Glossary: Common Words Related to Hearing Loss and their Definitions

Assistive Listening Device (ALD) or Assistive Listening System (ALS): Technical tool to assist people with hearing loss, with or without a hearing aid. It brings the speaker's voice directly to the ear. Helps to overcome the problems of distant and surround noise. This is a listing of some ALD/ALS:

Audio Loop (Induction Loops) - Uses electromagnetic waves for transmission of sound. The sound from an amplifier is fed into a wire loop surrounding the seating area (or worn on the listener's neck) which broadcasts to a telecoil that serves as a receiver. Hearing aids without a T-switch to activate a telecoil can use a special induction receiver to pick up the sound.

Hearing Loop - A wire that circles a room and is connected to the sound system. The loop transmits the sound electromagnetically. The electromagnetic signal is then picked up by the telecoil by flipping the t-switch in a hearing aid or cochlear implant.

FM (Frequency Modulation) System - A Transmitter which broadcasts the signal by radio waves from the sound source to a receiver worn by the listener. Useful in large indoor or outdoor locations, since it can cover several hundred feet and pass through physical obstructions.

IR (Infrared Red) System - Similar to FM System except that it uses invisible light waves to transmit sound. Frequently used in theaters.

Audiogram:

Decibels (dB) - Unit used to express the intensity of a sound wave in logarithmic ratios to the base of ten. Sounds of different frequencies need to be from 0-20 dB in intensity to be heard by normal ears. If more than 20dB is needed, then further hearing evaluation would be recommended.

Frequency Hertz (Hz) - The terminology used to describe the frequency or pitch of sound. The pitches measured on an audiogram are typically 250 Hz (lowest pitch) through 8,000 Hz (highest pitch). These frequencies are measured because speech contains most of its energy in this range.

Pure Tone Average (PTA) - The average of the thresholds at 500 Hz, 1,000 Hz; and 2,000 Hz; for each ear. The PTA is often used to describe an individual's

degree of hearing loss (see below). For example, when a hearing loss is described as an 80 dB loss, that number probably represents the PTA.

Speech Detection Threshold (SDT) or Speech Awareness Threshold (SAT) - The loudness level at which an individual begins to be aware of speech sounds, without understanding the sounds, words, or phrases used. When individual sounds are used, they are typically those chosen to represent various components of the frequency range often with "oo" and "aa" (low pitch), "ee" (mid-pitch), and "sh" or "s" (high pitch).

Speech Recognition Threshold (SRT) - The quietest level at which a person can understand words. This ability is measured by asking a person to repeat or point to pictures of two syllable words with equal stress placed on both syllables such as hotdog or airplane.

Word Recognition Testing - Usually described by a percentage score or the terms excellent, good, fair, or poor. This test evaluates a person's ability to understand one-syllable words at a comfortable listening level. This test may be done at varying loudness levels, in quiet, or in the presence of background noise. While this test does not determine how well a person will understand speech in a more natural environment, it does help identify whether they have difficulty with certain sounds or in noisy versus quiet environments.

Audiological Specialists:

Audiologist - Audiologists have a master's or doctoral degree in audiology with a 9-month post graduate fellowship in measuring and treating hearing loss. The initials CCC-A following an audiologist's name indicates that he or she has a Certificate of Clinical Competence in Audiology awarded by the American Speech-Language-Hearing Association (ASHA). To receive this certification, the audiologist, in addition to a professional degree, has completed a 36-week clinical internship, and passed a national examination. Audiologist test hearing and dispense hearing aids.

Hearing Instrument Specialist (Hearing Aid Dispenser) - Hearing aid specialists' education requirements vary by state, and virtually all states require a specialist to pass an exam before being issued a license. These individuals may also be certified as hearing instrument specialists (BC-HIS) by the International Hearing Society (IHS). To receive this certification, the hearing aid specialist has passed a national competency exam and has 2 years' experience.

Otologist/Neurotologist - An otologist/neurologist is a board certified otolaryngologist who provides medical and surgical care of patients, both adult and pediatric, with diseases that affect the ears, balance system, temporal bone, skull base, and related structures of the head and neck. The neurologist is

knowledgeable of the basic sciences of hearing, balance, nerve function, infectious disease and anatomy of head and neck. Their diagnostic, medical, and surgical skills include treatment of hearing loss and tinnitus, dizziness, infectious and inflammatory diseases of the ear, facial nerve disorders, congenital malformations of the ear, and tumors of the ear, hearing nerve, and skull base. As part of a team with neurosurgeons, they manage diseases and disorders of the cranial nerves and skull base.

CART- Communication Access Realtime Translation: CART or Communication Access Realtime Translation is the verbatim, near instantaneous conversion of spoken language into text. A stenotype machine, notebook computer and realtime software is used to produce the text. The text is usually displayed either on a screen by a projector connected to the notebook computer, or on a notebook computer or computer monitor. CART is usually utilized by people with hearing loss who use spoken language as a primary mode of communication. However, some culturally Deaf people (whose primary mode of communication is sign language) use CART in situations such as graduate level anatomy classes, as it may be easier to read all of the specific terminology rather than have signs improvised on the spot, or use fingerspelling.

Certified Hearing Dog: A dog that has completed extensive training to alert its owner to a variety of sounds in different environments. These dogs are usually identified by a bright orange leash with black lettering.

Closed Captions: Text display of spoken dialogue and sounds on TV and videos visible only to those using a caption decoder or TV with built-in decoder chip.

Cochlear Implant (CI): A cochlear implant is an electronic device that is surgically implanted and works by directly stimulating the functioning auditory nerve fibers in the inner ear. Cochlear implants convert sound waves to electrical impulses and transmit them to the inner ear, providing people with severe to profound hearing loss the ability to hear sounds and potentially better understand speech without reading lips.

Computer-Assisted Notetaking: Visual display of the speaker's words. A notetaker types on a computer keyboard a summary of what is being said. The notes are displayed on a projection screen or monitor.

FCC: Federal Communication Commission

Hearing Aids: An amplification device to assist persons with hearing loss. There are different kinds of hearing aids which are distinguished by how they are worn. The technology is still imperfect and hearing aids do not correct hearing loss. Newest developments include programmable aids.

BTE—behind the ear—are about one inch long and fit snugly behind your outer ear. A small tube connects with the amplification device behind your ear and

delivers amplified sound into your ear canal. It has an adjustable volume control. The battery fits into a compartment at the bottom of the aid. Its larger size allows for more power and features, such as telecoils. BTEs are suitable for the entire range of hearing loss.

OTE—on the ear—are a new style of BTE that is extremely small and sits on top of the outer ear. The tube going into the ear canal can be very narrow and, in some OTEs, may have a speaker located in the ear canal itself.

ITE—in the ear—are custom-fitted to your outer ear's contours. Both the volume control and the battery are smaller than the ones used in a BTE. The smaller size may not amplify sufficiently for those with very severe loss. For some users, this small size can be difficult to insert or remove, change batteries, or adjust the volume. Most ITE aids have special features, such as telecoils, to make talking on the telephone easier. ITEs are appropriate for those with mild to moderate loss.

ITC—in the canal—are smaller. They fit farther into the ear canal so they are barely visible. They are cosmetically appealing but are harder to manipulate and may not be powerful enough for someone with severe loss. They are customized to fit the size and shape of your ear canal.

CIC—completely in the canal—are the smallest ITEs. Cosmetically, they may be the most flattering, but their tiny size can be a real disadvantage in handling. Because they are closest to your eardrum, they need less power and take a smaller battery. They are the most expensive ITEs because of their miniaturized circuitry, and they often need more frequent maintenance and cleaning than larger aids because of their placement in the canal.

Telecoil or T-Switch – A setting on a hearing aid that can be used with a hearing aid-compatible telephone, assistive listening device, and audio loop system. When the hearing aid is switched to "T", it activates the induction telecoil, causing the hearing aids to pick up the magnetic field generated by the "hearing aid-compatible" telephone assistive device, or audio loop system being used.

Hearing Loss:

Conductive Hearing Loss - This occurs when sound waves are blocked from reaching the inner ear. Hearing is still normal once past the blockage. If left untreated, conductive hearing loss can result in permanent impairment.

Sensorineural Hearing Loss - This occurs when the cause of the deafness is in the cochlea or in the auditory (hearing) nerve. Sensorineural deafness often reduces the quality of sound as well as its loudness.

Mixed Hearing Loss - It is a combination of both the sensorineural and conductive hearing loss.

Mild - Sounds softer than 25 dB (decibels) to 40 dB are not detected. Soft sounds such as a faucet dripping, birds chirping, and some speech sounds may not be heard. Sounds that are moderately loud to a normal hearing person, such as speech, will be soft.

Moderate - Sounds softer than 40 dB (decibels) to 65 dB are not detected. Most speech sounds, and louder sounds such as a vacuum cleaner may not be heard. Sounds that are loud to a normal hearing person will be soft.

Severe - Sounds softer than65 dB (decibels) to 90 dB are not detected. Most speech sounds will not be understood, and other loud sounds such as a phone ringing or a dog barking may be missed. Sounds that are very loud to a normal hearing person will be very soft.

Profound or Severe-Profound - sounds softer than 90 dB (decibels) are not detected. Very loud sounds such as a lawnmower may not be detected.

Lip-Reading: A skill used by a person with hearing loss to try to understand speech by watching the lips. The term "speechreading" is now recognized as being more descriptive since it includes watching the facial expressions and body language, as well as the lips of the speaker.

Notetaker: A person who takes notes on a blackboard, overhead projector, notebook, etc. Key words and phrases are written to enhance understanding for the person with a hearing loss.

Sources: HLAA, AARP, Gallaudet University, ATArizona Distance Learning