

# *Auditory-Verbal Therapy: Developing Spoken Language Through Listening With Children Who Are Deaf*

*Nancy Caleffe-Schenck, M. Ed., CED, CCC-A, Certified Auditory-Verbal Therapist®*

*Auditory-Verbal therapy has been practiced with children who are deaf or hard of hearing since the 1950's. With cochlear implantation in children, Auditory-Verbal therapy has gained wide acceptance in the medical, educational and therapeutic professions. The basic premise of the Auditory-Verbal approach is that language and speech are learned through listening, and children who are deaf acquire spoken language commensurate with chronological age. Mainstreaming into the hearing world is the expected outcome.*



*Nancy Schenck is a certified audiologist, teacher of the deaf, and auditory-verbal therapist. She has had a private practice in Colorado since 1983 and also is on the referral network for the Listen Foundation. Nancy works with families and children of all ages locally and from out of state, consults and lectures for organizations internationally, and trains professionals. She is the author of several professional publications. Nancy is the Rehabilitation Coordinator for the CNI Rocky Mountain Cochlear Implant Center.*

*Introduction and Historical Perspective.* The Auditory-Verbal approach was developed following World War II with the development of transistor radios which allowed powerful hearing aids to be used by children who were profoundly deaf. One of the foremost international pioneers was Doreen Pollack, who in the 1950's, first practiced Auditory-Verbal therapy, then known as Acoupedics, at the University of Denver and then at Porter Hospital<sup>1</sup>. Auditory-Verbal therapy is now practiced around the world by audiologists, speech therapists, or teachers of the deaf who are Certified Auditory-Verbal Therapists®. Basically, these pioneers found that even children with minimal amounts of residual hearing could learn to listen and talk by developing the hearing they had available through powerful binaural hearing aids.

In 1990 the first children were surgically implanted with the multichannel cochlear implant during FDA clinical trials in the United States. Auditory-Verbal therapy thus became the logical therapy option for many children who received cochlear implants. The implant was the technology that provided children with access to sound, while the therapy was the

means through which children learned to discriminate, process, and understand what was being coded by the cochlear implant.

*Scope of Practice. Definition of Auditory-Verbal Therapy.* The goal of Auditory-Verbal therapy is that a child who is deaf can participate in the hearing world, socially and educationally, and attend typical, mainstreamed schools, without the use of a sign language interpreter. The basic premise of Auditory-Verbal practice is that parent(s)/caregivers actively participate in individualized therapy sessions so they learn how to seize opportunities throughout the day to maximize auditory learning for children with hearing impairments. This requires habitual and optimal use of amplified residual hearing or electrical stimulation, such as cochlear implant(s), so that a child develops and relies on spoken communication to become an independent member of mainstream society.<sup>2</sup> Essentially, a child is "bathed in sound" so that listening becomes a way of life.<sup>3</sup>

*The System of Principles of Auditory-Verbal Practice.* The practice of Auditory-Verbal therapy is guided by a set of logical

and critical principles:

1. Detect and identify hearing impairment early;
2. Provide early and aggressive on-going medical and audiological management;
3. Fit the child with appropriate technology to achieve maximum access to auditory information.
4. Actively involve and guide parent(s) and caregivers in individualized one-to-one therapy to provide maximum acoustic stimulation within meaningful contexts and to become the child's primary models for spoken language development;
5. Integrate hearing into the total personality of the child, regardless of the severity of the hearing impairment;
6. Establish the child's integrated auditory system for the self-monitoring of emerging speech to develop natural sounding voice quality and speech;
7. Use natural sequential patterns of auditory, perceptual, linguistic, and cognitive stimulation to encourage the emergence of listening, speech and language abilities;
8. Make ongoing evaluation and prognosis of the development of listening skills an integral part of the (re)habilitative process;
9. Integrate children into regular education classes with appropriate support services and to the fullest extent possible.<sup>1,2</sup>

*Who Provides Auditory-Verbal Therapy?* A Certified Auditory-Verbal Therapist® is a professional who, by virtue of academic and clinical training and appropriate certification, is uniquely qualified to provide Auditory-Verbal Therapy. She/he typically has a Master's degree in Audiology, Speech Pathology,

and/or Deaf Education. Requirements to become a Certified Auditory-Verbal Therapist® include: 80 additional hours of coursework in the Auditory-Verbal approach; a full-time Auditory-Verbal practice for at least 3 years where at least one year is supervised by an Auditory-Verbal mentor; and successful completion of the Auditory-Verbal Certification Exam which is administered by Auditory-Verbal International.<sup>2</sup>

*Auditory-Verbal Therapy. Length, Duration and Content.* Children and their parent(s) are typically seen once, and sometimes twice, a week for Auditory-Verbal therapy. Sessions usually last one hour where audition, speech, language, cognition, and communication goals are integrated into natural, playful, and age-appropriate activities. The therapist models for the parents the skill to be developed, then guides the parents as they participate actively in establishing the goal. The emphasis is on the process of listening for learning speech and language without the use of visual cues, such as lipreading or sign language. For each verbal interaction, the child is first presented with auditory information, the parent and/or child then verbally responds to what was heard, and finally the auditory cue is reinforced with a toy, picture, or action. Listening is linked with speech, and vice versa, so that listening is an active rather than a passive process.

Once a strong auditory foundation is established, a child naturally learns spoken language and acquires a natural sounding voice quality with the ability to learn incidental language through overhearing, provided that the basic principles of Auditory-Verbal practice are followed. As soon as possible, the child is encouraged to initiate the communication and to engage in taking

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turns which encourages spoken communication as a social act.

Weekly goals are targeted based on annual and quarterly treatment plans. Annual evaluations are administered using tests standardized on normal-hearing children. Since the goal is mainstreaming into hearing society, tests which are normed on children who are deaf are not used. When deafness is identified early in life, followed by appropriate medical management and state-of-the-art technology without additional complications, and in conjunction with an Auditory-Verbal approach, children typically complete Auditory-Verbal therapy prior to starting first grade.<sup>4</sup> This is based on the child obtaining receptive and expressive spoken language and speech intelligibility scores at or above chronological age. Therefore, Auditory-Verbal therapy, coupled with cochlear implantation is a cost-effective treatment.<sup>5</sup>

#### *Creating a Listening Environment.*

Establishing an optimal listening environment is a necessary component to teaching a child who is deaf to listen at home and in therapy sessions. Some of these strategies include: Being close to the microphone of a child's cochlear implant or hearing aid; sitting beside the child and focusing on the objects placed in front of the child; and minimizing background noises.<sup>6</sup> In the classroom an FM system is often used to compensate for distance, background noise and reverberation.

*Developing a Listening Function through the Auditory-Verbal Approach.*

The hierarchy for the development of a listening function is based on normal stages of auditory development. These auditory stages are interwoven into all interactions and

learning experiences.<sup>3</sup> Auditory stages and their definitions are as follows:

1. Auditory Awareness and Perception- Indicate the presence or absence of sound.
2. Auditory Attention and Inhibition-Pay attention to auditory information, especially speech, for an extended time.
3. Distance Hearing-Hear sounds from a distance.
4. Localization-Identify the source of a sound.
5. Discrimination-Differentiate and identify sounds and words that are acoustically similar or different.
6. Auditory Feedback and Monitoring- Listen to auditory information and repeat and modify the speech production, if necessary, to match the auditory model.
7. Auditory Memory-Store and recall auditory stimuli.
8. Auditory Memory Span and Sequencing-Remember varying lengths of auditory information in exact order.
9. Auditory Processing-Make cognitive judgments about auditory information.
10. Auditory Understanding-Comprehend auditory information in any situation.<sup>7</sup>

*Clinical Efficacy of the Auditory-Verbal Approach.*

Several studies have indicated that Auditory-Verbal therapy is a viable option for teaching children who are deaf to listen, talk, read, and be gainfully employed.<sup>8-15</sup> In general, the majority of children who were enrolled in Auditory-Verbal therapy were integrated into "regular" living, learning and working environments and developed speech, language, and reading abilities consistent with their chronological age.<sup>9</sup>

*Auditory-Verbal Therapy in the Future.* As more children are identified at birth with hearing impairment and as advances continue to be made in the medical profession for treating deafness, it is expected that the demand for Auditory-Verbal therapy will continue to grow. However, children will “graduate” from Auditory-Verbal therapy earlier by reaching speech and language skills commensurate with chronological age. Auditory-Verbal techniques that have worked with children for over 50 years are also helpful to adults who are now receiving cochlear implants; therefore more adults will receive Auditory-Verbal therapy to optimize the auditory information received through cochlear implant(s).

*Address questions and comments to:*  
Nancy Caleffe-Schenck, M.Ed., CED,  
CCC-A, Certified Auditory Verbal  
Therapist®  
NCShenck@aol.com