

Tele-Health/Education at the MDHC

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Marion Downs Hearing Center



- ❖ Scope: multidisciplinary clinical services, resources, education and research
- ❖ Activities value individual/family choice in communication needs and technology
- ❖ Affiliated with the University of Colorado Hospital, the University of Colorado Boulder, the University of Colorado Denver, and the MDHC Foundation

Remote Video Communication

❖ Tele-health

- Direct service for EI/therapy
- Direct service for audiologic assessment
- Direct Service for amplification validation and adjustment
- Participation on clinical & educational teams

❖ Tele-education

- Didactic instruction
- Grand Rounds
- Mentored support for clinical training
(therapy, assessment and amplification)



Technology Options

- ❖ Video Conference equipment: to connect multiple individuals and/or multiple sites
- ❖ PC to PC with Web-cam: The delivery of one-on-one communication
- ❖ Shared internet platforms: for assessment and amplification verification and adjustment
- ❖ Supporting tools
 - ❖ Monitoring headsets: for direct communication with provider without direct communication with patient or family
 - ❖ Material platform: For therapy materials or books

Video Conference Equipment

- ❖ Necessary for more than one-to-one communication
- ❖ Expensive equipment: \$5000-10,000 on each end
- ❖ Technology support from conference bridge (no charge for UCD/UCH activities)
- ❖ Ability to support multiple simultaneous sites (may be charges at receiving site)
- ❖ High speed connectivity widely accessible at public sites in Colorado

PC to PC Communication

- ❖ Good for one-on-one communication
- ❖ Inexpensive equipment: personal PC with webcam and skype (free)
- ❖ Technology support usually not necessary
- ❖ High speed connectivity widely available
- ❖ May be used with assessment equipment and shared internet platform
- ❖ HIPPA still an issue



Shared Internet Platform

- ❖ Shared screen for between provider/mentor and remote site
- ❖ Applications: ABR, HI adjustment, CI mapping
- ❖ Can be used for direct service or training
- ❖ Shared patient information needs secure site (VPN account)



Tele-Health for Early Intervention

Defining the Need

- ❖ Lack of qualified, experienced professionals in many rural areas
- ❖ Communication options for families may be limited
- ❖ Limited community resources
- ❖ Lack of professional development opportunities
- ❖ Limited resources for teaming



Early Intervention through Tele-Health

- ❖ Used to increase quality of services provided to DHH children by teaming with a child's family or local educational team in rural areas
- ❖ Using demonstration therapy and coaching
- ❖ Platform for professional growth for rural professionals
- ❖ Using a combination of direct service consultation
- ❖ Goal to transition care to local team



El through Tele-Health at the MDHC Challenges

- ❖ Access to video conference equipment in remote sites
- ❖ High speed internet available but may be monthly charges
- ❖ Scheduling
- ❖ Technology delay
- ❖ Planning sessions
- ❖ Team organization and communication
- ❖ Reimbursement for providers time



EI through Tele-Health at the MDHC

- Goal 1: To effectively and efficiently serve families in remote, less populated, difficult to access regions of Colorado
- Goal 2: To partner with other agencies to support professionals providing services to families
- Initial funding from Education grant (equipment) & MCH grant (staff and travel)
- Ongoing support from Dept of Ed, Dept of Health (EHDI) and LEND Audiology Training Grant



EI: Possible Funding Sources/ Collaboration

- ❖ School Districts
- ❖ Department of Education
- ❖ School for the Deaf
- ❖ Cochlear Implant Centers
- ❖ Federal and local grant funding
- ❖ PTA
- ❖ Community Resources
- ❖ Fundraising Efforts
- ❖ Other



Topics covered in EI sessions

- ❖ Identifying effective activities and strategies to enhance listening and learning
- ❖ Promoting early literacy
- ❖ Exploring speech perception vs speech production
- ❖ Carryover of auditory skill development into the classroom
- ❖ Facilitating self advocacy
- ❖ Creating and maintaining high expectations
- ❖ Equipment management
- ❖ Use of music and singing
- ❖ Eliciting verbal responses
- ❖ Brainstorming opportunities for success
- ❖ Expanding vocabulary throughout all activities

EI: Parent Involvement

Provide consistent support to parents when personal contact from an experienced professional is inconsistent due to distance and weather conditions

- ❖ Guiding parents through use of strategies to enhance vocal play and attach meaning to sound.
- ❖ Encourages parent participation in each session.
- ❖ Provides training for local interested professionals



EI: Keys to Success

- ❖ Initial personal contact is necessary in order to effectively establish and individualize the experience.

(Length of this contact may vary depending on team and individuals.)

- ❖ Teaming and collaboration

- ❖ Desire by both parties to grow from the experience

- ❖ Flexibility

- ❖ Access to equipment



Training Students & Off site Trainees through Tele-education

- ❖ Session observation in real time
- ❖ Session coaching in real time
- ❖ Host site providing direct service as demonstration
- ❖ Participation in Ground Rounds
- ❖ Observation of lectures between campuses

Training and Mentoring Rural Audiologists

- ❖ Goal: To improve access to pediatric audiology services in underserved areas by training practicing audiologists
- ❖ Training includes hands-on training at the MDHC, rural site visits with MDHC audiologist, tele-audiology to support direct service and mentoring



Audiology through Tele-Health Challenges

- ❖ Access to equipment video conference equipment in remote sites
- ❖ Secured shared internet support
- ❖ Defining role of MDHC & rural site audiologist
- ❖ Health plan reimbursement does not cover the costs of 2 providers
- ❖ Cannot practice out of licensed region

Training Professionals through Tele-Audiology

- ❖ Video conferencing for diagnostic assessments (neurodiagnostic & behavioral)
 - ❖ from MDHC to rural site
 - ❖ from rural site to MDHC
- ❖ ABR, HA programming, and CI mapping through shared internet platform
- ❖ Always include onsite training
 - ❖ Clinical protocols
 - ❖ Educational materials for audiologist and family

Training Professionals through Tele- Education

- ❖ Continuing education through remote conferencing and Abode Connect Pro
- ❖ Continuing education through video conferencing for interactive demonstration
- ❖ Graduate coursework through remote connectivity



