



A BRIEF REVIEW OF CONTEMPORARY TELE-AUDIOLOGY

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ABSTRACT

Teleaudiology has become a more viable approach to delivering care. Asynchronous and synchronous delivery can be used to deliver Teleaudiology. Hybrid delivery involves using both synchronous and asynchronous modes of delivery. Teleaudiology has been used for otoscopy, audiometry, immittance, cochlear implant programming and newborn screening. Teleaudiology is a viable technology, although reimbursement remains unclear.

Keywords: Teleaudiology; Telehealth; Teleconference

The colorful history of telehealth (telemedicine) spans over 150 years and parallels the remarkable advances in telecommunications technology. In spite of this long history, consumers (and clinicians) may still feel uncomfortable receiving his services at a distance.

Teleaudiology is defined as a healthcare delivery model that allows people to remotely access audiologists, who are licensed professionals that specialize in helping people with hearing loss. The patient may be at home, or visit a satellite office that's closer to their home [1]. Tele-audiology is the utilization of telemedicine to provide audiological services and may include the full scope of audiological practice.

Teleaudiology has become a more viable approach to delivering care. Asynchronous and synchronous delivery can be used to deliver Teleaudiology. Hybrid delivery involves using both synchronous and asynchronous modes of delivery [2]. Teleaudiology has been used for otoscopy, audiometry, immittance, cochlear implant programming and newborn screening. Teleaudiology is a viable technology, although reimbursement remains unclear. A recent literature review by Molini-Avejonas and colleagues indicated there is still considerable interest in teleaudiology [3]. This is not surprising, as the contemporary teleaudiology literature addresses both new applications and refinement of existing ones. Newer publications also span a broader spectrum of services, including pediatric audiology, diagnostic audiology, self-screening, cochlear implants, measurement of amplification outcomes, and aural rehabilitation

[4]. The first Transatlantic teleaudiology test was performed in April 2009 when Dr James Hall tested a patient in South Africa from Dallas at the AAA conference. Since that historic event the interest in tele-audiology increased significantly.

TYPES OF TELEAUDIOLOGY TESTS

Store-and-forward (Asynchronous) tests : Testing a patient and then transferring the results via emailing or the Internet to a professional that will look at the results

Real-time (Synchronous) tests : Testing a patient in real-time as if the patient is sitting in front of you. Audiologists are used to testing patients remotely because testing a patient in a sound booth while the audiologist sits outside the booth is virtually the same as testing a patient over the Internet. The window is not a real glass window but a teleconference window. The only real difference is that the physical distance changed [5].

Pediatric diagnostic applications in tele-audiology seem to have evolved as well. When only objective testing is required, complete diagnostic evaluations of infants are possible over long distances. In fact the use of tele-audiology in infant diagnosis can promote better follow-up. However, behavioral testing, particularly visual reinforcement audiometry, may require special innovations before it can be used in tele-audiology.

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