

Telepractice: Creating a Statewide Network of Support in Rural Maine

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Introduction

The Maine Educational Center for the Deaf and Hard of Hearing's POINT (Providing Opportunities for Integrating New Technologies) project is implementing a telepractice, distance learning collaborative in Maine with eight hub sites and 18 end points using Tandberg videoconferencing technology. This network is planned to be a national model enabling students who are deaf and hard of hearing and their families to overcome geographic, language, and cultural barriers to access rich and diverse early intervention and educational programs.

The Maine Educational Center for the Deaf and Hard of Hearing (MECDHH) is located on a small island off the coast of rural Maine. MECDHH provides statewide services to children birth through age 21 who are deaf and hard of hearing. For over 25 years, outreach programs have provided support to children with hearing loss in their homes, daycare centers, public schools, community libraries, and hospitals. There are challenges inherent in serving children in a state like Maine that has large rural areas. Limited opportunities for collaborative training with other professionals, winter travel, and distances to rural communities often prohibit delivery of ongoing and in-depth support to parents and professionals in local school districts.

In recent years, MECDHH has been a leading force in Maine's distance-learning initiatives. MECDHH utilizes distance learning technology to provide statewide access to information, support, and programming

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Network of Support in Rural Maine 409 throughout this geographically large state. For instance, when a family travels out of state to receive a comprehensive evaluation, the use of telecommunication equipment allows MECDHH to set up meetings with the evaluators to discuss their findings. Having the parent in Maine surrounded by their home support team makes the implementation of recommendations a smoother process for all.

MECDHH also utilizes distance learning technology to foster collaboration. For example, MECDHH and the New England Consortium of Deafblind Projects and Services for the Blind joined forces to provide a full day clinic to assess cortical visual impairment (CVI) of young children. Using Tandberg's MOVI, a mobile device for personal computers, experts located in Pennsylvania evaluated students while teachers of the visually impaired in Maine observed. It was a very successful use of technology to assess children and provide needed training for professionals in Maine. MECDHH expects that opportunities like this will increase the use of professionals in hub sites as well as experts in other states through access to compatible technology to enhance knowledge and skill sharing. MECDHH continues to look for ways to enhance the services they offer by utilizing new technology.

POINT Project

MECDHH is engaged in a 2-year distance learning project funded through a U.S. Department of Agriculture, Rural Utility Service (RUS) grant. The project, called POINT, will transmit resources from eight hub sites using Tandberg videoconferencing technology to targeted rural areas throughout Maine (Figure 1). In 2012, staff developed training modules and designed delivery systems. In 2013, staff will begin program delivery and evaluation.

MECDHH recognizes the importance of collaborating with other organizations to offer families and professionals access to experts in the field of hearing loss. Through this grant, MECDHH, which is one hub site, collaborates with four additional hub sites: Children's Hospital Boston, Clarke Schools for Hearing and Speech, Hear Me Now!, and Rochester Institute of Technology. Experts from each of these sites represent many different professional disciplines, including: teachers of the deaf, educational audiologists, speech-language pathologists, Listening and Spoken Language Specialists (LSLSe), mentors who are deaf and hard of hearing, and psychologists. POINT has four program goals:

1. Educate professionals who work with students who are deaf and hard of hearing.
2. Provide appropriate academic and social support to children who are deaf and hard of hearing in mainstream settings.
3. Assist families of children who are deaf and hard of hearing to access resources in a timely manner.

Figure 1. Geographical distribution of schools participating in the POINT project. Additional videoconferencing equipment is located in over 1,000 schools, hospitals, and state/community agencies statewide.

4. Raise community awareness and understanding of the needs of children who are deaf and hard of hearing.

Finding Resources to Meet Needs

Professionals who work in the field of early intervention and deaf education need skills to support the children and families with whom they work. However, a prevailing issue is finding additional funding to expand programs using 21st century technologies during difficult economic times. For MECDHH, a viable option was to find a grant that focused on technology. The RUS grant supports programs utilizing distance technologies. The center utilized the services of a

Network of Support in Rural Maine 411

grant writer and collaborated with the MECDHH Public School Outreach and Early Intervention Outreach program coordinators.

Steps in the Process

Initiating a statewide program using grant funds involves many steps and requires collaborative discussions with stakeholders from many different agencies. With this process comes challenges and successes. The first step was to identify school districts in Maine where children who are deaf and hard of hearing reside. This grant requires the placement of technology in rural areas that match child and family needs, such as distance from providers, being able to include extended family members, and specific Individualized Education Program (IEP)-driven requirements. It was important to ensure that these children lived in towns that met grant requirements, such as towns that were rural or lacked appropriate services.

The next step in the project involved soliciting matching funds through discussions with the administrators of the selected school units. Each school's technology budget needs to be considered because the criteria for accessing grant funding involves a monetary cash match. The schools that provide services for students who are deaf and hard of hearing were receptive to enhancing services to this population and welcomed the additional resources from experts in the field of deaf education. Twelve school districts committed to the project, and 18 different schools were engaged.

National and state resources in the field of hearing loss were also contacted to see if they were interested in serving as hub sites to provide resources and services as part of the POINT project. This particular process was free of challenge since all agencies that were contacted responded with enthusiasm to the opportunity to support more children, families, and professionals in rural areas of Maine. The project's five hub sites (MECDHH, Children's Hospital Boston, Clarke Schools for Hearing and Speech, Hear Me Now!, and Rochester Institute of Technology) were equipped with high end Tandberg videoconferencing equipment. Tandberg's MOVI was chosen because this software client is capable of delivering video at 720p (an HDTV signal format and 30 frames per second). This equipment served as a common link to deliver programming to the end points in Maine, which included the 12 school districts involved in the POINT project as well as other users of distance technology. Tandberg technology is compatible with Polycom, which is significant as there are hundreds of Polycom units throughout the state. The equipment was also used with families who received services in their homes.

A technology vendor provided expertise and input on the equipment needed for the grant proposal. It was critical to explain the needs and goals of the program to the technology vendor to ensure that appropriate technology was selected. MECDHH worked with a trusted vendor to create a budget that took into account the technology and the training needed to prepare professionals to

412 Hopkins, Keefe, & Bruno

work with distance technologies. Families and providers would also be given support to ensure they are comfortable using the technology. Telepractice requires some basic equipment and services at both the hub site (the expert provider's location) and the remote (rural) site. The essential elements of telepractice include a computer with a monitor or an integrated conferencing station, a webcam, high speed Internet, and software that provides a shared, virtual workspace. Optional equipment includes dual headphones with boom microphones, printer, copier, fax, document camera, and in-room phone (Juenger, 2009).

The final step in this process was securing approval from the MECDHH's school board as MECDHH would be serving as the grant's fiscal agent. School board members required an explanation about the commitment that was being made, the advantages to MECDHH's mission to offer all communication approaches, and the delivery of this new service throughout the state of Maine.

Needs of Families in Rural Maine

Many families living in rural areas are unable to access the same programs, resources, and services in their local communities that are offered to children living in urban environments. The use of technology can provide families in rural areas with access. The hub experts connect and collaborate with families, early intervention providers, local school districts, and hospitals using telecommunication equipment (videoconferencing

equipment and computers) to provide a variety of supports and resources to families and professionals throughout the state.

Early Intervention Support

The Early Childhood and Family Services (ECFS) program of MECDHH offers an early intervention program for children birth to age 3. The ECFS program provides information to families and professionals across the state, supports the choices families make to benefit their children, and helps parents to identify the resources that will help them meet the individual needs of their infant or young child. Home visits and child care visits are scheduled to support the family and primary providers for children who are deaf and hard of hearing, or who have a suspected hearing loss. ECFS works collaboratively with Maine's Part C agency, Child Development Services.

The POINT project expands MECDHH's goal of statewide access to services. This is done in many ways, such as connecting more families to adults (aka; mentors) who are deaf and hard of hearing and introducing families to different professionals (e.g., LSLS, educational audiologists, speech-language pathologists, teachers of the deaf) and support networks (e.g., parent support groups for children who are deaf and hard of hearing)

Network of Support in Rural Maine 413

throughout New England. Videoconferencing equipment is set up in each family's home so the child and caregiver can view the provider, mentor, or specialist in real time on a television screen or computer monitor (Cason, 2011). Each family is also provided a license for MOVI, which is paired with a USB camera at the family home. Families utilize their personal computers. Grants are currently being sought to support families who do not have computers in their homes.

The early interventionist, acting as a coach, supports and encourages the parents as they learn and practice new strategies. Rush (2000) noted that the practitioner-as-coach provides support to parents to improve their child's skills and abilities rather than working directly with the child. The early interventionist, in turn, provides ongoing feedback about the parent's use of particular techniques supporting the child's language development, overall development, and behavior (Kaiser & Hancock, 2003).

The consultants from MECDHH may serve as a liaison between the family and the specialist providing the telepractice services. Or the MECDHH consultant may be a conduit between a provider in the rural community and the specialist. Families also receive support during the Individual Family Service Plan (IFSP) process by utilizing technology to include professionals in the field of hearing loss who are not onsite.

Consultation

The ECFS consultants, and some of the POINT project hub partners, provide consultative services to daycare providers and preschool teachers throughout Maine. Telepractice aligns well with the consultative service delivery model and may be used to connect specialists working in different locations with people in a rural community. Using telepractice, team members work together to identify learning opportunities within a child's natural environments, teach therapeutic techniques to embed within daily routines, problem-solve collaboratively, coordinate care, and identify community and family resources (Cason, 2011). Using videoconferencing technology, more families can join support groups and participate in classes that are otherwise available only to those in urban areas of the state.

A specific need is for children in Maine who are considering, or have received, a cochlear implant. Currently there are no cochlear implant centers in Maine. Families travel hours to engage in the cochlear implant candidacy process. Meetings and consultative sessions related to implant candidacy often occur without the support of the child's team in Maine. Through distance technology, families can collaborate with providers at Children's Hospital Boston. Although some face-to-face appointments are necessary, the cochlear implant team can collaborate, remotely, with the child's local team to reduce some of the travel.

414 Hopkins, Keefe, & Bruno

Mainstream Settings

Telepractice offers more opportunities to serve students and boosts student learning (Juenger, 2009). For the first time, educators and therapists in Maine can receive frequent interactive support for students that are placed in their classrooms. The Public School Outreach (PSO) program of MECDHH employs consultants who support students in mainstream settings. In collaboration with the POINT project, PSO and the project's partners are able to offer more frequent and in-depth support to teachers and therapists throughout the state. Most distance events are collaborations among professionals and family members. Collaborative efforts move from explaining and debating possibilities to executing outcomes (Ricci & Weise, 2011). Parents and professionals are given an opportunity to provide feedback during the program sessions. As evidenced by family feedback and measured child outcomes, a balance of onsite and distance support is proving to be successful. Through these consultative activities, professionals in rural areas are able to receive information quickly and "face-to-face." Professionals working in the mainstream are able to ask questions and get immediate responses to help modify their curriculums and the strategies they use with their students. A range of topics is offered, including literacy,

language development, and use of all forms of hearing assistance technology.

A combination of in-person and distance technology appears to be a successful way to support the social-emotional needs of students who are deaf and hard of hearing. They are being connected to their peers throughout the state and the nation. This fosters opportunities to develop one's identity as a person with hearing loss. For example, through the collaborative efforts of PSO and local district staff, two students who are deaf met and established a friendship through ongoing meetings via videoconferencing. These students established a comfortable social communication framework while using videoconferencing to create a relationship, which flourished into a "BFF" relationship, after meeting face-to-face at regional and family programs provided by MECDHH.

Raising Community Awareness

Children who are deaf and hard of hearing often choose to be involved in community activities, such as scouts and sports. With support from the Americans with Disabilities Act (ADA; 1990), individuals are assured access. MECDHH and its hub partners are creating a network of support using distance technology to help local community leaders provide this access. LSLS certified professionals, adults who are deaf and hard of hearing, teachers of the deaf, speech-language pathologists, educational audiologists, and other experts conduct the trainings with community leaders. Training sessions

Network of Support in Rural Maine 415

provide instruction about hearing assistance technology and interpreting services; opportunities for adults to share their experiences as an individual who is deaf or hard of hearing; support for the social-emotional development of children who are deaf and hard of hearing through inclusion in community programs; and information about communication strategies.

Summary

In rural states such as Maine, more information, support, and services can be offered through telepractice to children who are deaf and hard of hearing. The use of distance technology can be a successful way to improve access to services. Generating the funds to deliver services through distance technology can be challenging; MECDHH's POINT project has shown that grant funds are a viable way to acquire the technology and develop programs.

Collaboration among professionals and their respective agencies is needed to ensure services are available to all families throughout the state irrespective of the chosen communication approach, degree of hearing loss, or location of the child. By providing distance learning opportunities, MECDHH is expanding their resources to support children living in rural communities. This will help provide equitable access to services in spite of geographic challenges.

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