

Auditory Verbal Intervention: Beginning at the Beginning

*Creating Connections:
Making a Meaningful Difference in the Lives of Families*
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Kyle

Chronological Age: 7 years 4 months

CI Age: 5 years 9 months

The Game Plan

- Where shall we start?
- Where are we going?
- How are we going to get there?
- By the way, ARE we going to get there?
- What do we know?
- What do we not yet know?
- What have we forgotten?
- What should we never ever forget?



**What we have to learn to do,
we learn by doing.”**

Aristotle, 384-322 B.C.

Counseling Parents of Newly Identified Children



Unlike most typically-hearing parents of typically-hearing children, parents of children with hearing loss must make important decisions about how they...and the rest of world...will communicate with their child.

Out of necessity, these sometimes extremely difficult decisions must be made very early in their child's life and are often made during times of uncertainty and sadness.

Stages of the Grieving Process

Denial	Bargaining	Anger
Despair	Acceptance	Reoccurrence?

Therefore, it is important that families receive:

- Thorough information about all communication choices;
- Unbiased information about communication choices;
- Unconditional support and appropriate resources and contacts for whatever methodology the family chooses;
- Contact information for a local support group or individual parents who have offered their support to newly-identified families.

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**What Are Some Factors that
Predict / Influence Success
When Parents Select Auditory
Verbal Intervention?**

Factors That Influence Auditory Development

- Age of the Child
- Age at Onset of Deafness
- Age at Diagnosis
- Duration of Deafness
- Use of Amplification
- Degree of Hearing Loss
- Etiology of the Hearing Loss
- Availability of Support Services
- Skills of Therapist
- Skills of Parent
- Expectations for Success
- Cognitive Ability/Learning Style of the Child
- Parent Support and Commitment
- Emotional Status of the Family

Regardless of the Communication Path
Chosen, the Ultimate Goal for the Child
with a Hearing Loss Needs to Be the
Same...

*Communicative
Competence!*

Families Helping Families

Parents of newly identified children need to see that other children, especially those being raised within the communication system they have chosen for their own child...




Families Helping Families



...are happy and successful.



Parents As Partners in the Rehabilitation Process



***“One good parent is worth
10,000 school masters”***

~Chinese Proverb

Parents As Partners

- Competent and capable parents vs. unnecessary dependency on professionals;
- Parent participation and active involvement in all aspects of the child's habilitation and educational programming;
- Parent-professional relationship based on open-communication, trust, respect, and shared responsibility;
- Begins by helping the family identify what they want for their child.

Parents as Partners

- Ask the parents/caregivers...
 - “What are your goals for your child?”
 - “Where do you see your child in
5 years? 10 years? 18years?”
- Write these goals down and keep the document.
- Discuss, openly and honestly, what is needed for the child to succeed.

Can you find the student in this picture?



“I’ll retain 10% of what you tell me, 50% of what you show me and 90% when you involve me.”



Camryn

Chronological Age: 2 years 5 months

CI Age: 1 year 4 months

Development of an AV Program

*Program Goals for Parents and/or
Primary Caregivers*

Major Program Goals for Parents

- Experience & accept the feelings associated with the discovery & reality of hearing loss in their child;
- Acquire the information and skills they need to teach their child listening and communication skills;

Major Program Goals for Parents

- Acquire the knowledge they need to participate actively in the management of their child's educational career;
- Interact with their child with a hearing loss in ways that promote the development of the child's feelings of self-esteem and competency.

Goals for Children with Hearing Loss

- Children will acquire a functional communication system, based on spoken language, that enables them to understand the information, feelings, & ideas conveyed by family members & friends and to communicate their own thoughts, feelings, and ideas to others.

The Goal is Conversational Competence!

Goals for Children with Hearing Loss

- That children, upon “graduation” from the early intervention program, are functioning linguistically and cognitively at levels at or above those of their hearing peers;
- That children, upon “graduation”, will enroll in a mainstream educational setting *with appropriate support.*

Goals for Children with Hearing Loss

- Children will acquire the social skills, emotional well-being, and positive self-esteem that allow them to function in families, schools, and society as a whole.



Content of an AV Program

Content of an AV Program

- Individualized assessment and developmental programming in listening, pre-symbolic language, receptive and expressive language, speech production, and cognition.
- Individualized instruction for parents on issues relating to their child's hearing loss.
- Regular and aggressive hearing assessments & use of technology (hearing aids, cochlear implants, FM systems)

Content of an AV Program


- Training of parents in troubleshooting the hearing aids or cochlear implant;
- Group educational or counseling opportunities for parents;
- Use of videotape to give parents feedback regarding their interaction with their child.
- Printed educational materials available to the parents.

Content of an AV Program

- Ongoing record-keeping of parent-child skill acquisition;
- Ongoing videotape record of the child's communication skill acquisition;
- Comprehensive annual reports/ formal assessments of the child's progress;
- Concerted effort to build rapport with referral sources.

What we know...

- Since the 1960's, there have been many changes in detection and intervention...
 - Age of identification has decreased
 - Common etiology has changed
 - Technology has improved dramatically
 - Incidence of multiply-handicapping conditions has increased
 - Number of parent-infant programs has increased



**Discussion of Basic Principles:
Theory to Application to
Practice**

Early Detection and Intervention

- The earlier, the better...
- Benefits from the “critical periods” of neurological and linguistic development;
- Less of a gap between hearing / language age and chronological age;
- More access to learning through incidental vs. didactic learning.



**Importance of
Early Auditory Stimulation:
*Sensory Deprivation***

Morphological Changes

- Disuse during early sensory periods leads to permanent alterations in the function and structure of relevant brain areas;
- Alterations in central auditory pathway:
“Use it or Lose it”
- The function of the peripheral system is critical to the maturation of portions of the central pathways.

Emotional Deprivation

- Audition play an important role in social and emotional development;
- Contribution to feeling of “oneness” with caregiver during first year of life...
- Contribution to feeling of “separateness” in the second year...

Development of Attachment

- Contact, even when not in visual field, is afforded by voice;
- When not present, bond is distorted or attenuated and an unnatural “emotional separation” can exist;
- Within a few weeks of age, a child can be quieted only by his mother’s voice;
- Later, separation can be tolerated if reassured by his mother’s voice, even if she is in another room;

Development of Attachment

- Sound is part of the cognitive building blocks needed to define personal boundaries and relationship to the world;
- Without, the sensory isolation developed by may far-reaching effects...

Communication Deprivation

- Studies of hearing infants illustrate how communication precedes language through development of social pre-linguistic communication;
- Type and amount of interactions between parent and child vary based on situation and environment;
- Differential response to sound occurs very early...coordination of movement? sensitivity to rhythm, intensity, etc?

Communication Deprivation

- Studies show that infants discriminate some phonetic elements of their own language at a very early age and actively improve own skills in the first few months after birth (Eilers and Gavin, 1977, 1980);
- Young infants also develop the ability to detect speech that is embedded in noise;
- Other studies show that the type and amount of early linguistic input effect the quality of the child's language later in life.

Critical Periods

- Defined as a “fairly well-delineated period in which a specific stimulus must be applied to produce a particular action”;
- A “sensitive” period is the optimal time for application of such stimulus;
- After this period, it becomes increasingly more difficult to learn, as neural pathways become more and more defined and set into specific patterns of response to environmental input.

Critical Periods

- From studies, it has been concluded that the first few years of life are critical for full comprehension and use of a language system;
- The input during these first years are assumed to “lay the roads” of neuronal patterns used to learn language;
- Must not just learn that sounds exist, but that they are *meaningful*...fundamental to the symbolic nature of language itself.

Critical Periods

- Early training is also better due to close proximity of caregiver, better quality of vocal input with little distraction, acquisition of skills is paired with the exploration of the environment, thus less need is seen to overcome challenges of attention and motivation;
- Early childhood allows for a large amount of time dedicated primarily to language learning in a social setting.

A geometric diagram consisting of a large circle centered on a square grid. The grid is composed of several vertical and horizontal lines. The circle's top and bottom edges are tangent to the top and bottom horizontal lines of the grid. The text 'The Uni-Sensory Approach' is centered horizontally across the middle of the grid.

The Uni-Sensory Approach

Uni-Sensory vs. Multi-Sensory

- Term “uni-sensory” has often been misinterpreted to mean the deprivation of other clues;
- Rather, by intensive conditioning of the impaired modality, the child is returned to a “multi-sensory” being, able to respond “multi-sensorily”;
- In contrast, multi-sensory methods encourage compensation for the impaired sense by the unimpaired ones.

Normal Development of Perception

- Uni-sensory methodology for hearing perception is based on specific psychological and physiological mechanisms that govern normal perceptual development:
 - Awareness of a stimulus
 - Attention to the stimulus
 - Motivation
 - Learning

Awareness

- The inter-relationship between awareness and consciousness and their dependent on systems within the brainstem is extremely complex and not well understood;
- It is a mechanism for maintaining the general “tone” of brain functioning...regulating the various states of awareness.

Attention

- Defined as the “selective focus for attention”;
- Human beings function effectively not as a being with constant response to all incoming stimuli, but with constantly shifting levels of attention;
- With divided attention comes the inability to attend, process and comprehend either stimulus fully;

Attention

- If a stimulus can attain the level of becoming the “figure” in a figure-ground relationship (as in normal vision and abnormal hearing), it can actually inhibit the perception of the competing stimulus.
- If both stimuli occupy the ground equally (as with normal hearing and normal vision), they can facilitate each other.

Motivation

- Primary factor for voluntary attention;
- Assists in arousing the cortex before the stimulus arrives, thus enhancing the quality of perception;
- Enables / facilitates development of linguistic skills by providing a need or desire to listen.

Learning

- Human beings are constantly bombarded by environmental stimuli;
- All perceptions /incoming sensory stimuli must be organized into meaningful units to create order;
- This order is necessary for learning to occur, as grouping allows the span of comprehension to be extended and allows the perceiver to cope with more material;

Learning

- Integration of auditory information occurs in the brain...not the in the peripheral hearing mechanism;
- Much of this is described by Piaget and his learning patterns of “adaptation” and “assimilation” and “accommodation”;
- In order to learn new information and retain and recall existing information, it must be organized into cognitive units or “schemata”.

Information Processing

- We all have limits on the amount of information we can process at any one time and we allocate our resources depending on the complexity of the task;
- The manner in which we process stimuli is set early in life by the method that is used to provide us with information about our world..i.e. visually or auditorily;
- Increased distractibility and variability in levels of processing occurs due to age, fatigue, health, motivation, method of input, complexity of task, etc.

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What About Children with Additional Disabilities?



Mary

Chronological Age: 2 years 6 months

CI Age: 1 year 7 months

Auditory Feedback Mechanism

- Hearing is not only necessary to perceive sound in the environment, but also to hear one's own voice and regulate it;
- Early vocal play, both independent and reciprocal in nature, constitutes a very important component of syntax, motor skill, and suprasegmental skill development;
- The development of a feedback mechanism explains why, by nine months, a baby's babble will begin to sound more like the speech of their mother tongue;

Auditory Feedback Mechanism

- In a study completed by Lennenburg (1964), it was observed that neither deafness nor the presence of deaf parents had any significant effect on the infant's babble within the first six months;
- In fact, the sounds made by all infants, whether hearing-impaired or not, within the first three months were virtually identical;
- However, by six months, the absence of the feedback mechanism were evident and many babies with significant hearing loss had stopped babbling all together.

Auditory Feedback Mechanism

- Inappropriate inflectional patterns and poor vocal quality are often evidenced in older children with severe hearing loss, who have learned to speak primarily through kinesthetic cues, without learning how to monitor their voices auditorily;
- Visual cues and verbal explanations are often inadequate for allowing for consistency in regulating these non-visual qualities of speech.

Retention of Normal Environment

- If one's goal is eventual placement of a child in mainstream education, the model for the child's behavior and communication must be that of typically-hearing peers;
- Successful social interaction and integration requires both that the child has these abilities and that the perceptions of typically-hearing peers toward physical differences are shaped prior or concurrent to integration of a child with hearing loss.

Development of a Listening Function



Development of a Listening Function

- Main goal of the Auditory-Verbal Approach is the integration of hearing into the personality of the child with a hearing loss;
- Therefore, logically, intervention is focused first and foremost on developing hearing perception;
- Child must wear his hearing aids or cochlear implant throughout all waking hours;
- Stimulation must occur that develops listening as a function of his interaction with his environment;

Hearing Age

- Relationship between age at first amplification and a child's chronological age;
- Calculated from the day the child begins wearing amplification;
- Used to put progress in perspective;
- Listening experience?
- Mixed hearing history?

Development of a Listening Function

- In order to attain normal language development, children with hearing loss must pass through the same language development stages as typically-hearing peers and must begin at the beginning;
- If the child's age is two years when he receives his hearing aids, his hearing age is only one day;
- Bridging the gap between a child's hearing age and their chronological age requires a greater than a 1:1 ratio of language development : time in therapy.

*After Audiological Data is Obtained
and Interpreted....*

Assessment

*Never, ever, ever, ever, under
any circumstances
begin AV intervention with a
child without first establishing
a
BASELINE
of speech, language, and
auditory skill development.*

What is “Assessment”?

“Assessment is any activity, either formal through the use of standardized criteria, or less formal, through the use of developmental profiles or checklists, that is designed to elicit accurate and reliable samples of behavior upon which inferences relative to developmental skill status may be made.”

Areas of Evaluation

<i>Speech Production / Oral Motor Development</i>	<i>Speech Perception / Auditory Skill Evaluation</i>
<i>Receptive Language</i>	<i>Expressive Language</i>
<i>Cognitive / Play Skill Development</i>	<i>Conversational Competency</i>

Additional Areas of Assessment

- Fine Motor Skills (Screening)
- Gross Motor Skills (Screening)
- Self – Help Skills
- Social / Emotional Maturity Level
- Parent – Child Interaction
- Parental Motivation and Dedication
- Sensory Integration (Screening)

Why do we need (re)assessment?

- Develop a BASELINE –current level;
- Create ACCOUNTABILITY- for parent, professional, child, program.
- JUSTIFY referral;
- ENCOURAGE more rapid progress;
- IDENTIFY specific areas needing development;
- VERIFY treatment efficacy.

Important Points to Remember...

- No single measure serves as a reliable general index of language development over the whole range from newborn to 60 months of age.
- There is only a weak relationship between measures of children's performance on language tests administered under controlled conditions & developmental measures derived from spontaneous speech.

Important Points to Remember...

- Taken together, the findings concerning measures of language development derived from spontaneous speech and those derived from tests indicate the inappropriateness of using any single measure as an index of general linguistic development.

*You've got to be very careful if
you don't know where you're
going, 'cause you might not
get there."*

~ Yogi Bera

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The Development of Auditory Awareness and Attention:

First Three Months

Auditory Awareness / Attention

- Sound awareness, particularly of the maternal heart beat, begins in utero;
- A newborn is bombarded with many sounds, many of which appear to be “unnoticed” unless they are very loud;
- A typically-hearing neonate begins to listen with varying degrees of attention;
- Only after much repetition within a limited environment, the infant begins to understand sounds that have become meaningful to him;

Auditory Awareness / Attention

- First responses are to gross environmental sounds;
- Startle response, suppression of reflexes, and beginning of selective attention to novel sounds;
- Infant is observed to attend to softer sounds;
- What is considered response?
- Within two months, will begin to recognize the caregiver's voice;
- Begins to understand source of sound;

Auditory Awareness / Attention

- Infant learns that there are all kinds of sounds: quiet, rhythmic, noisy, male, female...also hears himself, his own bodily noises, crying, and other vocal sounds;
- Begins to exhibit understanding of presence or absence of sound;
- At first, the child only reacts to sounds that are close by...gradually develops distance hearing and is eventually startled by sounds occurring farther away.

By The End of Third Month:

- Recognizes his mother's voice;
- Stops crying to listen to familiar voice or music;
- Enjoys playing with a few noisemaker toys;
- Listens to his own sounds;
- *Most importantly, he has learned that sound is used for communication: by crying or vocalizing he gets a response.*



Camryn

Chronological Age: 1 year 2 months

CI Age: 1 month

Conditioned Response to Sound

- In order to accurately assess a child's hearing acuity with and without hearing aids or cochlear implants, a reliable conditioned response **MUST** be established.
- Has the child begun to show awareness to sound spontaneously?
- Sound is presented auditory-only...**NO** visual cues and the child is asked to "respond" with predetermined action.

Conditioned Response to Sound

- Begin immediately at whatever level the child can perform the activity;
- Can they hold it independently and wait patiently for the sound? Can they hold it and wait with impatience? Can they release the block in order to put in?
- What sounds should I make? Auditory Learning Guide...varied intonation through the Ling 6 (7?) Sound Test.

Conditioned Response to Sound

- Remember that activity must be:

motivating but not too motivating
repeatable

uncomplicated

QUICK

age and developmentally appropriate

varied...but not before the child “gets it”

- Remember to gradually introduce levels of hearing...detection, discrimination, identification... then at greater distances.



Camryn

Chronological Age: 1 year 4 months

CI Age: 3 months

Major Auditory Goals in First Three-Six Months

- SOUND AWARENESS
 - Spontaneous response to sound...
 - Awareness demonstrated with conditioned response
 - Response to music with dancing, “singing”, clapping
 - Increasing auditory attention
 - Indicating presence/absence of sound
 - Begins to associate a sound with an object...
 - Learning to Listen Sounds!

Major Auditory Goals in First Three-Six Months

- SPEECH BABBLE
 - Imitation of non-speech oral motor/gross motor actions...
 - Hand cue is used to stimulate imitation...
 - Imitate suprasegmental qualities...LtoL
 - Imitate vowel variety...
 - Begin early speech sound bombardment...

Major Auditory Goals in First Three-Six Months

- AUDITORY MEMORY
 - Associating LtoL sounds with objects/actions
 - Identification of common phrases through suprasegmental qualities and word recognition
 - Identify simple songs with pictures/books/ hand motions
 - Development of one-word memory

Major Auditory Goals in First Three-Six Months

- **IMPORTANT!**
 - All goals are developed through 4 stages of auditory skill...
 - All goals are developed through a closed set, then bridge set, then open set...
 - All goals are developed initially and primarily through audition only...

Erber's Hierarchy of Listening Skills

Detection

The ability to detect the presence or absence of sound.

Discrimination

The ability to perceive differences between sounds.

Identification

The ability to label or name what has been heard.

Comprehension

The ability to understand the meaning of an acoustic message by reference to knowledge of language.

*Just Because a Child is
Capable of Hearing Does Not
Mean He is Listening!*



**The Development of
Discrimination and Auditory
Feedback:**

Second Three Months

Auditory Feedback Mechanism

- Infant begins to develop this extremely important skill involuntarily;
- Enjoys hearing his own voice, laughing aloud over and over, vocalizing, cooing, and babbling;

Auditory Discrimination

- Hearing now contributes to spatial awareness and keeps baby “in touch” with his environment, even in the dark;
- When he’s alone, he is reassured by familiar sounds around him;
- The environment in which the child is raised influences reaction to sound...the louder the environment, the more apt the child is to ignore sounds;

Auditory Discrimination

- Multiple listening experiences of the early months lead to a new auditory skill, that of discrimination;
- Leads to conscious and more sophisticated awareness of the presence or absence of sound;
- Perceives differences in speech sounds;
- Reacts differently to tones of voice and recognizes environmental sounds;
- A baby held face to face by an adult will cry upon hearing his mother's voice....why?

Auditory Discrimination

- Able to begin to inhibit sound and create a rudimentary auditory figure ground;
- Begins to turn his head to localize sound;
- Purposely produces sounds with noisemaking toys.

End of the Sixth Month

- Becoming much “more human”;
- Wider range of vocal and facial expression;
- Increased motor control;
- Greater involvement with his world;
- Likes reciprocal vocalization play;
- Enjoys being sung to;
- If standing, can bounce to the rhythm of music;
- Using hearing to orient to unseen space.



Camryn

Chronological Age: 1 year 7 months

CI Age: 6 months



The Development of Localization and Babbling:

Third Three Months

Localization

- Next important milestone: *localization*
- Facilitated by maturation and opportunity;
- “Orienting Reflex” (Luria, 1973);
- Associated with cessation of all other, irrelevant forms of activity;
- Developmentally, begins when child is put into a sitting position (approx. six months of age);
- Facilitated by binaural, symmetrical hearing – what about cochlear implants?

Localization

- Distance hearing and localization are incorporated into each level of auditory learning once close range hearing has been demonstrated;
- Ability to localize develops gradually and continues during first years of listening;
- Children are able to localize first on the horizontal plane within three feet and develop the ability to localize sounds from above and behind and at greater distances later on...will react to, but perhaps lack true, automatic localization for up to three years?

By the end of Ninth Month

- Enjoys playing with his own voice;
- Plays vocally by singing tones and letting voice slide from high to low pitches;
- Begins monitoring through auditory feedback and feedforward mechanism;
- Responds to simple requests (say bye-bye);
- Imitates speech sound if already in vocal repertoire;
- Imitates non-speech sounds (raspberries, lip smaking)

By the end of Ninth Month

- It is important to note that there will be periods when the child is extremely “chatty” and periods of time when the child becomes rather quiet;
- These times are “listening times”, when the child quiets himself in order to take in new information from his environment;
- Development, in all areas, is a series of peaks and plateaus...and sometimes, “regression” in one skill to facilitate another;
- Reassurance and constant monitoring is essential during these times.



Camryn

Chronological Age: 1 year 7 months

CI Age: 9 months



The Development of Auditory Processing

Last Three Months of the First Year

Auditory Processing

- Entering symbolic level, when passive word understanding comes into being;
- Connection between experience and word symbol is a result of constant repetition;
- After patterns of sound recognition and association become ingrained, learning quickens;
- Two new skills are of great importance: *auditory-memory and auditory sequencing.*

Auditory Memory

- Necessary for recalling critical elements;
- Three Stages:
 - a complete sensory image of just-occurring events;
 - an immediate or short-term memory with limited capacity;
 - a permanent long-term memory with very large capacity;
- Controversy in literature about retention of a sensory image and presence of irrelevant or distracting factors;

Auditory Memory

- For storage into long-term memory, an item must be rehearsed and associated with previous information;
- Increased capacity through association;
- Use of a “cognitive set” in therapy?
- Use of rhythm and kinesthetic information (i.e. alphabet song);
- Meshed with experience, motivation, language acquisition, knowledge of language code, intelligence.

Auditory Memory

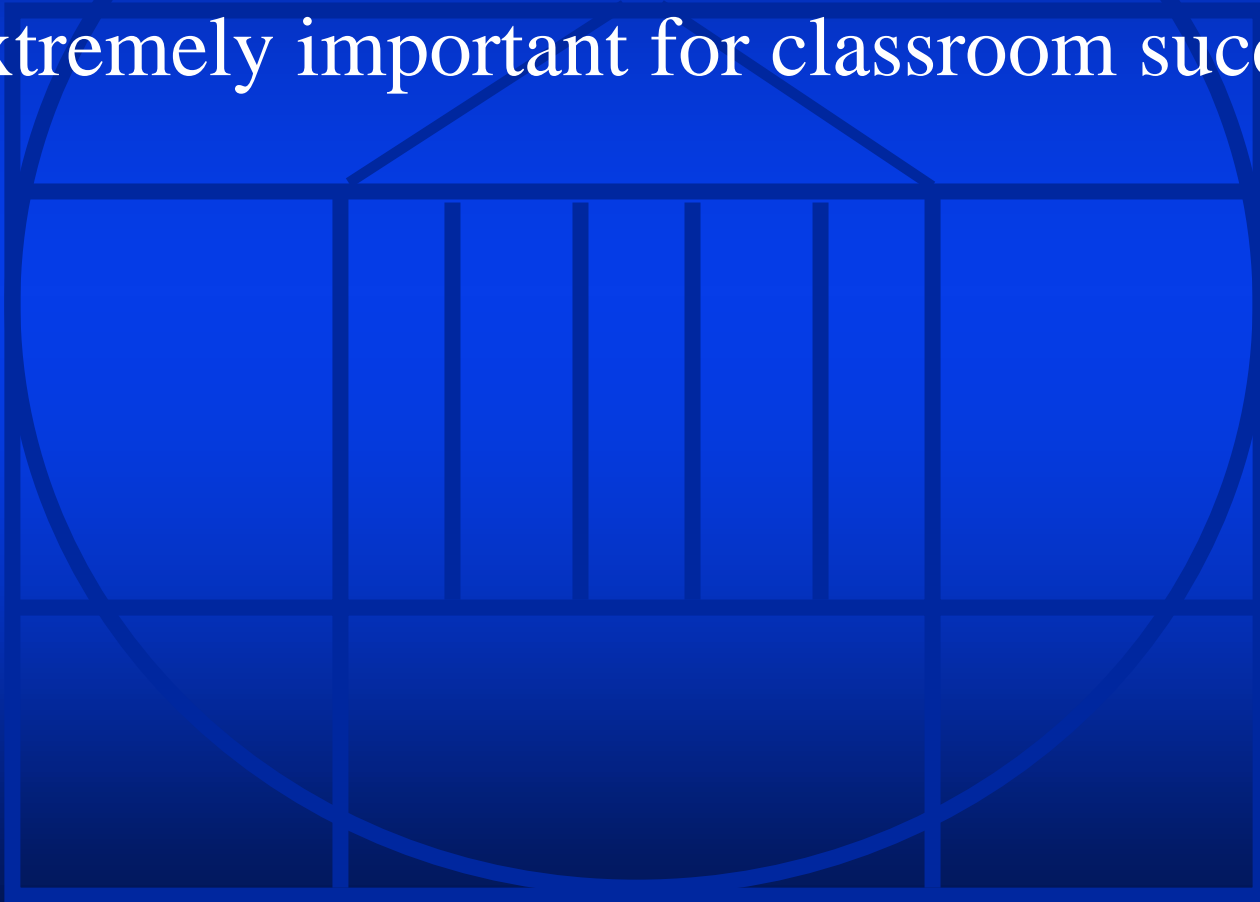
- Effect of auditory recall? Pediatric aphasia? Learning disabilities? CAPD???
- Child's ability to repeat "unconnected" sounds, numbers, words does not serve as an effective indication his/her potential to use audition as a tool in developing a functional language system;
- Memory and recall must constantly be "connected" to real life situations;

Auditory Memory

- In order to learn language, a child must be able to STORE and RECALL:
 - Auditory image of sounds, words, and sentence structures of the language (i.e. making the transition from perception through peripheral mechanism to the auditory cortex),
 - Correct sequencing of auditory vocal patterns (i.e. making the transition from auditory cortex to output specific of oral-motor patterns).

Auditory Memory

- Extremely important for classroom success!



By the end of Twelfth Month

- A typically-hearing infant can use all these basic skills to respond to his environment and to process language;
- Requires the “Learning to Listen” year to begin to communicate with words;
- How does this effect children learning to listen at two years of age?
- *The basic premise of Auditory-Verbal education is that a child with hearing loss needs the same foundation of listening experiences as a typically-hearing child, regardless of the age at which intervention occurs!*



Camryn

Chronological Age: 1 year 11 months

CI Age: 10 months

By the end of Twelfth Month

- Definite skills attained:
 - Auditory Awareness and Perception
 - Auditory Attention and Inhibition
 - Distance Hearing
 - Localization
 - Discrimination
 - Auditory Feedback and Monitoring
 - Auditory Memory
 - Auditory Memory Span and Sequencing
 - Auditory Processing

By the end of Twelfth Month

- Hutchison (Auricle, 1994) suggests that these skills fit into three psychological purposes:
 - Environmental Monitoring
 - Self-Monitoring of the Child's Vocal Activity
 - Creative Organization and Management of Meaning
- Suggests an additional step-Auditory Association

Major Goals in Second Half of First Year

- SOUND AWARENESS
 - Child should have an independent conditioned response
 - Should identify his/her own name
 - Should comprehend a large number of everyday phrases...”open the door”/”wave bye-bye”
 - Should respond to loud and soft sounds at varying distances...identify familiar ones

Major Goals in Second Half of First Year

- SPEECH
 - Should imitate strings of alternated vowels...
 - Should imitate consonants varying in manner...
 - Accurate production of vowels and front consonants...
 - Should use voice INTENTIONALLY...

Major Goals in Second Half of First Year

- AUDITORY MEMORY
 - Will understand and answer common questions: What's that? Where's Daddy? What's _____ doing?
 - Will follow a story illustrated by 3-4 sequenced pictures and will identify the picture that corresponds to a specific part of a story.
 - Will recall two (three?) critical elements...

Major Goals in Second Half of First Year

- For specific weekly speech and language therapy goals...

consult resources for “normal developmental sequences”.

Bloom and Lahey?

CASLLS?

Speech Sound Charts?

**“No matter how hard we try,
language serves too many functions,
expresses too many meanings,
provides too many lexical and
syntactic options and is formally too
complex for us to teach everything to
a language-impaired child that is
necessary to be a competent
language user...”**

Consequently, when we undertake the task of language intervention, we must rely on the child's ability to extend whatever is acquired within intervention contexts and to acquire other related knowledge and ability on her own."

~Mark Fey, 1988



Specific Strategies and Techniques

Learning to Listen: *Enhancing the Listening Environment*

- Sit within 3 feet of the child's hearing aid or cochlear implant;
- Stay on the child's level;
- Sit beside and slightly behind the child and share focus on objects/activities in front of you;
- Be aware of and minimize background noise;

Learning to Listen:

Enhancing the Listening Environment

- Remember, the child is a beginning listener...enhance presentation to make speech information more accessible;
- Build attention by cueing child to “listen” while pointing to your ear to cue child to attend;
- Follow the child’s interest level in age and stage appropriate activities.

*All targets should be developed through listening and **INTEGRATED** into meaningful interactions throughout the child's daily routines and experiences.*



Auditory Learning Guide

Developed by
Beth Walker, Cert. AVT



Promoting Auditory Attention and Development:

Techniques and Strategies

Techniques and Strategies

- Deciding where to sit...
 - Increase auditory access?
 - Reduce tendency to seek visual cues?
 - Give parent the “hot seat”?
 - What is the goal?

The “Hand Cue” in Auditory-Verbal Therapy



The hand cue may consist of...

- The therapist, parent, or caregiver covering his/her mouth briefly, from time to time, when the child is looking directly at the adult's face.
- The adult moving his/ her hand toward the child in a non-threatening and nurturing way, as a prompt for vocal imitation or as a signal for turn-taking.
- The adult talking through a stuffed animal, a toy, a picture, or a book placed in front of the speaker's mouth.

Techniques and Strategies

- Auditory first, then visual (i.e. talk, talk, talk...then show);
- Give them time to think before responding;
- Expect an answer;
- Increase success by providing a choice;

Techniques and Strategies

- The auditory sandwich...
- Repetition and redundancy;
- “What did you hear?”
- Give them the language...
 - Self-talk
 - Parallel-talk
 - Expansion
 - Internal Language

Techniques and Strategies

- Modeling...it's my turn, then Mom's turn, then Dad's turn, then Grandma's turn, then baby's turn...
- Turn-taking and inner discipline...
- Before inner discipline and motivation, direct attention...Listen! Ready to Play? Here we go! Wow! Uh oh! What's next?
- Test-Type vs. Natural Questioning

Techniques and Strategies

- Sometimes you just need to sit still and remain quiet...
- The absent minded therapist or “sabotage”
- Could I speak to the person in charge?
- Acoustic highlighting...
- Motherese? Fatherese? Parentese? And the effects of presentation...

Acoustic Highlighting

“Motherese” (a form of acoustic highlighting) is speech used by parents / caregivers in talking with young children to help them in learning language. Its use is extended in communicating with a child who is hearing impaired to **increase audibility of language**. As a child learns to listen, the aim is to progress toward a more normal, less highlighted mode of communication.

Examples of Acoustic Highlighting

- No background noise...to increased levels of background noise;
- Six inches from hearing aid or implant...to increased distance from device;
- Slightly slower rate...to normal rate
- Increased pitch variation...to normal rhythm;
- Clearer enunciation...to less clear or unfamiliar voices;
- Increased repetition...to no repetition;
- Greater acoustic contrast...to less variation.



Use of Specific Presentation Skills

What is “Presentation”?

Presentation is the use of specific strategies to acoustically highlight the message or specific components of the message to which the clinician wishes the child to attend.

Examples of Presentation

pausing	stress	slower rate
whispering	singing	(de)emphasizing
auditory closure	rewording	“What did you hear?”
providing alternatives	repeating	labeling by category

Examples of Presentation

providing definition	changing open to closed set	providing rhyming word
suggesting opposites	providing visual cues	moving closer to child
directing child to listen again	repeating part that has answer	

Techniques and Strategies

- Turn it down and turn it off...control your environment
- Get a little closer...not louder
- Take your time and speak clearly
- If you get tired of saying it, **SING** it!

Techniques and Strategies

- Keep it Simple.
- Stay strong...they can smell fear.
- Open set vs. Closed set...How many? 2? 5?
15? 601, 234?
- Have FUN!!!

Language development doesn't occur in isolation...

- Concurrent Development of Speech, Language, Audition, Cognition, and Communication Skills.
 - Auditory skills must be taught in conjunction with speech, language, and cognitive goals.
 - In order to address all these needs, goals must be integrated rather than isolated.

Language development doesn't occur in isolation...

- Concurrent Development of Speech, Language, Audition, Cognition, and Communication Skills.
 - Development of these skills coordinate to a child's "hearing age" rather than their chronological age until the gap is closed.
 - Select activity according to: child's age, listening age, cognitive ability, listening ability, interests, learning style.

“The greater danger for most of us lies not in setting our aim too high and falling short; but in setting our aim too low, and achieving our mark.”

∞ Michelangelo