	
<h2>Auditory Development Series: Development Hierarchy</h2>	<h2>Auditory</h2>
<p>August 5, 2015 MaryKay Therres, M.S., CCC-SLP, LSLIS Cert. AVT Manager of Education and Therapy, MED-EL Corp.</p>	

	
<h2>Learning Objectives</h2>	
<ul style="list-style-type: none"> – Participants will be able to list play milestones for children ages birth to six years. – Participants will be able to describe auditory strategies to use when facilitating listening and spoken language development. – Participants will be able to list an auditory hierarchy along with goals at each level. – Participants will be able to develop purposeful play activities that specifically target listening goals. 	
	
<p>© MED-EL</p>	

Purposeful Play

MED⁹EL

1. Identify age-appropriate toy/material
2. Identify child's level of auditory skill
3. Choose appropriate auditory goals
4. For each goal, write out targets (scripts) that facilitate the goal
5. Identify strategies to assist in development of the goals

© MED-EL

Play-why?

MED⁹EL

Contributes to:

- Physical development
- Social development
- Emotional development
- Cognitive/intellectual development
- Communication development

Fun



© MED-EL

Types/Stages of Play

Mildred Parten, 1933, looked at children between ages 2 – 5 and observed 6 types:

1. Unoccupied play: child is relatively stationary and appears to be performing random movements without purpose (infrequent)
2. Solitary play: child engrossed in playing and doesn't notice other children (most often seen between ages 0 – 2)
3. Onlooker/Spectator play: child takes interest in other children's play but doesn't join in, primarily watches (2 – 2 ½ years)

Types/Stages of Play

4. Parallel play: child mimics other children's play but doesn't actively engage with them (2 ½ - 3 years)
5. Associative play: shows more interest in others rather than the toys; first category that involves strong social interaction (3 – 4 years)
6. Cooperative play: organization enters the children's play (e.g., play has a goal, rules, children act at group) (4 – 6 years)



Play Milestones

MED^oEL

- Exploratory play from birth to 24 months
- Relational or functional play 9 – 24 months (predominant 15 to 21 months)
- Begin to use some toys appropriately around 9 – 12 months
- Constructive play at 24 months but predominant 36 months +
- See more parallel play 2 ½ years to 3 years
- Interacting with peers begins around 2 ½ years



© MED-EL

Play Milestones

MED^oEL

- Cooperative play begins around 3 to 3 ½ years; begins to share
- Rough and tumble play begins around 3 years and is predominant from 4 – 5 years
- Enjoys play with simple concept and board games (manipulatives) around 3 – 4 years
- Understands turn-taking and sharing around 3 – 4 years
- Play has a sequence of events around 3 – 4 years
- Prefer to play in small group emerges around 3 ½ - 4 years

© MED-EL

Play Milestones

- By 4 – 4 ½ years have good imaginative play
- By 4 ½ - 5 years like working on projects (ie: cut/paste)
- By 4 – 5 has good imaginative pretend play
- Plays cooperatively with others by 4 – 5 years
- By 5 – 6 years able to play games with rules
- By 5 – 6 years more imaginative and plans many sequences of pretend events (ie: going on a trip to outer space)



Auditory Verbal Therapy Strategies



MED^oEL

1. **On all waking hours:** child wears hearing aids/cochlear implant whenever awake.
2. **Come close to me:** when speaking to the child be close so has better access to sound.
3. **Talk more:** use language with child all the time-talk about what you are doing, talk about what the child is doing, talk about what you see around you.
4. **Auditory hooks:** use words/phrases that have the sing-song voice with them to grab child's attention and start to develop understanding of the language that goes with the object/action; use familiar vocabulary in routine situations.
5. **Thinking place:** joint attention, you and the child are focuses on the same thing.

© MED-EL

MED^oEL

6. **Acoustic highlighting:** a sound or a sound in a word, word or phrase is slightly emphasized (highlighted) to draw child's attention to it. Can be used in any spoken language throughout the world.

7. **Auditory sandwich:** gives the child three chances to listen: alone, 2. listen with support, Supports can include point/gesture, show a picture/toy/object, speech read or sign.



© MED-EL

MED⁹EL

8. Check for comprehension: ask child specific questions about information presented.

9. Ask what they heard: have child repeat. Particularly useful when checking auditory memory or auditory discrimination.

10. Parent (or other) as a model: to provide appropriate response for child; after modeled then child is given chance to respond.



© MED-EL

MED⁹EL

14. Expand: response to child in which word order is the same and utterance is made longer and/or grammatically correct. Recast into adult syntactic form.

15. Extend: respond to child's utterance in conversational way, providing a bit of new information that is related to what the child had to say.

16. Clarification: skill to teach child; child learns to self-advocate when breakdowns in communication occur; requests specific information rather than "I didn't hear you", "say it again".

© MED-EL

MED⁹EL

17. Sabotage: two ways

- adult creates a problem or makes a mistake to block a goal of the child, thereby creating a context in which the child needs to communicate if he/she wants to overcome the difficulty and proceed with the activity
- adult makes a mistake to give child opportunity to identify and correct the mistake

18. Listening first: present with audition first and then if needed add visual cues to help understanding.

© MED-EL

MED⁹EL

19. Favorable listening environment: keep the noise level down.

20. Auditory feedback loop: have child listen then repeat, works on the auditory system (listen-process-repeat).

21. My voice matters: acknowledge and encourage child to use voice and later words to communicate.

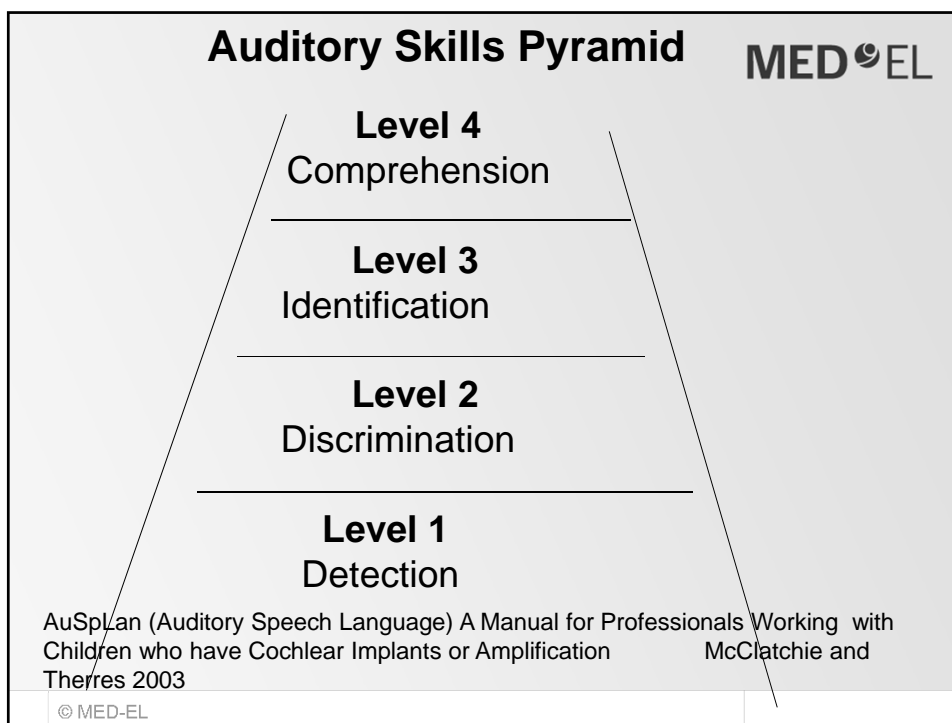
22. Choices: Provide child with choices for understanding and to also communicate to you what they want.

23. Build auditory memory: important for language development.

24. Music: expose to-sing.

25. Books: expose to-important for literacy development.

© MED-EL



Strategies for all levels of auditory

MED^oEL

- On all waking hours
- Come close to me
- Talk more
- Expansion/extension
- Thinking place
- Listening first
- Signal to noise ratio
- Pause-wait
- Auditory feedback loop
- My voice matters
- Music
- Books
- Parent as model



© MED-EL

MED⁹EL

Detection

Response:

- Repeatedly shows awareness of sound/speech. Individual can detect sounds but will not understand what they mean. Will know that a sound is present.



© MED-EL

MED⁹EL

Detection Goals:

- Awareness of Voicing
- Awareness of Environmental Sounds
- Awareness of Ling Sounds
- Voice in Distraction

© MED-EL

Strategies for Detection

MED^oEL

- Wear the cochlear implant all day, everyday
- Check detection of the 6 Ling sounds daily
- Prepare listener by saying “Listen”
- Point to your ear and comment “I hear that” or “You heard that”
- Repeat the sound
- Rephrase (ahh, ah-ah-ah or with intonation)
- Pause and wait



© MED-EL

Discrimination

MED^oEL

Response:

- Indicate similarity or difference (same/not same). Individual can recognize that there's a difference between sounds and words through listening. This is done through recognizing and possibly imitating the differences or showing beginning understanding in words/phrases that differ in duration, pitch, intonation, length, and/or rhythm.
- Use auditory hooks-words/phrases to get the child's attention. These are used with much sing-song voice (motherese, parentese).

© MED-EL

Discrimination Goals:

MED⁹EL

- Vocal length same/different
- Word length same/different
- Loud-soft same/different
- High-low pitch same/different
- Prosody same/different
- Auditory hooks-some beginning association



© MED-EL

Strategies for Discrimination

MED⁹EL

- Prepare listener by saying, “Listen”
- Contextualize the information-make it meaningful
- Use the auditory sandwich
- Repeat
- Use greater acoustic contrasts
- Auditory hooks
- Acoustic highlighting
- Use choices



© MED-EL

Auditory Hooks

MED^oEL

AUDITORY HOOK	WHEN AND HOW TO USE IT
Up up up	Picking up the child
Uh oh	When a mistake has been made (such as dropping something)
Ow	When someone is hurt
Look	Showing something, pointing to something
Oh no	When something goes wrong (eg. Spilling milk)
Yay	When something is achieved (e.g. putting a piece in a puzzle)
Wow	Something unexpected or exciting happens (e.g. a big tractor goes by)
Go	Letting something go (e.g. car down a slope)
Ready, steady... Go!	As above
Oooh yuck	Mess
No no no	Telling off animals, dolls etc.

© MED-EL

MED^oEL



© MED-EL

MED⁹EL

Auditory Purposeful Play

Level: Discrimination

Goal: Discriminate between routine utterances that differ by suprasegmentals

Targets: mmm, brush brush, brush, shh-go night night, num num num

© MED-EL

MED⁹EL

Identification

Response:

- Point to item named by speaker, repeat stimulus. Individual is building a listening vocabulary and understands simple words, phrases and, sentences along with sequential memory for sequences of words.

© MED-EL

MED⁹EL**Identification Goals: (vocabulary)**

- Build vocabulary
- Different levels of vocabulary for words
- Multiple meanings



© MED-EL

MED⁹EL**Identification Goals: (auditory memory)**

- One Key Word in Sentence Context
- Two Key Words in Sentence Context
- Three Key Words in Sentence Context
- Four+ Key Words in Sentence Context

Increase number of key words

Increase length of utterance short to long

Closed to open set

© MED-EL

Why do we work on Auditory Memory?

There is a strong relationship between auditory memory and language acquisition.

Strategies for Identification

Vocabulary Development and Auditory Memory

- Prepare listener by saying, "Listen," or "Ready?"
- Contextualize the information-make it meaningful
- Use the auditory sandwich
- Repeat the information
- Change the position of the key word in the sentence
- Change the number of items to recall
- Acoustic highlighting
- Rephrase
- Auditory sandwich
- Sabotage
- Use choices

Identification-vocabulary



Auditory Purposeful Play

Level: Identification

Goal 1: Increase receptive vocabulary

Targets: cow, sheep, chicken, pig, moo, baa baa, bak bak, oink oink, neigh, nose, eyes, mouth, ears, run, jump, sleep, sit, eat, drink, stand, colors, big, little, slow, fast

Identification - auditory memory

MED⁹EL



© MED-EL

Auditory Purposeful Play

MED⁹EL

Level: Identification

Goal 1: Increase ability follow direction with two- to three-key words.

Targets: Give the banana to mommy.
Give the cookie and apple to MaryKay.
Give the hot dog to Cody.
Give a cup to mommy.
Give a plate and cup to Cody.

© MED-EL

Comprehension

Response:

- Individual can understand longer and more complex spoken language; can answer questions; uses thinking skills like inference; and engages in a conversation with different people in a variety of settings.



Comprehension Goals:

- Advanced Vocabulary Development
- Auditory Word-Play Association
- Answer Simple Questions
- Understand More Complex Sentences
- Sequence a Short Story (put in correct order)

Comprehension Goals (continued):

- Answer Simple and Complex Questions About Short and then Long Paragraphs of Information
- Increase Cognitive Language Skills
- Follow Conversation With Familiar Topic
- Follow Open-Ended Conversation



Cognitive Language Skills

- Infer
- Interpret and Paraphrase
- Problem Solve
- Identify Missing Information
- Define and Explain
- Cause and Effect/Predicting
- Identify Main and Supporting Ideas about a Story
- Humor
- Figurative Language

Strategies for Comprehension

- Prepare the listener, "Listen," "Ready?"
- Know what is developmentally appropriate
- Contextualize the information-make it meaningful
- Use the auditory sandwich
- Repeat the information
- Acoustic highlighting
- Auditory sandwich
- Sabotage
- Use choices
- Rephrase
- Chunk important phrases together.
- Reword or summarize the information the second time
- Ask specific questions to encourage thinking

Comprehension-

Infer MED⁹EL



Auditory Purposeful Play

MED⁹EL

Level: Comprehension

Goal: Infer from information provided.

Targets:
The little boy is hungry what should he do?
What is something that has wheels and windows and you drive it?
What is something that that goes on your bed and you use it when you are cold?
Mom wants to go to the store to buy groceries, how should she get there?

© MED-EL

Reviewed

MED⁹EL

- Play Milestones
- Strategies
- Auditory Hierarchy and
- Some Purposeful Play



Goals

© MED-EL

MED⁹EL

Time to Play

- You will see a picture of a toy
- You will be given the auditory goal
- Determine the auditory level
- Think of a target/script to go along with the goal
- Think of two auditory strategies to go along with the activity

© MED-EL

MED⁹EL

© MED-EL

Auditory Goal: Child will sequence a short story at least three sentences in length.

Conclusion

Participants should have a better understanding of:

- play milestones
- auditory strategies to use when facilitating listening and spoken language development
- auditory hierarchy and goals to set for each level
- how to develop purposeful play activities that specifically target listening goals

