

## **National Early Childhood Assessment Project – D/HH**

### **Project Justification**

Severe delays in the acquisition of speech and language have been consistently documented in deaf children. These language delays are apparent early in life and are directly related to significant later limitations in reading and writing. The severe limitations that most deaf individuals face when reading, in turn, have a profound impact on their ability to learn during the school years and throughout their life.

Universal newborn hearing screening has increased dramatically the number of infants identified with hearing loss within the first few months of life and has reduced the age at which intervention services are initiated. This provides an excellent opportunity to raise the language levels of children who are deaf or hard of hearing, potentially closing the gap between children with hearing loss and their hearing peers by the time of school entry.

A data-driven approach to early intervention will assist in achieving the goal of maximizing the language abilities of children with hearing loss. This is accomplished through regular and consistent assessment of all children within an intervention program. The aggregate results of this assessment can be used to evaluate the intervention program as a whole, guide program development, and inform professional preparation needs. The results for individual children allow parents and interventionists to monitor a child's progress over time and identify potential delays at their onset. Additionally, results from the assessment data can be used to generate IFSP/IEP goals and to provide a data-driven approach to educational programming decisions.

The use of a standard, nationwide assessment battery, provides significant benefits to the field of deafness in addition to the general benefits of regular assessment described above. By using a common set of assessment tools, states can contribute to a national outcomes database that will provide much-needed data on the progress of a large group of young children who are deaf or hard of hearing with varying characteristics. This database will allow us to characterize the language strengths and weaknesses of children with hearing loss and identify factors that are predictive of more successful language outcomes. The identification of key variables that lead to better (or poorer) outcomes for young deaf and hard-of-hearing children will allow early intervention and preschool programs to identify children that may be at risk for significant delays in speech and/or language. In addition, it will assist intervention and educational programs in designing curriculums that will maximize the success of all deaf and hard-of-hearing children.

### **Eligible Participants**

All children with permanent hearing loss are eligible to participate. Children whose loss is not permanent (e.g., cases where the hearing loss is solely a result of otitis media) are not eligible. Eligible children may have:

- Unilateral or bilateral loss
- Conductive, sensori-neural, or mixed hearing loss
- Any degree of permanent hearing loss from mild to profound
- Multiple disabilities or hearing loss only
- English or Spanish as the language of the home

## **Testing Schedule**

Individual programs may determine the testing schedule for their children based on when they feel the developmental information would be of most value. The instruments included in the test battery are valid and reliable for children from 14 months to 4 years of age. Testing is recommended at 6 to 12 month intervals in order to monitor progress and inform intervention. Completed questionnaires should be sent to the university one full month before the results are needed to allow time for mailing, scoring, and report writing.

If a program does not have a specific preference regarding the testing schedule, the following test ages (plus or minus one month) are recommended:

- 15 months
- 24 months
- 33 months (to provide information in time for transition to Part B)
- 4 years (if the child is still enrolled in the program)

## **Testing Procedure**

At each assessment, parents will complete several developmental questionnaires regarding their child's language and general developmental skills. These questionnaires are described in more detail in the section below. Completion of the questionnaires requires approximately 1 to 2 hours of the parent's time. Typically, the questionnaires are given to the family by their interventionist at a regularly scheduled visit. The interventionist reviews the instructions for completing the questionnaires with the family and answers any questions they might have. They inform the family that they will collect the completed questionnaires at the next scheduled visit.

When the interventionist retrieves the questionnaires from the family, it is critical that they review all of the forms for completeness and accuracy. Incomplete forms can not be scored, and inaccurately completed forms are of no value to the family, provider, or national database. If the interventionist disagrees with the family's assessment of the child's abilities, this is an excellent clinical opportunity to provide education to the family about observation of their child's skills. The interventionist, preferably with input from the family, should complete any missing items and make corrections to the responses as needed.

Completed assessment protocols should be sent to Dr. Allison Sedey at the University of Colorado at Boulder for scoring and input into the national outcomes database. Dr. Sedey will generate a report of the results and return these to the child's early intervention provider. It is the responsibility of the interventionist to share the report with the family and/or other professionals as

determined by each individual program. Results from the report can be used to identify potential delays and track individual children's progress over time. It may also be useful to the provider in establishing goals and/or making other programming decisions.

## **Cost and Benefits**

The cost for this service will be \$50 per child per assessment packet. If a provider chooses to complete the Play Assessment Questionnaire in addition to the standard set of protocols, the total cost will be \$75 per assessment.

The fee for the assessment includes the following services:

- Scoring of all questionnaires
- A written report sent to the interventionist detailing the results of the testing
- A profile sheet based on the results of the Minnesota Child Development Inventory graphically displaying the child's areas of strengths and weaknesses relative to their chronological age
- A summary sheet detailing the raw scores and age scores obtained on the MacArthur Communicative Inventory
- An annual accountability report summarizing the language and developmental outcomes of children within the state. This information can be disaggregated based on key demographic characteristics (e.g., presence of additional disabilities, degree of hearing loss, etc.) on request.
- Participation in the establishment of a national database to track outcomes for young children who are deaf or hard of hearing

## **Description of Questionnaires**

*Minnesota Child Development Inventory:* This instrument assesses the child's development in nine domains. They are: social, self help, gross motor, fine motor, expressive language, language comprehension, letters, numbers, and situational comprehension. Parents circle "yes" or "no" to a series of statements describing different skills. Developmental age scores are derived for each of the subscales. These are plotted on a profile graph relative to the child's chronological age so that areas of strength and weakness can be seen easily.

*MacArthur Communicative Inventories:* There are three inventories in this series. Only one is completed at a given age based on the child's estimated vocabulary size. All three of the inventories assess a child's use of vocabulary. Parents check off words that their child produces in speech and/or sign. Depending on the inventory selected, additional skills may be measured including vocabulary comprehension, grammar, and cognitive-linguistic abilities. For each area that is assessed an age score is calculated and presented on a single summary sheet.

- *Demographic Information Form*: This form is used to obtain information about the child's hearing loss (age of identification, age of onset, etc.), any other disabilities the child may have, the type of communication used with the child (sign language, spoken language only, etc.), and the type and amount of intervention the child receives.

- *Audiologic Release Form*: This form will be used so that audiologic records can be obtained for each participant from whatever facility they go to for hearing testing. In lieu of this form, interventionists/families may provide a recent unaided audiogram and/or the results of ABR testing.

- *Consent form*: This form requests the parents' permission for including their child's results in the national database.

- *Play Assessment Questionnaire*: This assessment is optional, and scoring of this protocol increases the cost of the evaluation from \$50 to \$75. The Play Assessment Questionnaire lists a variety of play and play-related behaviors demonstrated by children from 2 month to 3 years of age. Parents indicate which behaviors they have observed in their child. A developmental age score is calculated based on behaviors a child can do independently as well as a score for what he/she is able to accomplish with adult assistance. These scores are highly correlated with cognitive ability, thus the results of the assessment can give an indication of a child's non-verbal cognitive level. The items on the questionnaire are arranged in a developmental hierarchy, thus it is often useful to interventionists and parents in identifying symbolic play goals for individual children.

## **Training**

Optional in-service training will be provided on request. The cost of this training is \$1,500 for a single day which includes transportation, lodging, food, and trainer stipend. For each additional day of training within the same visit, the cost is \$800.

A series of three, one to two day trainings over the course of a year are recommended. These would include:

1. Description of the assessment instruments, instructions for test administration, understanding the assessment results, and logistics for disseminating and completing the assessments
2. Interpreting the results of the assessment and using the results to establish goals, make programming decisions, and guide intervention
3. A follow-up on the training described above after interventionists have had approximately 6 months of experience administering the assessment instruments and receiving the results