<input type="checkbox"/>
Occasionally uses the FM system	<input type="checkbox"/>
Rarely uses the FM system	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

45. How would you describe the family's **level of knowledge** about managing their child's FM system? (conducting listening checks, trouble-shooting, changing batteries, etc)

	<b>CHECK ONE</b>
Doesn't know much about how to manage the FM	<input type="checkbox"/>
Has some knowledge but wants to learn more about managing the FM system	<input type="checkbox"/>
Has learned how to manage the FM system	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

46. Which of the following best describes the family's current **level of confidence** in managing their child's FM system?

	<b>CHECK ONE</b>
Not yet confident managing the FM	<input type="checkbox"/>
Beginning to be confident managing the FM	<input type="checkbox"/>
Relatively confident managing the FM	<input type="checkbox"/>
Completely confident managing the FM	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>



47. Are there any issues surrounding service to infants/toddlers with a cochlear implant(s) and their families that you find challenging? (please comment in the box below)

48. Are there any additional thoughts or concerns regarding provision of services to young children with cochlear implant(s) that you would like to share with us? (please comment in the box below)

**Thank you for completing our survey! Please select your gift card from the options below.**

- \$10 Starbucks Gift Card
- \$10 Target Gift Card
- \$10 Barnes & Noble Gift Card

APPENDIX C

PRESCHOOL SERVICE PROVIDER SURVEY

Investigating Service Provision in Children  
with  
Cochlear Implants

**Services and Provider Survey (SPS)  
Preschool: Ages 3 - 5**

**Questions? Please contact Tara Gjerstad at 319-353-658**

## SERVICES AND PROVIDER SURVEY (SPS)

I choose to:       complete the survey     not complete the survey

### Identifying Information

Enter the data entry code: \_\_\_\_\_

Today's Date: \_\_\_\_\_

First name of professional completing form:

\_\_\_\_\_

Last name of professional completing form:

\_\_\_\_\_

Professional's phone number:

\_\_\_\_\_

Professional's email address:

\_\_\_\_\_

Agency name:

\_\_\_\_\_

Agency address:

\_\_\_\_\_

This program is:     Public       Private       Other       Prefer not to answer

1. Is the child currently enrolled in early preschool services?

- Yes                                       Unknown  
 No                                          Prefer not to answer

### If no...

2. What was the approximate date of the child's or family's last preschool service? \_\_\_\_\_

3. What was the main reason for service not being offered or discontinued? (check all that apply)

- Family moved away. Please indicate any available new location and provider information for the family below.  
 Family discontinued service (e.g. no longer interested). Please give reason below.  
 Child changed household or custody (e.g. changed foster family). Please give new address below if you have it.  
 Family had transportation barriers  
 Repeated attempts to contact family were unsuccessful  
 Child was no longer eligible for service  
 Child is deceased  
 Don't know  
 Other (please specify below)

Prefer not to answer

---

4. If you selected that the child is no longer eligible for service, please indicate why:

- Based on assessment results
- Based on attainment of goals
- Due to both assessment results and attainment of goals
- Prefer not to answer

5. About how long did it take after the child received the cochlear implant(s) for early intervention services to begin?

\_\_\_\_\_ months

6. How would you best describe this child's environment, Monday through Friday? (please choose all that apply)

	<b>Full Time</b>	<b>Part Time</b>	<b>Prefer not to answer</b>
At home with parent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the home of a family member (other than the parent)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public/Regular (school district) preschool setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private preschool setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Center-based preschool for deaf or hard of hearing children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Center-based preschool program (multi-categorical/special education)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daycare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Another setting (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Services Provided

7. From the following list, please identify the child's/family's Primary Service Provider. The Primary Service Provider is typically the person who sees the child most frequently in relation to his/her cochlear implant(s) and the IEP. Next, identify the other service providers who support the child/family in the "Other Service Providers" column.

<b>Check appropriate boxes to indicate which providers are serving the child and indicate if they serve in a primary role or a support role.</b>	<b>Primary Provider</b> (check only one)	<b>Other Service Providers</b> (check all that apply)	<b>Prefer not to answer</b>
Early intervention specialist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Early childhood special education teacher	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speech language pathologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teacher of the deaf and hard of hearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Certified auditory-verbal therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Audiologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family counselor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Genetic counselor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occupational therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ophthalmologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENT physician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Case Manager/Service Coordinator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social Worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Please identify the location(s) where this child receives services from the Primary Service Provider. Check the location where services were received most frequently and second most frequently. (check no more than two)

	<b>Most frequent location</b>	<b>Second most frequent location</b>	<b>Prefer not to answer</b>
In the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Home of a care provider (what was relationship, if any, to child)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Regular daycare environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private preschool setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specialized center-based early intervention program (multi-categorical)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clinic or office (therapist's office)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specialized center-based preschool for the deaf or hard-of-hearing children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Another setting (e.g. extended family or neighbor's home) (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. In your opinion, how conducive for implementing intervention goals was the location where services were most frequently provided?

- Good
- Fair
- Poor
- Prefer not to answer

10. If the setting was rated as poor or fair, what factors contributed to this rating?

- Noisy
- Visually distracting
- Frequent interruptions
- Other (please specify) \_\_\_\_\_
- Prefer not to answer

11. Please identify all of the services the child has received in the past 12 month time period as a part of his/her preschool program. (check all that apply)

- None
- Amplification and/or Assistive devices
- FM
- Cochlear Implants
  - binaural
  - monaural

- Consultation to daycare providers
- Family-to-family support/parent group
- Translation (interpreter services)
  - Sign Language
  - Foreign Language
- Sign language instruction
- Ancillary private therapies (i.e., AVT or speech therapy) \_\_\_\_\_ times/week
- Sensory integration therapy
- Transportation
- Other (please specify) \_\_\_\_\_
- Prefer not to answer

### Service Frequency, Participation and Location

12. In an average month, how frequently and for what amount of time did you provide services for this child/family?

Example: Two times a month for 30 minutes per session.

\_\_\_\_\_ times per month for \_\_\_\_\_ minutes per session

13. In an average month, how often were visits missed?

Approximately \_\_\_\_\_ sessions per month  
(number)

14. Which of the following caused this child to miss services? Please select the most common reason and the second most common reason.

Reason	Most Common	Second Most Common	Prefer not to answer
No services were missed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasons related to the child (e.g. child was sick)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasons related to the family (e.g. transportation, parent forgot about appointment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasons related to the service provider (e.g. provider illness, staff not available)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Don't Know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Which family members participate in at least one-half of the sessions?

	Yes	No	Prefer not to answer
Mother (stepmother)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Father (stepfather)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Siblings: list number of sibs typically present _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Grandmother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grandfather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family members do not participate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. If services were received in a center-based daycare or school-based setting, were the services provided to the child alone or to the child in a group?

- Child alone
- Child in a group (indicate number of children in the group \_\_\_\_\_)
- Both alone ( \_\_\_\_\_ percent) and in a group ( \_\_\_\_\_ percent)
- Not applicable
- Prefer not to answer

17. If services were provided in a group setting, how would you describe the other children in the group? (check all that apply)

- Children with hearing aids
- Children with cochlear implants
- Children with normal hearing
- Children with other special needs
- Not applicable
- Prefer not to answer

18. If you could change two things about this child's services, what would they be? Please explain in the comment box below.

### Current Caseload

19. About how many children/families do you serve? (e.g. your typical caseload, give your best estimate)

\_\_\_\_\_ Number of active children/families in your caseload



20. About how many of these cases are children with a cochlear implant(s)?

\_\_\_\_\_ (please give your best estimate)

	Yes	No	Prefer not to answer
Behavioral/emotional disorders, including autism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developmental delays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health Impairment/medically fragile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiple impairments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthopedic impairment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vision loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor impairments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Of the children with a cochlear implant(s) on your caseload, \_\_\_\_\_ out of \_\_\_\_\_ have additional disabilities.

22. In addition to children with a cochlear implant(s), which of the following are included in the population of infants and toddlers currently served by your program?

### Personal Preparation

23. Please indicate the highest degree you have earned:

- Associate's degree
- Bachelor's degree
- Master's degree
- Doctoral degree
- Other (please specify) \_\_\_\_\_
- Prefer not to answer

24. Please indicate the area in which you earned your degree(s). (check all that apply)

- Education of the deaf and hard of hearing
- Early childhood education
- Special education
- Early childhood special education
- Speech-language pathology
- Audiology
  - Masters
  - Au.D.
- Other (please specify) \_\_\_\_\_
- No degree in this area
- Prefer not to answer



Designing the appropriate intervention goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Incorporating language development into daily activities such as dressing & meal time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using toys and play to develop language	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expanding the child's vocabulary repertoire	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing a child's oral skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing a child's sign language skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Promoting early literacy for a child with hearing loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carryover of speech activities to the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carryover of language activities to the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daily checks of the child's cochlear implant(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utilization of the Ling Six Sound test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Troubleshooting hearing devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using FM effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing a child's ability to listen (auditory curricula)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. How frequently do you communicate with the child's audiologist?

- Never
- 1 – 2 times per year

- 3 – 4 times per year
- Frequently (please specify) \_\_\_\_\_
- Not applicable
- Prefer not to answer

31. How frequently do you communicate with the child's other service providers?

- Never
- 1 – 2 times per year
- 3 – 4 times per year
- Frequently (please specify) \_\_\_\_\_
- There are no other service providers
- Not applicable because \_\_\_\_\_
- Prefer not to answer

## Development of the Individualized Education Plan

### The Education Plan

An Individualized Education Plan (IEP) is a written plan that families and professionals develop together. The IEP is designed to meet the unique educational needs of one child.

32. Did you develop an IEP with the family?

- Yes
- No
- Prefer not to answer

**For the questions in this section, please think about the period of time when the IFSP was being developed.**

33. When the most recent IEP was developed, the family:

	Yes	Sometimes	No	Prefer not to answer	Comments
Had the opportunity to review their child's education plan prior to the IEP meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was an equal partner in planning the goals and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Had a choice about how often their child received services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Had a choice about the location of services (e.g. daycare center, center, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Was given the opportunity to participate in the services with their child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Disagreed with any aspect of the education plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

34. How was eligibility determined? (check all that apply)

- Multidisciplinary school-based evaluation
- Outside evaluation (e.g., private therapist, early interventionist)
- Doctor's letter or referral
- Not sure
- Prefer not to answer

35. Is the child's **primary** eligibility related to having a cochlear implant(s)?

- Yes
- No
- Not sure
- Prefer not to answer

36. Typically, how often are the child's speech and language abilities formally assessed?

- More than 1 time a year
- Every 1 – 2 years
- Every 3 years or more
- Prefer not to answer

37. What assessments/evaluation tools do you typically use?

---

38. How were therapy goals related to the child's hearing loss and communication established? (choose all that apply)

- Based on assessment results
- Goals were continued from early intervention
- Taken from a district/state goal bank (e.g. pre-created/standard goals)
- Based on observation
- Prefer not to answer

Comment: (please provide details in the box below about the assessment strategies used)

39. What curriculum, if any, is used for the child's instruction?

---

40. Which of the following statements best describes the progress this child has made in the past 6 months toward the outcomes specified in the IEP? (check one)

The child has:

- Achieved more goals than expected in the IEP
- Achieved about as many goals as expected in the IEP
- Achieved fewer goals than expected in the IEP
- Don't know
- Prefer not to answer

Comment: (please comment on observations you have made about factors influencing this child's progress)

### Your Role as this Child's Primary Service Provider

41. Regarding the child's family, as the child's Primary Service Provider did you:

	Yes	Another Service Provider Assisted	No Assistance Provided	Uncertain	Prefer not to answer
Help with filling out forms, if assistance was needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the parents contact parents of other children with a cochlear implant(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the parents feel more confident in their ability to parent this child?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the family find funding for services or equipment, if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encourage the family to be the major- decision maker about their child?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the family become knowledgeable about the	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

hearing technology their child uses?					
Motivate the family to communicate with their child?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Show the family how to incorporate language into their daily routines like dressing & bathing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the family prepare for the child's next therapeutic/educational setting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

42. During sessions with the child, what is the approximate time that you spend on the following? (estimate the **number of minutes** in a one hour session)

- \_\_\_\_\_ Direct "child-centered" therapy
- \_\_\_\_\_ Observing and guiding other support personnel (e.g. daycare workers, teachers, aids) as they interact with the child
- \_\_\_\_\_ Modeling strategies for other support personnel
- \_\_\_\_\_ Providing language and speech stimulation for the child
- \_\_\_\_\_ Educating and providing support for family members
- \_\_\_\_\_ Working with siblings
- \_\_\_\_\_ Evaluating outcomes
- \_\_\_\_\_ Other (please specify)
- 

### Cochlear Implant Use

43. Does this child have a cochlear implant(s)?

- Yes
- No
- Don't know
- Prefer not to answer

44. Which statement best describes this child's **current use** of his/her cochlear implant(s)?

	<b>CHECK ONE</b>
Easily accepts the cochlear implant(s) and wears it on a full-time, daily basis	<input type="checkbox"/>
Allows the cochlear implant(s) to be placed on his/her head but removes it periodically throughout the day	<input type="checkbox"/>
Resists the cochlear implant(s) being placed on his/her head and it is a struggle to keep it on for any extended period of time	<input type="checkbox"/>
Seldom uses the cochlear implant(s)	<input type="checkbox"/>
Probably never uses the cochlear implant(s)	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

### **Family's knowledge and confidence regarding the cochlear implant(s) and FM**

45. How would you describe the family's **level of knowledge** about managing their child's cochlear implant(s)? (conducting listening checks, trouble-shooting, changing batteries, etc)

	<b>CHECK ONE</b>
Doesn't know very much about how to manage the a cochlear implant(s)	<input type="checkbox"/>
Has some knowledge but wants to learn more about managing the cochlear implant(s)	<input type="checkbox"/>
Has learned how to manage the cochlear implant(s)	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

46. Which of the following best describes the family's current **level of confidence** in managing their child's cochlear implant(s)?

	<b>CHECK ONE</b>
Not yet confident managing the cochlear implant(s)	<input type="checkbox"/>
Beginning to be confident managing the cochlear implant(s)	<input type="checkbox"/>
Somewhat confident managing the cochlear implant(s)	<input type="checkbox"/>
Completely confident managing the cochlear implant(s)	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

47. Does this child use an FM system at home?

- Yes
- No
- Don't know
- Prefer not to answer



48. Which best describes this child's current FM system use **at home**?

	<b>CHECK ONE</b>
Regularly uses the FM system in a variety of situations	<input type="checkbox"/>
Occasionally uses the FM system	<input type="checkbox"/>
Rarely uses the FM system	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

49. How would you describe the family's **level of knowledge** about managing their child's FM system? (conducting listening checks, trouble-shooting, changing batteries, etc)

	<b>CHECK ONE</b>
Doesn't know much about how to manage the FM	<input type="checkbox"/>
Has some knowledge but wants to learn more about managing the FM system	<input type="checkbox"/>
Has learned how to manage the FM system	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

50. Which of the following best describes the family's current **level of confidence** in managing their child's FM system?

	<b>CHECK ONE</b>
Not yet confident managing the FM	<input type="checkbox"/>
Beginning to be confident managing the FM	<input type="checkbox"/>
Relatively confident managing the FM	<input type="checkbox"/>
Completely confident managing the FM	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

51. Are there any issues surrounding service to preschoolers with a cochlear implant(s) and their families that you find challenging? (please comment in the box below)

--

52. Are there any additional thoughts or concerns regarding provision of services to young children with a cochlear implant(s) that you would like to share with us? (please comment in the box below)

**Thank you for completing our survey! Please select your gift card from the options below.**

- \$10 Starbucks Gift Card
- \$10 Target Gift Card
- \$10 Barnes & Noble Gift Card

APPENDIX D

SCHOOL AGE SERVICE PROVIDER SURVEY

Investigating Service Provision in Children  
with  
Cochlear Implants

**Services and Provider Survey (SPS)  
School Age**

**Questions? Please contact Tara Gjerstad at 319-353-6582**

## SERVICES AND PROVIDER SURVEY (SPS)

I choose to:  complete the survey  not complete the survey

### Identifying Information

Enter the data entry code: \_\_\_\_\_

Today's Date: \_\_\_\_\_

First name of professional completing form:

\_\_\_\_\_

Last name of professional completing form:

\_\_\_\_\_

Professional's phone number:

\_\_\_\_\_

Professional's email address:

\_\_\_\_\_

Agency name:

\_\_\_\_\_

Agency address:

\_\_\_\_\_

\_\_\_\_\_

This program is:  Public  Private  Other  Prefer not to answer

1. Is the child currently enrolled in early preschool services?

- Yes  Unknown  
 No  Prefer not to answer

### If no...

2. What was the approximate date of the child's or family's last preschool service?

\_\_\_\_\_

3. What was the main reason for services not being offered or discontinued? (check all that apply)

- Family moved away. Please indicate any available new location and provider information for the family below.
- Family discontinued service (e.g. no longer interested). Please give reason below.
- Child changed household or custody (e.g. changed foster family). Please give new address below if you have it.
- Family had transportation barriers
- Repeated attempts to contact family were unsuccessful
- Child was no longer eligible for service
- Child is deceased

- Don't know
  - Other (please specify below)
  - Prefer not to answer
- 

4. If you selected that the child is no longer eligible for service, please indicate why:

- Based on assessment results
- Based on attainment of goals
- Due to both assessment results and attainment of goals
- Prefer not to answer

5. About how long did it take for services to begin after the child transitioned from early intervention services?

\_\_\_\_\_ months

6. What is the child's primary school setting? (please choose all that apply)

Public/Regular (school district) school setting	<input type="checkbox"/>
Private school setting	<input type="checkbox"/>
Center-based school for deaf or hard of hearing children	<input type="checkbox"/>
Center-based school program (multi-categorical/special education)	<input type="checkbox"/>
Another setting (please specify)_____	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

7. How would you best describe this child's environment after school, Monday through Friday? (please choose all that apply)

	<b>Full Time</b>	<b>Part Time</b>	<b>Prefer not to answer</b>
At home with parent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the home of a family member (other than the parent)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
After school program (YMCA program, Parks & Recreation, etc)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daycare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Another setting (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Services Provided

8. From the following list, please identify the child's/family's Primary Service Provider. The Primary Service Provider is typically the person who sees the child most frequently in relation to his/her hearing loss and the IEP. Next, identify the other service providers who support the child/family in the "Other Service Providers" column.

<b>Check appropriate boxes to indicate which providers are serving the child and indicate if they serve in a primary role or a support role.</b>	<b>Primary Provider  (check only one)</b>	<b>Other Service Providers  (check all that apply)</b>	<b>Prefer not to answer</b>
Special education teacher (not THI)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speech language pathologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teacher of the deaf and hard of hearing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Certified auditory-verbal therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Audiologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Occupational therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ophthalmologist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ENT physician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Therapist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Case Manager/Service Coordinator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social Worker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. Please identify the location(s) where this child receives services from the Primary Service Provider. Check the location where services were received most frequently and second most frequently. (check no more than two)

	<b>Most frequent location</b>	<b>Second most frequent location</b>	<b>Prefer not to answer</b>
In the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public (school district) school setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Private school setting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Center-based school for deaf or hard of hearing children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Center-based school program (multi-categorical)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Clinic or office (therapist's office)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Another setting (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. In your opinion, how conducive for implementing intervention goals was the location in which services were provided most frequently?

- Good
- Fair
- Poor
- Prefer not to answer

11. If the setting was rated as poor or fair, what factors contributed to this rating?

- Noisy
- Visually distracting
- Frequent interruptions
- Other (please specify) \_\_\_\_\_
- Prefer not to answer

12. Please identify all of the services the child has received in the past 12 month time period as a part of his/her preschool program. (check all that apply)

- None
- Amplification and/or Assistive devices
- FM
- Cochlear Implant
  - binaural
  - monaural
- Consultation to other providers
- Family-to-family support/parent group
- Translation (interpreter services)
  - Sign Language
  - Foreign Language
- Sign language instruction
- Ancillary private therapies (i.e., AVT or speech therapy) \_\_\_\_\_ times/week
- Sensory integration therapy
- Academic tutoring
- Other (please specify) \_\_\_\_\_
- Prefer not to answer

### Frequency of Services

13. In an average month, how frequently and for what amount of time did you provide services for this child/family?

Example: Two times a month for 30 minutes per session.

\_\_\_\_\_ times per month for \_\_\_\_\_ minutes per session

14. In an average month, how often were visits missed?

Approximately \_\_\_\_\_ sessions per month  
(number)

15. Which of the following caused this child to miss services? Please select the most common reason and the second most common reason.

<b>Reason</b>	<b>Most Common</b>	<b>Second Most Common</b>	<b>Prefer not to answer</b>
No services were missed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasons related to the child (e.g. child was sick)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasons related to the family (e.g. transportation, parent forgot about appointment)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reasons related to the service provider (e.g. provider illness, staff not available)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Don't Know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Which family members participate in at least one-half of the sessions?

	<b>Yes</b>	<b>No</b>	<b>Prefer not to answer</b>
Mother (stepmother)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Father (stepfather)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Siblings: list number of sibs typically present _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grandmother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grandfather	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other relative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family members do not participate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. If services are received in a center-based or school-based setting, are the services provided to the child alone or to the child in a group?

- Child alone
- Child in a group (indicate number of children in the group \_\_\_\_\_)
- Both alone ( \_\_\_\_\_ percent) and in a group ( \_\_\_\_\_ percent)
- Not applicable
- Prefer not to answer



18. If services were provided in a group setting, how would you describe the other children in the group? (check all that apply)

- Children with hearing aids
- Children with cochlear implants
- Children with normal hearing
- Children with other special needs
- Not applicable
- Prefer not to answer

19. If you could change two things about this child's services, what would they be? Please explain in the comment box below.

### **Current Caseload**

20. About how many children/families do you serve? (e.g. your typical caseload, give your best estimate)

\_\_\_\_\_ Number of active children/families in your caseload

21. About how many of these cases are children with permanent hearing loss (of any degree)?

\_\_\_\_\_ (please give your best estimate)

22. About how many children with a cochlear implant(s) do you currently serve? \_\_\_\_\_

23. Of the children with hearing loss on your caseload, \_\_\_\_\_ out of \_\_\_\_\_ have additional disabilities.

24. In addition to children with hearing loss, which of the following children are currently served by your program?

	Yes	No	Prefer not to answer
Behavioral/emotional disorders, including autism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developmental delays	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health Impairment/medically fragile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Multiple impairments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Orthopedic impairment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vision loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motor impairments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Personal Preparation

25. Please indicate the highest degree you have earned:

- Associate's degree
- Bachelor's degree
- Master's degree
- Doctoral degree
- Other (please specify) \_\_\_\_\_
- Prefer not to answer

26. Please indicate the area in which you earned your degree(s). (check all that apply)

- Education of the deaf and hard of hearing
- Early childhood education
- Special education
- Early childhood special education
- Speech-language pathology
- Audiology
  - Masters
  - Au.D.
- Other (please specify) \_\_\_\_\_
- No degree in this area
- Prefer not to answer

27. What certifications or licenses do you hold? (check all that apply)

- Teacher of the deaf and hard of hearing
- Early childhood education
- Special education teacher
- Early childhood special education
- Speech-language pathologist
- Audiology
- Other (please specify) \_\_\_\_\_
- Prefer not to answer



Encouraging student participation in discussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Development of self-advocacy skills for communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Promoting literacy for a child with hearing loss	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carryover of speech goals/targets to the classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carryover of language goals to the classroom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carryover of speech goals/targets to the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Carryover of language goals to the home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing a child's sign language skills	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Incorporating accommodations and modifications in the school environment to maximize a child's hearing ability (ex: modifications to physical space)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daily checks of the child's cochlear implant(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Utilization of the Ling Six Sound test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Troubleshooting hearing devices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using FM effectively	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Developing a child's ability to listen across challenging environments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supporting academic development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. How frequently do you communicate with the child's audiologist?

- Never
- 1 – 2 times per year
- 3 – 4 times per year
- Frequently (please specify) \_\_\_\_\_
- Not applicable
- Prefer not to answer

33. How frequently do you communicate with the child's other service providers?

- Never
- 1 – 2 times per year
- 3 – 4 times per year
- Frequently (please specify) \_\_\_\_\_
- Not applicable because \_\_\_\_\_
- Prefer not to answer

## Development of the Individualized Education Plan

### The Education Plan

An Individualized Education Plan (IEP) is a written plan that families and professionals develop together. The IEP is designed to meet the unique educational needs of one child.

34. Did you develop an IEP with the family?

- Yes
- No
- Prefer not to answer

**For the questions in this section, please think about the period of time when the IFSP was being developed.**

35. When the most recent IEP was developed, the family:

	Yes	Sometimes	No	Prefer not to answer	Comments
Had the opportunity to review their child's education plan prior to the IEP meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was an equal partner in planning the goals and services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Had a choice about how often their child received services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Had a choice about the location of services (e.g. daycare center, center, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was given the opportunity to participate in the services with their child	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Disagreed with any aspect of the education plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

36. How was **primary** eligibility determined? (check all that apply)

- Multidisciplinary school-based evaluation
- Outside evaluation (e.g., private therapist, early interventionist)
- Doctor's letter or referral
- Not sure

Prefer not to answer

37. Is the child's **primary** eligibility related to his/her hearing loss?

- Yes
- No
- Not sure
- Prefer not to answer

38. Typically, how often are the child's speech and language abilities formally assessed?

- More than 1 time a year
- Every 1 – 2 years
- Every 3 years or more
- Prefer not to answer

39. What assessments/evaluation tools do you typically utilize?

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40. How were therapy goals related to the child's hearing loss and communication established?  
(choose all that apply)

- Based on assessment results
  - Goals were obtained from a previous service provider
  - Taken from a district/state goal bank (e.g. pre-created/standard goals)
  - Based on observation
  - Other (please specify)
- 

Prefer not to answer

Comment: (please provide details in the box below about the assessment strategies used)

41. What curriculum, if any, is used for the child's instruction?

---

42. Which of the following statements best describes the progress this child has made in the past 12 months toward goals specified in the IEP? (check one)

The child has:

- Achieved more goals than expected in the IEP
- Achieved about as many goals as expected in the IEP
- Achieved fewer goals than expected in the IEP
- Don't know
- Prefer not to answer

Comment: (please comment on observations you have made about factors influencing this child's progress)

### **Your Role as this Child's Primary Service Provider**

43. Regarding the child's family, as the child's Primary Service Provider did you:

	<b>Yes</b>	<b>Another Service Provider Assisted</b>	<b>No Assistance Provided</b>	<b>Uncertain</b>	<b>Prefer not to answer</b>
Have the opportunity to interact with the family on a regular basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the parents become more effective advocates for their child's communication and academic needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encourage the family to be the major decision maker about their child?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the family become knowledgeable about the hearing technology their child uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motivate the family to utilize more complex language structures (in order to expand the child's language understanding and use)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Show the family how to incorporate language into their daily routines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the family prepare for the child's next therapeutic/educational setting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the family find funding for services or equipment, if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motivate the family to utilize amplification during "all waking hours"?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Involve the family in parent-to-parent support activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

44. Regarding the child's school environment, as the child's Primary Service Provider did you:

	<b>Yes</b>	<b>Another Service Provider Assisted</b>	<b>No Assistance Provided</b>	<b>Uncertain</b>	<b>Prefer not to answer</b>
Have the opportunity to interact with the classroom teacher on a regular basis?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help teachers and support staff feel more confident in their ability to educate this child with a hearing loss?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Show teachers and support staff how to incorporate the child's communication goals into their daily school routines?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help the child prepare for his/her next therapeutic/educational setting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help find funding for services or equipment if needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Help teachers and support staff become knowledgeable about the hearing technology that the child uses?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Encourage "all day" usage of the child's amplification while at school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



45. During sessions with the child, what is the approximate time that you spend on the following?  
(estimate the **number of minutes** in a one hour session)

- \_\_\_\_\_ Direct “child-centered” therapy
- \_\_\_\_\_ Observing and guiding other support personnel (e.g. daycare workers, teachers, aids) as they interact with the child
- \_\_\_\_\_ Modeling strategies for other support personnel
- \_\_\_\_\_ Providing language and speech stimulation for the child
- \_\_\_\_\_ Educating and providing support for family members
- \_\_\_\_\_ Working with siblings
- \_\_\_\_\_ Evaluating outcomes
- \_\_\_\_\_ Other (please specify)
- 

### Cochlear Implant Use

46. Does this child have a cochlear implant(s)?

- Yes
- No
- Don't know
- Prefer not to answer

47. Which statement best describes this child's **current use** of his/her cochlear implant(s)?

	<b>CHECK ONE</b>
Easily accepts the cochlear implant(s) and wears it on a full-time, daily basis	<input type="checkbox"/>
Allows the cochlear implant(s) to be placed on his/her head but removes them periodically throughout the day	<input type="checkbox"/>
Resists the cochlear implant(s) being placed on his/her head and it is a struggle to keep it on for any extended period of time	<input type="checkbox"/>
Seldom uses the cochlear implant(s)	<input type="checkbox"/>
Probably never uses the cochlear implant(s)	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

48. How would you describe the family's **level of knowledge** about managing their child's hearing aids? (conducting listening checks, trouble-shooting, changing batteries, etc)

	<b>CHECK ONE</b>
	<input type="checkbox"/>

Doesn't know very much about how to manage the cochlear implant(s)	<input type="checkbox"/>
Has some knowledge but wants to learn more about managing the cochlear implant(s)	<input type="checkbox"/>
Has learned how to manage the cochlear implant(s)	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

49. Which of the following best describes the family's current **level of confidence** in managing their child's cochlear implant(s)?

	<b>CHECK ONE</b>
Not yet confident managing the cochlear implant(s)	<input type="checkbox"/>
Beginning to be confident managing the cochlear implant(s)	<input type="checkbox"/>
Somewhat confident managing the cochlear implant(s)	<input type="checkbox"/>
Completely confident managing the cochlear implant(s)	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

50. Does this child use an FM system at home?

- Yes
- No
- Don't know
- Prefer not to answer

51. Which best describes this child's current FM system use **at home**?

	<b>CHECK ONE</b>
Regularly uses the FM system in a variety of situations	<input type="checkbox"/>
Occasionally uses the FM system	<input type="checkbox"/>
Rarely uses the FM system	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

52. How would you describe the family's **level of knowledge** about managing their child's FM system? (conducting listening checks, trouble-shooting, changing batteries, etc)

	<b>CHECK ONE</b>
Doesn't know much about how to manage the FM	<input type="checkbox"/>
Has some knowledge but wants to learn more about managing the FM system	<input type="checkbox"/>
Has learned how to manage the FM system	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

53. Which of the following best describes the family's current **level of confidence** in managing their child's FM system?

	<b>CHECK ONE</b>
Not yet confident managing the FM	<input type="checkbox"/>
Beginning to be confident managing the FM	<input type="checkbox"/>
Relatively confident managing the FM	<input type="checkbox"/>
Completely confident managing the FM	<input type="checkbox"/>
Prefer not to answer	<input type="checkbox"/>

54. Are there any issues surrounding service to preschoolers with hearing loss and their families that you find challenging? (please comment in the box below)

55. Are there any additional thoughts or concerns regarding provision of services to young children with mild to severe hearing loss that you would like to share with us? (please comment in the box below)

**Thank you for completing our survey! Please select your gift card from the options below.**

- \$10 Starbucks Gift Card
- \$10 Target Gift Card
- \$10 Barnes & Noble Gift Card