



NATIONWIDE  
CHILDREN'S  
HOSPITAL  
Speech Pathology

# EARLY INTERVENTION

# EARLY HEARING DETECTION AND INTERVENTION (EHDI) EARLY INTERVENTION SERVICES (Birth-School Years)





## Education – ODH & ODE

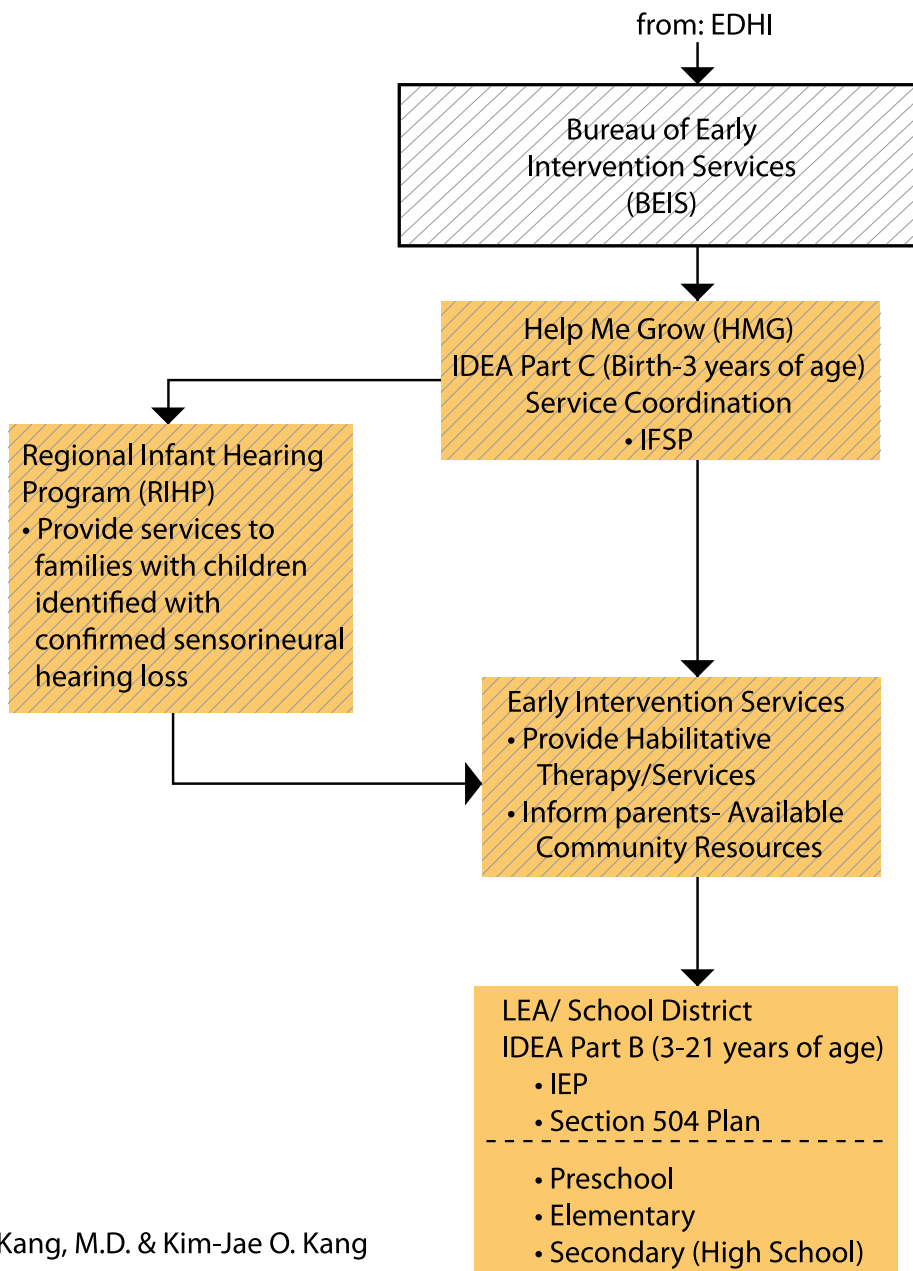
### Acronym Key:

**ALDS**- Assistive Listening Devices and Systems  
**AO**- Auditory Oral (Communication Modality)  
**ASL**- American Sign Language  
**AV**- Auditory Verbal (Communication Modality)  
**BEIS**- Bureau of Early Intervention Services- under ODH  
**CI**- Cochlear Implant  
**EI**- Early Intervention  
**ENT**- Ear, Nose, and Throat Doctor (Otolaryngology)  
**HMG**- Help Me Grow- under ODH  
**IDEA**- Individuals with Disabilities Education Act  
 Part B- (3 to 21 years) Special Education Federal Funding  
 Part C- (Birth to 3 years) Early Intervention Federal Funding

**IEP**- Individualized Educational Plan  
**IFSP**- Individualized Family Service Plan  
**LEA**- Local Education Agency  
**ODE**- Ohio Department of Education  
**ODH**- Ohio Department of Health  
**RIHP**- Regional Infant Hearing Program- under ODH  
**Section 504 Plan**- of Rehabilitation Act of 1973- Civil Rights Law, protects children with disabilities from discrimination  
**TC**- Total Communication  
**UNHS**- Universal Newborn Hearing Screening

### Color Key

 ODH  
 Medical  
 Medical – CI  
 Education – ODH & ODE



### Source:

D. Richard Kang, M.D. & Kim-Jae O. Kang



# EARLY INTERVENTION

## **Early Intervention** – (Birth to 3 years of age)

Once your child has been diagnosed and appropriate medical treatment has been implemented, early intervention services are **critical** for your child’s speech and language development.

### **What is Early Intervention?**

According to The Ohio Department of Developmental Disabilities (DODD) early intervention means services and support provided as early as possible, to enhance the family’s ability to meet the developmental needs of their child. Early intervention services and support are designed to identify a disability, delay, or risk-factors which may lead to a delay. It provides the family’s choice of interventions to maximize the child’s optimal growth and development.

### **Who Provides the Services and Support?**

Early intervention services are provided for children with hearing loss through the Ohio Department of Health – Help Me Grow (HMG) Program and Regional Infant Hearing Program (RIHP). Help Me Grow is responsible for providing your child with a service coordinator, and can also provide other direct habilitative services such as: physical therapy and/or occupational therapy, speech-language therapy, and social work. These services can be provided in your home and/or at a center. These programs and services are free and available for your child.

It is helpful to understand the roles that these two programs have in providing services for your child.

### **Ohio Department of Health (ODH)**

The Universal Newborn Hearing Screening (UNHS) and Early Hearing Detection and Intervention (EHDI) are managed by the Ohio Department of Health (ODH). ODH receives federal funds from the Individuals with Disabilities Education Act (IDEA) to provide early intervention services for infants and toddlers with developmental delays. IDEA is explained later in this parent’s guide in *Section IX. Education Services*, under *Understanding the IEP Process*.

#### **Help Me Grow Program (HMG)**

HMG provides the coordination for early intervention services for infants and toddlers with developmental delays, free of charge.

### **Individualized Family Service Plan (IFSP)**

The IFSP is a plan of action written by the service coordinator and developed jointly by the parents and service providers (educator, speech and language therapist, occupational and/or physical therapist, and social worker or case manager).

The Individualized Family Service Plan (IFSP):

1. Describes family strengths and needs supporting the development of the infant or toddler
2. Lists the desired outcomes for family services
3. Identifies the necessary resources and services to achieve the outcomes

To download the IFSP Form from Help Me Grow (HMG), see their website:

<http://www.ohiohelpmegrow.org/professional/training/ifsp/IndividualizedFamilyServicePlan.aspx>

The following is stated from “Working Together in Franklin County – Help Me Grow and Franklin County Board of Developmental Disabilities” booklet:

### **Referral for Services**

Upon completion of the Individual Family Service Plan (IFSP), the Help Me Grow Service Coordinator will make referrals to agencies or providers who can help to implement the IFSP by providing certain early intervention services. One of the agencies that provides services is the Franklin County Board of Developmental Disabilities within their Early Intervention Program.

### **Franklin County Board of Developmental Disabilities (FCBDD)**

Services provided by the Board include: Developmental Evaluations, Early Intervention Services in the home (Home Based Services) or Center Based Early Intervention, provided in one of the Board’s or partner agencies’ Early Childhood Center. The Board also provides “Bridge Services”, which may include: occupational therapy, physical therapy, and speech therapy.

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Franklin County Board of Developmental Disabilities (FCBDD)  
(Previously known as, Franklin County MRDD)  
Coordinator of Schools & Special Programs  
2879 Johnstown Road  
Columbus, OH 43219  
Phone: (614) 475-6440  
Fax: (614) 342-5001

For more information on Franklin County Board of Developmental Disabilities (FCBDD) or to find your local County Boards of Developmental Disabilities, see the following websites:

“Working Together in Franklin County – Help Me Grow and Franklin County Board of Developmental Disabilities” booklet  
website: <http://www.fcbdd.org/uploads/HMGBooklet.pdf>

Franklin County Board of Developmental Disabilities (FCBDD)  
website: [www.fcbdd.org](http://www.fcbdd.org)

For a list of contacts in your county, see a county roster of the County Boards of Developmental Disabilities  
website: <http://dodd.ohio.gov/contacts/documents/COUNTYBOARDROSTERMarch2010.pdf>

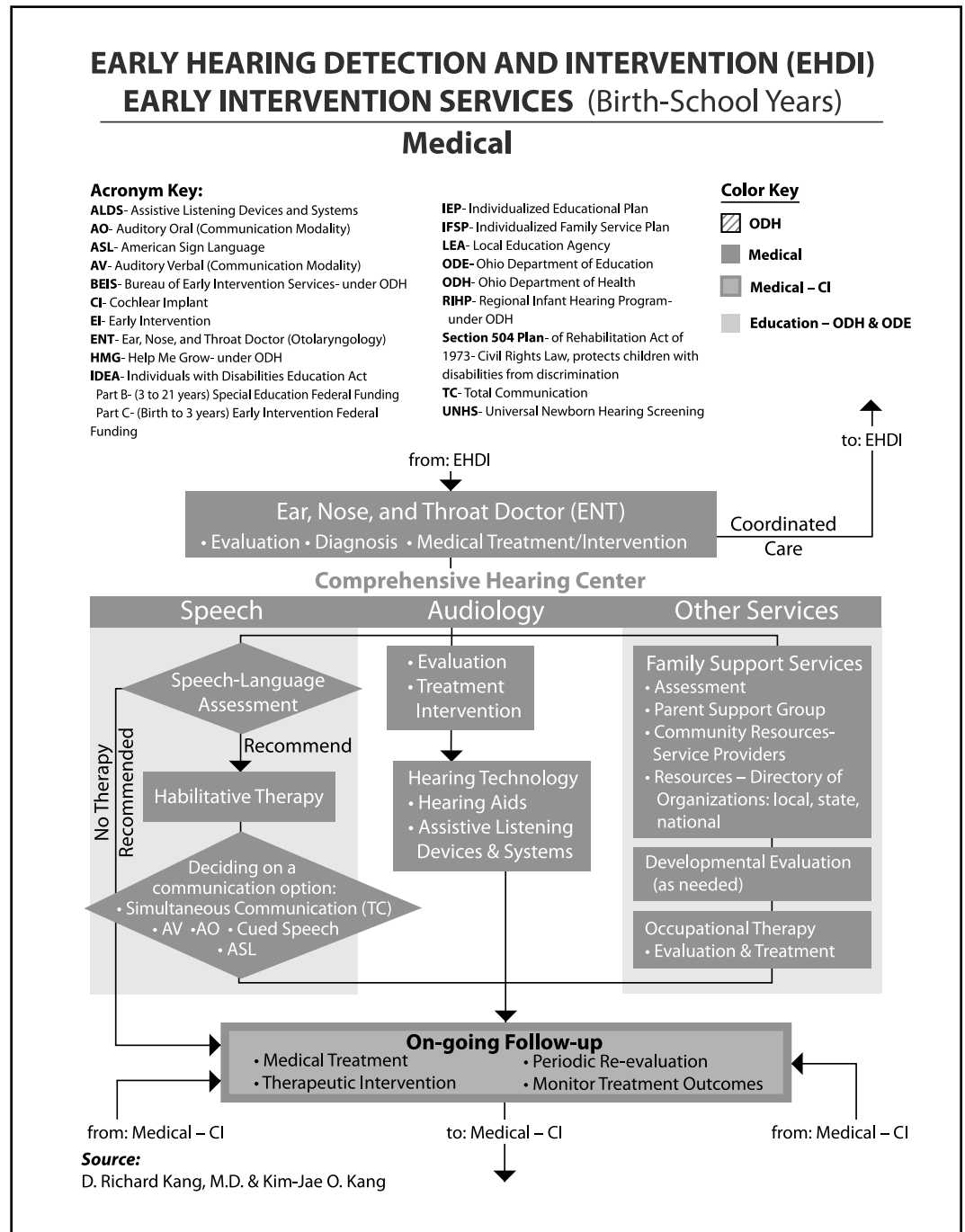
### **Regional Infant Hearing Program (RIHP)**

RIHP provides specialized early intervention services for infants and toddlers diagnosed as deaf or hard of hearing.

RIHP responsibilities:

1. Provide follow-up and tracking of infants who did not pass their newborn hearing screening
2. Provide non-bias information on communication options for children with hearing loss
3. Provide appropriate habilitative services to infants and toddlers with consideration of the chosen communication mode of the child and the family
4. Inform parents the available resources in the community for their child

For more information on the Regional Infant Hearing Program (RIHP) see their website:  
<http://www.ohiohelpmegrow.org/parents/infanthearing/reginfher.aspx>



### Speech and Language

A speech-language pathologist evaluates and treats children who have swallowing disorders, voice, speech, language, and hearing problems that affect their ability to communicate.

Speech and language are the tools that we as humans use to communicate with each other. Language, speech, and voice are interrelated, but can be defined as follows:

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## What is language?

Language is an expression of human communication that uses a systematic set of rules. We use language to communicate our feelings, ideas, and experiences to be understood within a group or community.

The two components of language are:

- **receptive** – understanding what is said (written or gestured)
- **expressive** – using words, gestures, or written words to communicate with others

Language has its own set of rules and uses the following building blocks:

- **phonology** – (phonemes or speech sounds or with sign language, handshapes)
- **morphology** – (word formation, e.g., making a word past tense)
- **syntax** – (sentence formation – to form grammatical sentences)
- **semantics** – (word and sentence meaning)
- **prosody** – (intonation and rhythm of speech)
- **pragmatics** – (effective use of language – socially acceptable ways of interacting with others)

A language disorder is when a child or adult is unable to understand (receptive language) or has difficulties expressing (expressive language) their thoughts.

## What is Speech?

Speech is the oral or verbal means of communicating with others. We produce speech through the coordination of muscle actions of the head, neck, and abdomen. A child learns how to regulate these muscles in order to produce intelligible (understandable) speech. Speech consists of:

- **articulation** – (how speech sounds are made)
- **voice** – (use of vocal folds and breathing to produce sound)
- **fluency** – (the rhythm of speech)

A speech disorder is when a child or adult is unable to produce speech sounds correctly or fluently, or has problems with their voice.

“BLINDNESS SEPARATES  
PEOPLE FROM THINGS.  
DEAFNESS SEPARATES  
PEOPLE FROM PEOPLE.”  
– HELEN KELLER

Any concerns regarding these areas: voice, speech, or language should be evaluated by an ENT doctor and a speech-language pathologist.

For more information on The American Speech-Language-Hearing Association (ASLHA) see their website: [www.asha.org](http://www.asha.org)

### **Speech and Language Development**

Research has shown that the first three years of life is the most critical periods of speech and language development in infants and young children. During these “critical periods” the developing brain can best learn a language.

The beginning of communication occurs as early as the first few days of life, when a newborn learns that when it cries, someone will feed or comfort them. The sound of a parent’s voice is the first familiar sound a newborn hears. The infant will learn to recognize the sounds in their environment, distinguishing the speech sounds (phonemes) which are the building blocks of their language.

As an infant matures, the speech mechanism (jaws, lips, and tongue) and voice develop into babble (“ba, ba, ba”) or baby talk, then into single words and word combinations. There is a natural progression of speech and language skills noted as “Speech and Language Developmental Milestones” which identifies a timeline for normal speech and language development.

These milestones are used in the health and medical community as a standard to assess speech and language delays. If your child can not hear all letter sounds (phonemes), then learning to talk will be difficult. Reading and literacy will also be affected if your child can not hear **all** the sounds of the alphabet. This will greatly affect your child’s learning abilities and their performance in the classroom.

For a copy of the checklist, see *APPENDIX B – “Speech & Language Developmental Milestone Checklist”*, from The National Institute on Deafness and Other Communication Disorders.

**Early Language Stimulation** – The following information is from Nationwide Children’s Hospital – Department of Speech Pathology.



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A young child's everyday routines and his/her interest in playing provide endless opportunities for learning! The benefit of using daily routines to teach language is that these events occur frequently, some of them several times a day. Since an adult must be present to help the child through routine care giving activities, talking to the child about what the child is doing and seeing as the routine is progressing is an efficient and effective way to promote listening and language learning.

Most childhood routines can be tailored to teach new skills and concepts as the child's use of hearing and use of language increases. Adults can change an activity to meet the needs of the child by matching the language they use during routine activities and play to the developmental levels of the child. When the adult makes an activity fun and interesting, the child becomes involved in the communication that is taking place and wants to participate.

**Some examples of everyday activities that can be turned into language opportunities:**

***Getting Dressed:***

1. Though babies are passive participants during dressing, they are willing listeners! Talk not only about the items of clothing you are taking on or off, but about baby's body parts, e.g. arms, legs, tummy, head. Make sure you put the baby's hearing aids or cochlear implants on first, so they do not miss out on all this language!
2. When his clothing is laid out in advance, a toddler can help pick out what item of clothing he wants to put on "first", "next", etc.
3. The two-year old can try putting his own socks on and can help more and more by pulling pants up, pulling shirt down, etc. Talk about what is happening! Talk about the sequence of dressing – "Socks go on your feet before your shoes".
4. The older the child gets, the more responsibility they can take for selecting clothing. Help them describe clothes they cannot reach in the closet by using color names and terms such as "striped one" or "shirt with the dog on it".

***Snack Time:***

1. Use infant-directed language when preparing the snack. Talk about what is happening now. Use facial expression and vocal quality to add meaning. Use short, simple, grammatically correct phrases and sentences.
2. Peel and section an orange or slice an apple or banana. Wrap each section in a small piece of plastic wrap or waxed paper. Give your child one wrapped piece at a time. Wait for them to tell you through pre-linguistic communication behaviors (i.e. reaching, pointing) that they want another piece. Emphasize to them that they want “more”. Talk about “opening” the paper, about each piece of fruit and what it looks like, smells like, feels like, etc.
3. Hide a bag or pretzels or crackers under a dishcloth. Crinkle the bag before you open it. Have the child listen to the sound. Ask “What is it?” before you reveal the snack.
4. Pop popcorn. Listen to the sound, whether in the microwave or the stove. Use language like “hot”, “salt”, “butter”, “mmm, good”, “more please”, “all gone”.

***Bedtime:***

1. Talk with your child about the things that happen before bedtime: brushing teeth, taking a bath, picking out pajamas and putting them on, reading a book, kissing family members good-night, taking hearing aids/cochlear implants off. Whatever happens routinely, have the child help you remember the sequence.
2. Get in the habit of reading at least one book to your child before they remove their hearing aids/cochlear implants and get into bed.
3. Rock your child and sing a few soothing songs prior to putting them down for a nap or for the night.

The best thing you can do for your child to help him learn language is to turn everyday activities into language experiences. Talk, talk, talk!

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(See a copy of “*Early Language Stimulation*”, from Nationwide Children’s Hospital – Department of Speech Pathology, in *APPENDIX M*.)

### **Deciding on a Communication Option**

You have learned about your child’s diagnosis, various medical treatments, and the importance of speech and language development. Now you will need to make a decision on a communication option for your child.

Research and learn the various communication options. It is through an informed decision making process that you as parents will decide on what fits the communication needs of your child and family.

*Note: It is important to realize that your decision on a communication option will determine your child’s early intervention therapy and educational placement.*

#### **Considerations:**

- **Communication options are significantly different and lead to different outcomes, therefore it is important to do your research.**
- Visit programs (that use different communication approaches), and talk with the professionals; speech-language therapists and educators of the deaf and hard of hearing.
- Talk with parents whose children use different communication approaches and/or have their children in different programs.

The following questions are to be considered when choosing a communication option for your child, as stated from the Alexander Graham Bell Association for The Deaf and Hard of Hearing (AG Bell):

1. What are my long-term goals for my child? For my family?
2. Is a given option a good match for my child? For my family?
3. What communication options are available in my community? Near my community? In my state?
4. Does my child appear to have any additional issues that need to be considered as we consider the various communication options?
5. What kind of school experience do I want for my child? How important is it that my child be educated in the mainstream (regular classroom with same-age children who do not have hearing loss)?

“WE WANTED TO GIVE OUR CHILD THE BEST OPPORTUNITY TO LISTEN AND TALK. WE LIVE IN A HEARING WORLD AND WE WANTED TO OPEN THE DOOR TO THE HEARING WORLD TO OUR CHILD.”

AG Bell states: Choose an option and “stick with it” for at least six to twelve months. Then, along with the professionals who are working with you, assess your child’s progress with the communication option(s) you have selected.

For more information on the Alexander Graham Bell Association for The Deaf and Hard of Hearing (AG Bell), see their website: [www.agbell.org](http://www.agbell.org)

### **Communication Options**

The following communication options (from BEGINNINGS) are described below.

“WORK DILIGENTLY WITH PROFESSIONALS. EVERY SESSION IS IMPORTANT. WORK DILIGENTLY WITH YOUR CHILD A LITTLE BIT EVERY DAY. IT ACCUMULATES.”

- **Auditory Verbal** – is an approach emphasizing spoken language development through listening. The child develops spoken language through one-on-one therapy and use of residual hearing with optimal amplification. This approach strives to make the most of a child’s ability to learn through listening; therefore, the child does not rely on visual cues.

#### **Primary goals:**

1. To develop spoken language through listening by following the stages and sequence of typical development.
2. To develop the skills necessary for successful mainstreaming in school and integration into the hearing community.
3. To promote a positive self-image through natural family and social interactions using spoken language.

Auditory – Verbal International, Inc. website:  
[www.auditory-verbal.org](http://www.auditory-verbal.org)

Alexander Graham Bell Association for The Deaf and Hard of Hearing  
AG Bell Academy for Listening and Spoken Language website:  
<http://nc.agbell.org/NetCommunity/Page.aspx?pid=330>

Equal Voice for Deaf Children website: <http://www.evdcweb.org>

John Tracy Clinic website: [www.johntracyclinic.org](http://www.johntracyclinic.org)

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- **Auditory Oral** – is an approach that teaches a child to use his/her remaining hearing through amplification and the use of speech reading/natural gestures/visual cues to aid the child’s understanding of language. The use of any form of sign language communication is not encouraged.

**Primary goals:**

1. To develop spoken language through listening and visual cues.
2. To develop spoken language and communication skills necessary for school success and integration into the hearing community.

Alexander Graham Bell Association for The Deaf and Hard of Hearing (AG Bell) website: [www.agbell.org](http://www.agbell.org)

John Tracy Clinic website: [www.johntracyclinic.org](http://www.johntracyclinic.org)

Oral Deaf Education – Oberkotter Foundation website: [www.oraldeafed.org](http://www.oraldeafed.org)

Option Schools, Inc. website: <http://auditoryoralschools.org/default.aspx>

- **Cued Speech** – is an auditory-visual communication approach combining a system of hand cues with the natural mouth movements of speech, specifying each sound (phoneme) of spoken language clearly.

**Primary goals:**

1. To provide clear communication in the spoken language of the home.
2. To develop the phonemic language base to achieve full literacy in conversation, reading and writing.
3. To support speech reading, speech and auditory skill development.

National Cued Speech Association (NCSA) website: [www.cuedspeech.org](http://www.cuedspeech.org)

Cued Language Network of America website:  
<http://www.cuedlanguage.org>

- **Simultaneous Communication (Total Communication)** – is an educational philosophy that uses spoken language and sign language simultaneously. It uses an English-based sign language system which can include speech, speechreading, fingerspelling, natural gestures and the use of residual hearing.

**Primary goals:**

1. To provide a bridge to the development of spoken language in the very young child.
2. To provide communication between the child and his/her family, teachers and peers using sign language.
3. To support integration into both the hearing and the deaf communities.

- **American Sign Language (ASL)** – a bilingual approach which includes the development of both ASL and English. ASL is a natural, visual/manual language totally accessible to children who are deaf that has its own grammar and linguistic principles.

**Primary goals:**

1. To acquire an age-appropriate internal language as a basis for learning a second language and opportunities for academic achievement.
2. To develop a positive self-image and cultural identity providing access to the Deaf community.
3. To provide a basis for learning written and when possible, spoken English as a second language.

The American Society for Deaf Children (ASDC)  
website: <http://www.deafchildren.org>

The National Association for the Deaf (NAD)  
website: <http://www.nad.org>

Laurent Clerc National Deaf Education Center – Gallaudet University  
website: [http://clerccenter.gallaudet.edu/Clerc\\_Center/New\\_Resources\\_for\\_Families\\_and\\_Professionals.html](http://clerccenter.gallaudet.edu/Clerc_Center/New_Resources_for_Families_and_Professionals.html)

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The Ohio School for the Deaf – Center for Outreach Services  
website: <http://www.ohioschoolforthe deaf.org/Outreach.aspx>  
ASL Preschool.org website: <http://aslpreschool.osd.oh.gov/about.htm>

For more detailed explanations on these communication options,  
see *APPENDIX N – “Communication Options – Reference Chart”* from  
BEGINNINGS or see website:  
[http://www.ncbeginnings.org/index.php?option=com\\_content&view=art  
icle&id=99&Itemid=232](http://www.ncbeginnings.org/index.php?option=com_content&view=article&id=99&Itemid=232)

Also see, A Parent’s Guide to Hearing Loss from CDC website:  
<http://www.cdc.gov/ncbddd/ehdi/CDROM/building/index.html>

### **Habilitative Services**

The following services are on-going for your child and family:

#### **Auditory Training**

Auditory training is the process of training the auditory (hearing) portion of a child’s brain to translate sound into meaningful language. This early intervention process requires the therapist to closely monitor the child’s receptive and expressive language development to ensure a comprehensive hierarchy of auditory development. Auditory development involves the following hierarchy: awareness, discrimination, recognition and comprehension.

#### **Strategies to Incorporate Listening into Everyday Activities –**

The following is from Nationwide Children’s Hospital –  
Department of Speech Pathology.

There are many strategies that you as parents can use to incorporate listening into everyday activities. The following is a list of techniques you can use to help your child listen throughout each day:

- **Reduce background noise** – you will have greater success in communicating with your child if there are no other activities (other children or adults talking, TV, radio, dishwasher, etc.) competing with you. During communication learn to control your child’s environment by providing a quiet setting. Make a point of finding “quiet conversation periods” on a regular basis during the course of the day.



- **Pausing and Repeating** – waiting for your child to respond can be one of the most difficult techniques to use. However, it is critical to allow them the time to process and respond appropriately.
- **Moving closer to the child** – this allows for child's hearing to significantly improve.
- **Acoustic Highlighting** – acoustic highlighting consists of speaking at a slightly slower rate, increasing your pitch variation and rhythm, clear enunciation and increased repetition. It also includes simpler language with shorter phrases and emphasis on key words.
- **Auditory closure** – give your child some of the information that they need. For example, say "The dog is in the \_\_\_\_\_." and allow them to fill in the missing piece.
- **Rewording** – changing what you say to make the message clearer to the child
- **Asking** – "What did you hear?" – This will allow you to see where the communication breakdown occurred.
- **Providing Alternatives** – "Do you want milk or juice?"
- **Directing the child to listen closely**
- **Repeating part of the story message containing the answer**
- **Providing a visual cue and putting the stimulus back into hearing** – it's important to remember; we are focusing on listening so always put it back into hearing!

(See a copy of "*Strategies to Incorporate Listening into Everyday Activities*", from Nationwide Children's Hospital – Department of Speech Pathology, in *APPENDIX O*.)



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### **Speech-Language Therapy**

Speech Language therapy is the treatment of speech and/or language disorders. An initial evaluation provides a base line of your child's receptive and expressive (understanding and speaking) language abilities. Maintaining an on-going therapy plan for your child's speech and language development is necessary and should include regular assessments to determine their progress. Standardized or norm referenced assessments should be used for children who use an oral communication approach as it helps to determine their speech and language progress.

### **Parent Education**

Family involvement is critical for your child's success. "There is a strong correlation between parental involvement and success of children with hearing impairment (Harrigan and Nikolopoulos, 2002; Moeller, 2000).

Active participation in workshops and conferences that provide parent education for families to learn how to stimulate their child's language development are necessary. Research various national organizations on hearing loss for educational workshops for families and professionals. Your commitment to continued education and parental involvement will benefit your child's language and literacy skills, as well as, their social and emotional development.

For more information on organizations, see section on *Resources, Resources Directory of Organizations*.



# NOTES