

Project Plan: Educational audiology plays a vital role in both the educational and healthcare success of children with hearing loss. Educational audiologists provide a full range of services to children, as part of a multidisciplinary team, to facilitate “listening, learning and communication access via specialized assessments, monitor personal hearing instruments; recommend, fit and manage hearing assistance technology; provide and recommend support services and resources; and advocate on behalf of the students.” In addition, “ Educational audiologists provide evidence for needed services and technology, emphasize access skills and supports, counsel children to promote personal responsibility and self-advocacy, maintain student performance levels, collaborate with private sector audiologists, help student transitions and team with other school professions to work most effectively to facilitate student learning” (Educational Audiology Association, 2018). Literature has suggested over numerous years that educational audiology services are valuable and produce efficacious outcomes for students with hearing loss (Stewart & Funaki, 1968; Dijk, 2003).

However, the state’s educational audiology is severely lacking and the children of Mississippi deserve these services in order to be successful. In the state of Mississippi, there are currently two full-time educational audiologists- one of which is employed solely by the DeSoto County School District and the other which is employed by the Children’s Center. Unfortunately, these educational audiologists serve only the children within their schools and are not available for other children in the state. The authors of this grant do contract occasionally to local area schools as needed, but because of job and time commitments, it is extremely infrequent and is an inadequate service as a whole. The children of Mississippi deserve to have access to educational audiology services as do the schools to help the children become the most successful citizens.

This grant will serve as a pilot study for an educational audiology model in which both telepractice and direct educational audiology service provision are delivered to one school district within the state. Outcomes of this project will be analyzed and combined for state and national presentations as well as publications. It is the authors' hopes that the project identifies a new model for educational audiology service provision which will work for the state until we can reach the level of educational audiology in which other states have long achieved.

Facilities and Resources: After permission is obtained from the school district, the researchers will have access to all of their students with hearing loss and all of the teachers and paraprofessionals who work with these children. The exact numbers cannot be given at this time as choice of school is based upon receipt of this grant.

Methods and Procedures:

The researchers will work collaboratively to provide educational audiology services to one large school district within the state. Dr. Lowe will provide the telepractice services and Dr. Ward will provide the direct service provision. Listed below are the procedures which will be utilized in obtaining this pilot data.

Selection of School System: One school district will be selected to pilot this hybrid model in the Hattiesburg area. The school will be selected based upon the following criteria: willingness to work with the investigators and comply with outcome measures; number of children with hearing loss; lack of appropriate audiologic services; and willingness to house and use telepractice equipment following all HIPAA standards.

Assessment of School District: An initial needs assessment of the school district at large, the

services already provided, the services needed, and the budget available will be assessed through an in-person interview and electronic questionnaire.

Assessment of each child with hearing loss: The audiograms, audiology reports, previous year's grades and current IEP/504 of each student with hearing loss in the school district will be reviewed and a needs assessment on services for each student will be implemented.

Inservice training of school personnel: All members of the team working with each HOH student will receive in-service training on the following topics: a) The needs of hard-of-hearing children, b) The role of the educational audiologist, c) A multidisciplinary approach using an educational audiologist in meeting the needs of children with hearing loss, d) The new hybrid program being implemented, and e) The coordination of communication with each investigator.

Housing and training of telepractice equipment: A secure, quiet office will be identified in the school to house the telepractice equipment and at least two school personnel will be trained on its usage.

Outcome measures obtained: a) *Measurements of School Personnel-* Quarterly assessments (every nine-weeks) will be given to the school personnel involved with the hard-of-hearing children to derive outcome measures identifying the effectiveness of the hybrid nature of the educational audiology services. With each assessment, any challenges noted will be addressed immediately and subsequent changes to this program implemented so as to improve the programming structure as "issues" arise. b) *Measurements of Children Served-* Likewise, grades of each student served by the educational audiologist will be reviewed every nine weeks and compared with the previous year's grades corresponding to that point in time. Understanding that all variables influencing grades cannot be controlled for, at this point, the investigators still plan

to use the grades of the students as one outcome measure for the effectiveness of the services provided.

Programmatic structure: The hybrid program will be implemented initially following the structure described below. If changes are necessary or other services implemented during the year, those will be executed and described in the final report.

a) One investigator will be onsite in the school to perform the following services:

i. Measurement of noise levels in classrooms and provision of recommendations for environmental modifications ii. Management of the selection, purchase, installation, and evaluation of any large-area amplification systems. iii. Monitoring of personal hearing instruments including hearing aids, cochlear implants and FM technology. This includes but is not limited to: recommending, fitting, evaluation and programming the hearing assistance technology iv. Oversight of the administration of hearing screening programs in school, training non-audiologists to perform hearing screening in the educational setting. v. Diagnosing, treating and managing any children with hearing problems. vi. Meeting with each child, providing counsel and advocacy training as needed.

b) The second investigator will implement the following services via tele-practice:

i. Provision of individual training for professionals on the team when needed. ii. Participation in the development of an Individual Education Program (IEP) or a Section 504. iii. Provision of in-service programs for school personnel iv. Consultation to educators as members of interdisciplinary teams about communication management, educational implications of hearing loss and other auditory problems, educational management, classroom acoustics, and FM technology for children with hearing loss. v.

To help with student transitions and “team with” school personnel to facilitate student learning.

Final outcome measure: A final outcome measure will be taken at the end of the school year assessing the overall structure of the program with the necessary changes made throughout the school year. All school personnel will be assessed individually. Overall grades will be assessed for each child served in the program. A final report will be written as to the benefits and challenges of the hybrid nature of the program, the ongoing changes made during the year to better improve the services, and future direction for the implementation of this model in the state of Mississippi.