

A History:
The Army Audiology and Speech Center
Walter Reed Army Medical Center
1943-2011

Early History

The US Army and the Army Audiology and Speech Center in particular played an important role in the development of the profession of Audiology. Audiology had its origins and much of its early development within the U.S. Army (See Bergman, 2002 for an excellent summary of this early history). Organized efforts in hearing treatment within the Army date from World War I when teachers of the deaf were employed to teach lipreading to hearing-impaired soldiers.

During the years between World War I and World War II wearable electronic hearing aids were introduced commercially. Hence, the focus of hearing treatment shifted from exclusively lipreading and auditory training, to include amplification. The problem of noise-induced hearing loss within the Army became acute during World War II when thousands of soldiers returned home with significant hearing impairments. Three “aural rehabilitation” centers (the term “audiology” had not yet been coined) were established and operated by the Army to provide services to these soldiers. These were located at Walter Reed General Hospital, Washington, D.C. (the first Army hearing treatment center, established in the spring of 1943); Borden General Hospital, Chickasha, OK; and Hoff General Hospital, Santa Barbara, CA. A fourth Army hospital, Deshon General Hospital, Butler, PA, began providing hearing treatment services six months later when the demand for services at Walter Reed General Hospital exceeded its capacity. Notably, Raymond Carhart, recognized as the “father of audiology” was a staff member at Deshon General Hospital during World War II, and is credited with coining the term “audiology” to refer to the discipline. Many of the hearing and hearing aid evaluation testing methods developed by Carhart and his colleagues at Deshon General Hospital became standards of practice within the profession of audiology. Thousands of soldiers were provided hearing treatment at these Army sites between 1943 and 1946, including hearing aid fittings.

Forest Glen Annex

In September, 1946, following the conclusion of World War II, the Army consolidated its hearing programs into one major center: “The Audiology and Speech Correction Center” which was located at the Forest Glen Annex (in Maryland) of Walter Reed General Hospital, a few miles north of the Walter Reed main campus in the District of Columbia. This center was renamed a few years later the ‘Army Audiology and Speech Center’ (AASC), which remained its name for the duration of its existence. For the next 32 years, “The Barn” at the Forest Glen Annex would be the home of the AASC. When fully developed, the Center had a staff of approximately 45 military and civilians and was housed in two buildings on the Annex. The Barn contained the Audiology, Aural Rehabilitation, and Speech Pathology clinical sections as

well as the Administrative Section, Hearing Aid Repair Section, Earmold Laboratory, Electroacoustics Section, and Supply Section. A separate smaller building housed the Bioacoustics Laboratory (later, the Research Section).

Although a detailed history of the Forest Glen Annex is beyond the scope of this brief history, the interested reader is directed to the Internet website http://www.operant.com/Seminary/main_page.html. Briefly, it began as a royal manor grant in 1689. During the colonial period, families who owned the property included signers of the Articles of Confederation and the Constitution, the first Catholic archbishop in America, and the first mayor of the District of Columbia. In the mid-nineteenth century it was converted to a farm. In 1887, a resort hotel was built on the property, which constituted the main buildings later acquired by the Army. The hotel was not successful and it was briefly converted to a casino. In 1894, it became a girl's private finishing school, which it remained for nearly a half century. A tobacco plantation adjacent to the school was acquired during this time, which was used as a dairy farm to provide milk and cheese to the school. During World War II, the Army invoked the War Powers Act to acquire the property. Since 1942, it has been the Forest Glen Annex of Walter Reed Army Medical Center. The original intention for the property was as a peaceful suburban site to house and rehabilitate wounded soldiers returning from the war. In 1946, the barn on the adjacent farm property was converted to the Audiology and Speech Correction Center.

During the very early years of the AASC, as audiology was just coming into being as an academic discipline, the Center was directed by an otolaryngologist, and staff otolaryngologists were directly involved in the assessment of soldiers who had been referred because of hearing loss. The most notable of these early medical directors was Aram Glorig who served from 1947-1952. He joined the Army during World War II and became interested in noise-induced hearing loss and tinnitus. After leaving the service, he was recruited by Walter Reed General Hospital to lead the Audiology and Speech Correction Center. Later, in 1964, Glorig founded the Callier Center for Communicative Disorders in Dallas, TX, where he served as its director until 1975. Glorig was one of the founders of the International Society of Audiology and the Association for Research in Otolaryngology.

In 1952, Edward Shutts was hired as the AASC's Assistant Director. Shutts was among the early recipients of a doctoral degree in the newly created discipline of audiology, receiving it from Northwestern University under Ray Carhart's tutelage. For the next 15 years, Shutts played the major role in guiding and shaping the AASC. The position of medical director increasingly became a figurehead, as the assistant director (an audiologist) was responsible for the day-to-day operations of the Center.

The AASC was the only designated hearing and speech center within the Army from 1946 until 1966. Some other Army hospitals had audiometric equipment to perform hearing testing and staff that consisted of a few commissioned and noncommissioned individuals with training in

audiology. However, there was no coordinated audiology program for the Army as no military occupational specialty existed for audiologists, despite widespread recognition that hearing loss was a major problem among active-duty soldiers. The Army Audiology Officer Military Occupational Specialty was created in 1966 as a result of the coordinated efforts of staff of the AASC. Roy Sedge was the first Army Audiologist commissioned. Sedge later served as AASC Director from 1975-1986, the longest tenure of any Director. Notably, the third Army Audiology Officer commissioned was Jerry Northern.

Northern came on active duty in the summer of 1966 and was assigned to Brooke Army Medical Center in San Antonio, TX. However, when Shutts died unexpectedly in early 1967, Northern was transferred to the AASC to take over as Assistant Director. He served as the first military assistant director of the AASC from 1967 until he completed his two-year military obligation in the summer of 1968. He remained on as Assistant Director in a civilian capacity for an additional two years when, in 1970, he left to accept a position at the University of Colorado Medical Center. He was replaced by Don Worthington who, at the time, was an Army Audiology Officer newly assigned to the AASC and a recent Northwestern University graduate. Worthington left the AASC in 1975 to become Director of Audiology and Speech Pathology at Boys Town National Research Hospital in Omaha, Nebraska.

The growth of the Army's Hearing Program into an effective preventative program can be dated to an Army Chief of Staff Memorandum of June 1971 that tasked the Surgeon General with determining the extent of noise-induced hearing loss within the Army. This tasking was a direct result of efforts by Northern, his successor Worthington, and Harry McCurdy, M.D., Consultant to the Army Surgeon General in Otolaryngology and Chief, ENT Service of Walter Reed General Hospital. An essential component of this tasking was to obtain empirical data to substantiate the widely held assumption that noise-induced hearing loss was a major health and readiness problem for the U.S. Army. Two Army-wide studies authored by Brian Walden, an Army Audiologist assigned to the AASC, demonstrated that noise-induced hearing loss was the most prevalent occupationally-related health hazard to US Army soldiers (Walden et al, 1971; Walden et al, 1975). Over the next few years, the number of commissioned Army Audiology Officers was increased from the original 12 authorizations to 76. As Army Audiology grew, the Air Force and Navy also began to build their hearing programs by commissioning increasing numbers of audiologists.

In 1974, the medical director position was eliminated and the Assistant Director at the time, Don Worthington, became the first audiologist-director of the AASC. The Center functioned as a fully autonomous service within the Department of Surgery and patients had direct access to its services. In 1975, Worthington was appointed as the first Consultant to the Surgeon General in Audiology and Hearing Conservation. Since that time, the AASC was directed by an active-duty Army Audiology Officer and, for the majority of that time, the Director also served as Consultant to the Surgeon General.

In the fall of 1978 the original Walter Reed General Hospital building in the District of Columbia was replaced by a new, larger Walter Reed Army Medical Center structure on the same campus. Simultaneous with the opening, the Army Audiology and Speech Center relocated from the Walter Reed Annex to the new medical center on the main campus, where it remained for the duration of its existence.

Inpatient Aural Rehabilitation Program

Throughout its nearly 70 year history, the Army Audiology and Speech Center provided state-of-the-art hearing diagnostic and treatment services. Further, many important advances in clinical practices within the profession were developed within the AASC. In the earlier years of the Center, this was especially true for aural rehabilitative services, which were provided on an inpatient basis. As noted earlier, audiology within the Army originated as a hearing treatment service, and the original four hearing treatment centers focused on lipreading training. Soldiers who had incurred hearing losses were temporarily assigned to one of these treatment centers as inpatients for 6-12 weeks, during which time they received daily instruction in lipreading, auditory training, and speech conservation. The focus on lipreading training reflected the fact that wearable hearing aids were in their infancy and often provided less than satisfactory results. As hearing aid technology began to advance in the 1950s and 1960s, a focus on hearing aid fitting as the primary treatment method gradually emerged. With this change in emphasis came a steady shortening of the inpatient aural rehabilitation program of the AASC. By 1968, it had been shortened to three weeks and by the early 1970s to two weeks. It remained a two week program until 1978. During this time, the focus of the program shifted away from speechreading and auditory training toward assertiveness training, situation control training, listening and repair strategies, and counseling-based techniques, as well as adjustment to amplification. Obviously, inpatient aural rehabilitation services were increasingly costly to provide. Additional shortening of the inpatient program continued to 1 ½ weeks, one week, and 3 ½ days. Finally, in 2003 the inpatient aural rehabilitation program was eliminated altogether. This ended the tradition of inpatient hearing treatment at the AASC that defined the Center in its early years.

Clinical Services and Research

Although the inpatient aural rehabilitation program had given the AASC its identity during the first half of its existence, other activities of the Center gradually came to become more prominent. Although beyond the scope of this brief history to discuss in detail, diagnostic and treatment services continued to evolve. With the advances in hearing aid technology came greater reliance on amplification as a primary treatment, augmented by individual counseling and hearing aid orientation. Vestibular testing and rehabilitation also began to play a more prominent clinical role. The AASC was consistently among the first clinics in the nation to incorporate newly developed diagnostic and treatment methods for hearing and balance. Paralleling this evolution in clinical diagnostic and treatment services was a steady growth in the productivity and visibility of the Research Section. Brian Walden served as Director of Research of the AASC

from 1971 to 2007. He continued his association with the Research Section until his retirement in 2010. His 39-year tenure at the AASC was the longest of any staff member, more than half of its 70 year history. During this time, clinical and research staff of the AASC published hundreds of research papers and presented thousands of papers at national and international meetings.

AASC Legacy

What emerged during the latter part of the 20th century and continued through the first decade of the 21st century was an internationally-recognized center of excellence for clinical service, education, and research. The distinguished reputation of the AASC owed largely to the competence and dedication of the clinical service providers, administrators, researchers, and support personnel who staffed the center over the years. In addition to their responsibilities within the AASC, many staff members occupied prominent positions within national professional and scientific organizations. Few institutions within the profession of audiology can claim as many illustrious alumni as the AASC. Through the efforts of hundreds of staff members over the years, the AASC played a unique and important role in the professions of Audiology and Speech Pathology. Not only did the Center play a major part in the creation of our professions, it lead the way in many important maturational developments including rehabilitative audiology, hearing aid dispensing, clinical research programs, administrative autonomy, direct patient access to services, training and use of audiometric support personnel, military audiology, and doctoral-level distance education (Audiology) to name but a few. Although its history has ended, the Army Audiology and Speech Center's significant legacy to the profession endures.

References

Bergman M. American wartime military audiology, Audiology Today, Monograph No. 1, 2002.

Walden B, Worthington D, McCurdy H. The Extent of Hearing Loss in the Army: A Survey Report. Washington DC: Army Audiology and Speech Center, December, 1971.

Walden B, Prosek, R, Worthington D. The Prevalence of Hearing Loss within Selected U.S. Army Branches. Washington DC: Army Audiology and Speech Center, August, 1975.