

Telepractice: An alternative service-delivery model

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Definition of the Topic

- Application of telecommunications technology to deliver professional services at a distance.
- Related terms – telemedicine, telehealth

Telemedicine

- Telemedicine – “use of telecommunications technology for medical diagnostic, monitoring, and therapeutic purposes when distance separates the users” (Agency for Healthcare Research and Quality AHRQ, 2001).

Telemedicine vs. Telehealth

- Historically, telemedicine dealt exclusively with medical applications by physicians using advanced technology
- 1997 Comprehensive Telehealth Act – broader term “telehealth” was used to refer to services delivered by non-physician as well as physician providers.

Telehealth vs. Telepractice

- Telehealth - Expansion of telemedicine to include applications across the health sciences.
- “Telepractice” – term adopted by ASHA (2001) to encompass range of services provided through telecommunications technology that are not exclusively health related, including clinical services for communication enhancement, and education and supervision.

How Telehealth is Being Used

- **By Audiologists**

- Hearing screening
- Hearing aid programming/counseling
- Auditory Brainstem Response (ABR)
- Otoacoustic Emissions (OAEs)
- Audiologic Rehabilitation

How Telehealth is Being Used

- **By Speech-Language Pathologists (SLPs)**

- provide speech-language services to schools in remote or underserved areas
- provide voice, aphasia, or cognitive-communication treatment to satellite clinics from hospitals
- In clients' homes as an adjunct to home health visits
- For specialized services such as laryngectomy rehabilitation and augmentative and alternative communication

Benefits of Telehealth

- Meet needs of underserved populations in remote areas.
- Receipt of services not available due to distance, lack of specialized clinicians and/or transportation.
- Receipt of services in natural environment
- May facilitate continuity of care when multiple health/rehab needs exist.

Benefits Continued

- Increased motivation on part of client due to technological aspects (Brennan, Georgeadis, Baron, & Barker, 2004).
- Increased capacity of technology provide access to larger repertoire of materials and technical capability (Farmer & Muhlenbruck, 2001; Hassol et al., 1996; Karp et al., 2000; Marcin et al., 2004).

Benefits Continued

- Eliminates cost of travel and indirect cost of missed work for clients and client caregivers –
Convenience!

- Productivity of clinicians - limits time of travel for clinicians, canceling of sessions due to inclement weather.

Limitations of Telehealth

- No direct contact with the client.
- Services typically occur in a static environment due to equipment.
- Barrier – the psychological barrier of resisting change.
How resistant will clients be to not having clinician in room.
- Apprehension using computer technology.

ASHA's Involvement in Telepractice

- Late 1990s - ASHA examined the feasibility and success of applications of telemedicine technology to delivery of SLP services.
- 1998 – ASHA's Telehealth Issues Brief described telepractice activities taken place to date (ASHA, 1998)

ASHA's Involvement

- 2001-2003 ASHA's Focused Initiative on Technology – increase members' knowledge and access to information related to use of telepractice
- 2001 Telepractices and ASHA: Report of the Telepractices Team – presented an updated overview of telepractice and future activities/needs (ASHA, 2001)

ASHA's Involvement

- 2002 – ASHA survey (1,667 ASHA members) determine awareness and experience with telepractice (ASHA, 2002).
- At that time, 11% of respondents (12% of audiologists, 9% of SLPs) indicated they had provided services via telepractice (included services conducted exclusively by telephone).

ASHA Survey Results

- SLPs – most common uses of telepractice
 - Professional consultation (42%)
 - Direct patient care (38%)
 - Education (15%)
 - Supervision (6%)

ASHA Survey Results

- Most frequently used patient care services
 - Follow-up (76%)
 - Counseling (66%)
 - Treatment (37%)
 - Equipment check (16%)

ASHA's Involvement

- 2001-2003 ASHA collaborated with National Rehabilitation Hospital's Rehabilitation Engineering Research Center on telerehabilitation – develop professional education presentations.
- 2003 – ASHA awarded \$4,000 grants to 3 telepractice programs to develop materials used to inform members about telepractice activities.

ASHA's Involvement

- American Speech-Language-Hearing Association. (2005). Knowledge and Skills Needed by Speech-Language Pathologists Providing Clinical Services via Telepractice [Knowledge and Skills]. Available from www.asha.org/policy
- American Speech-Language-Hearing Association. (2005). Speech-Language Pathologists Providing Clinical Services via Telepractice: Technical Report [Technical Report]. Available from www.asha.org/policy
- Similar documents exist for Audiologists

Current Research

- Several reports and professional presentations have described the use of telehealth for delivery of clinical SLP services (Fitch & Cross, 1983; Hornsby & Hudson, 1997;

Kully, 2000; Pagel & Knight, 2000; Perlman & Witthawaskul, 2002; Vaughn et al., 1987).

Research on Outcomes

- Research investigating outcomes of SLP services via Telehealth is more limited
- Research suggests telehealth applications offer viable, reliable, & acceptable options for delivery of SLP services (Cole, Martin, Moody & Miller, 1986; Duffy, Werven & Aronson, 1997; Helm-Estabrooks & Ramsberger, 1986; Hill et al., 2006; Mashima et al., 2003; Wertz, et al., 1992; Wilson, Onslow & Lincoln, 2004.

Missouri Telehealth Network (MTN)

- MTN began in 1994 as one of the nation's leading public-private partnerships in telehealth.
- 9-site network initially developed with federal support.
- Today MTN has over 130 sites in 44 MO counties.
- Funded with federal, state and institutional dollars.

Missouri Telehealth Network (MTN)

- Semi-private network using the Internet Protocol (IP) to deliver two way interactive audio and video for clinical encounters and data transfer for teleradiology and other store and forward services.
- Telecommunications – uses T1 (Frame Relay) connections to each site. Provide dynamic bandwidth allocation for voice, video and data.

Northeast Missouri Telehealth Network

- Established in 2005 to improve access to high quality primary, specialty, and mental health care for the underserved of rural northeast MO
- Supported in part by grant from Missouri Foundation for Health which was awarded to A. T. Still University of Health Sciences (ATSU) in Kirksville, Missouri.

Northeast Missouri Telehealth Network

- Collaboration between Kirksville College of Osteopathic Medicine (KCOM), a division of ATSU, the 43-member Northeast Missouri Rural Health Network (NMRHN, www.nmhrn.org), and the nationally recognized Missouri Telehealth Network (MTN, www.telehealth.muhealth.org).
- Public awareness campaign for the project provided by the Northeast Missouri Area Health Education Center (NEMO AHEC).

Northeast Missouri Telehealth Network Project Objectives

- Establish and expand site-based telehealth services in an 11-county area of northeast MO;
- Conduct comprehensive provider/staff recruitment and training to maximize utilization of the telehealth system in northeast Missouri;
- Raise public awareness about the availability/benefits of telehealth and improve consumer use of this health care service.

Northeast Missouri Telehealth Network Project Region

- MO counties impacted by project cover an 11-county service region, including Adair, Clark, Knox, Lewis, Linn, Macon, Putnam, Schuyler, Scotland, Shelby, and Sullivan.
- All targeted counties designated as geographic/low-income health professional shortage areas (HPSAs), low-income dental HPSAs, and mental health shortage areas.

Our Site/Project

- Truman St. University Speech & Hearing Clinic
2400 Barnett Hall
Kirksville, MO 63501
Contact: Paula Cochran
660.785.7414
<http://comdis.truman.edu>

Truman State University and Surrounding Northeast Missouri Area

- Kirksville, MO county seat of Adair County, MO.
- Population 16,988 at the 2000 census.
- Best known as the location of Truman State University and Kirksville College of Osteopathic Medicine.
- Geographic/low-income health professional shortage area (HPSA)

Truman State University Speech and Hearing Clinic

- On-site clinic associated with Communication Disorders Program at Truman State University
- Service to over 1000 clients per year from northeast MO.
- Services provided at no cost to the consumer.

Benefits of Our Involvement with Telehealth

- Becoming a site on the Missouri Telehealth network has enabled the speech and hearing clinic to provide services in remote areas.
- Provide services not available due to distance, lack of specialized clinicians and/or transportation.
- Provide more unique clinical opportunities for our students.

Services Provided

- To date the Truman Speech and Hearing Clinic has provided intervention services to clients with the following:
 - Articulation/phonological disorders
 - Child language impairment
 - Adult language disorders

Development of Telehealth Protocol

- Essential to maximizing effectiveness of this service delivery model was the development of a Telehealth Protocol
- Designation of on-site coordinator
- Designation of Graduate Student to Telehealth
- Paperwork – Client Checklist

- Appointments

Considerations and Challenges

- Paramount that SLPs provide initial on-site evaluations and visits with clients and caregivers at the beginning of each clinic semester.
- Face-to-face contact helps SLP establish rapport which is crucial for success of program.
- Clinician and/or client may decide at any time that an on-site visit is warranted.

Scheduling

- Most clients seen two times per week for 50-minute sessions; however, flexibility in scheduling is sometimes required based on availability of the connecting site.
- Need someone at the opposing site to help client dial-up to the Truman site.
- Need to work within the scheduling parameters of the remote site.

Adequate Preparation and Training

- Orienting our faculty, clinical supervisors, and student clinicians to the use of the equipment is crucial.
- MTN requires “providers” to undergo training in use of the equipment.
- If equipment is not working properly the providers will be expected to trouble-shoot problems.

Client Training and Awareness

- Important to provide client and caregiver, staff, and student education about this mode of treatment and the clinical protocol.
- On-going survey study of our student's and user's attitude about Telehealth.
- Clients sign a consent form and survey.

Licensure

- Issues of licensure have been addressed by the National Council of State Boards of Examiners for SLP and Audiology (NCSB).
- Licensure boards share the responsibility to protect consumers regardless of service delivery mode.

Other Possible Challenges

- Due to the nature of our clinic we avoid some common challenges including
 - Liability
 - Reimbursement
 - Patient privacy and confidentiality

Other Potential Uses for Telehealth

- MTN provides on-going continuing education seminars through the network.
- Use in supervision of interns and clinicians off-campus
- Providing supervision for speech-implementers and SLPs in the CF year.
- Consultation with other related agencies.
- Videoconferencing

Future Directions

- Provide a synthesis of the evidence pertaining to clinical outcomes and costs to inform policy and use, both nationally and internationally.
- Synthesis should assess the scientific adequacy of available evidence and suggest appropriate methodologies to guide future research.
- Need to consider significant technological innovations likely to affect the reliability, efficiency, productivity, ubiquity, and appeal of telehealth.

Time to Share

- Discussion of others' use of and experience with Telehealth.
- Challenges and Rewards?