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ABSTRACT

This document presents guidelines for differential diagnosis and eligibility determination under Connecticut's Birth to Three System for young children with communication problems, usually delayed speech. An executive summary presents a rationale and recommendation locator in the form of a matrix of communication problems, the eligibility decision, the rationale for this decision, and recommendations. Section 1 offers guidelines for evaluating specific expressive language delays (SELD). Sub-sections consider early identification of SELD (otitis media, phonology, and oral motor/developmental apraxia of speech), determining eligibility for Connecticut's Birth to Three System, intervention for eligible children, and strategies for children found not to be eligible. Section 2 is on fluency and covers early identification of stuttering like disfluencies, intervention for eligible children, and strategies for children found not to be eligible. Section 3 offers guidelines for children from homes in which English is not the primary language. This section covers early identification, intervention for eligible children tested in their primary language, strategies for children found not to be eligible, international adoptions, and hearing children of deaf parents. Frequently asked questions and their answers complete the guide. Among 16 appendices are an evaluation/assessment protocol, standards of English and Spanish phonological development, and a glossary. (Contains 68 references.) (DB)

Service Guideline 3

Children Referred for Speech Delays

Evaluation, assessment and intervention guidance for service providers and families of young children whose delays in communication are a primary concern

May, 1998

Connecticut Birth to Three System

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PREFACE

Remarkably, of the referrals made to Connecticut's Birth to Three System over the past several years at least 40% have been identified as having communication as the *only* area of concern. This prompted the Department of Mental Retardation as lead agency to establish a task force to develop the following guideline.

The tasks were to recommend strategies and supports both for those children with communication delays that are significant enough to make them eligible for Birth to Three and those who are not eligible (often described as late talkers.) As the task force began its work, it became clear that the participants had different understandings of the mission of Birth to Three in Connecticut. Developed by a wide variety of key stakeholders in the Spring of 1996, the mission of the Connecticut Birth to Three System is to *strengthen the capacity of Connecticut's families* to meet the developmental and health-related needs of their infants and toddlers who have delays or disabilities (Appendix 1).

To do this, the system supports 39 comprehensive programs (Appendix 2) that provide the services and supports identified in Part C of the Federal Individuals with Disabilities Education Act (IDEA). Families may choose the program that best meets their needs. It is through a variety of means, including guidelines such as these, that the system can assure that the quality of the support offered is consistent among programs.

Programs were surveyed about referrals they received from April 1, 1997 through June 30, 1997. The results indicated that over half of these referrals (63%) were for speech concerns. Of these referrals, 73% were found to be eligible for Birth to Three services. The following table shows a breakdown by age of the children.

Referrals for Communication Concerns Only 4/97-6/97

Age at time of referral	Total # referrals	Total # eligible	Percentage eligible
0-12 months	10	5	50%
13-24 months	271	199	**73%**
25-36 months	295	217	73%
Total	576	421	**73%**

Although these children were referred for speech concerns, the assessment process revealed other related issues or delays which, together with the communication delay, made these children eligible for services. Some of these issues included chronic ear infections, adaptive, cognitive or social-emotional delays, oral motor problems, and other health issues or diagnosed conditions.

It is often confusing to refer to children as having speech delays. Communication includes facial expressions, gestures and signs as well as spoken words where "speech" refers to spoken communication. Children may be delayed in speech without having a delay in communication or they may have communication delays and no actual speech concerns. These guidelines use the term "language" to refer to the system of symbols (words) that is used to communicate.

In August 1997, the lead agency directed programs to combine ***expressive**** (how children make their wants known) and ***receptive*** (what they understand) communication test scores into one total score of a child's communication domain. *The intent was to screen out those children who are considered to be "late talkers" from this comprehensive system of supports for families with children who have significant developmental delays.*

The goals of this guideline include addressing concerns about children for whom expressive language is their only delay. When is there enough of a concern to warrant eligibility for a formal external support like the Birth to Three System? When are monitoring and suggestions for activities at home enough? What type of safety net is in place for those not to be eligible in case they don't make progress?

Results from another survey of the Birth to Three programs in Connecticut (March, 1998) indicated that these guidelines will increase the number of children who are referred with only a communication concern *and* who are determined eligible for the Birth to Three System by slightly less than 2%. These are the children who have biological factors that may be indicative of a more significant language delay as explained on page 7.

Many of the components of these guidelines are written by speech-language pathologists for speech-language pathologists but they are also intended to be useful to the entire team, including parents. The primary section focuses on expressive language delays and the factors that influence why a child may have receptive skills that are considered to be age appropriate and expressive skills that are impaired; **otitis media,** disorders of **phonology, oral motor** disorders and **developmental apraxia of speech** are four major factors.

The guidelines offer suggestions for differential diagnosis and eligibility determination. Appendix 3 was developed by the task force to help individuals who work with young children and their parents consider the many facets of a comprehensive language assessment. Connecticut's Birth to Three System encourages use of a transdisciplinary model in which one primary person develops a relationship with the family and child while others consult as needed. In support of that, the primary interventionist with whom a parent has a good working relationship may not be a speech-language pathologist. It is expected however, that a speech-language pathologist will be involved when the only area of concern is language.

The other two areas covered in these guidelines are early fluency concerns (how to better distinguish between normal ***disfluencies*** [e.g. repeating a sound or word] and ***stuttering*** like disfluencies) and finally suggestions for evaluation and support for children where English is not the primary language spoken in the home.

As the draft of this guideline was being reviewed by the Connecticut Birth to Three community for feedback, two related articles were published: Olswang, Rodriguez and Timler (1998) and Kelly (1998). Both offer comprehensive summaries of much of the research about "late talkers." Nationwide, our understanding of the purpose of Part C of IDEA is continually being refined. Since these issues are being researched and explored worldwide, this guideline is a starting point for continued discussion about preferred practices for working with families who have infants and toddlers with communication delays and disorders.

**** Words that are bold and italicized are listed in the glossary in Appendix 15. Note that "dis" and "dys" mean the same thing.***

Executive Summary
Rationale and Recommendation Locator

Look below at the considerations. Where you see **YES**, then look along that row to the right to determine whether the child is eligible based on this guideline. Listed further to the right are the pages containing the rationale and recommendations. (For example, if a child has a significant expressive language delay and an oral motor disorder, they would be eligible as described on page 6 with recommendations on page 8.)

Considerations							**Eligibility**	**Rationale**	**Recs.**
Significant Expressive Language Delay	Significant Receptive Language Delay	Phonological Impairment	Develop-mental Apraxia of Speech	Oral Motor Disorder	Family History of Language Impairment	Significant Birth History	Yes or No	See Page.	See Page...
Yes	no	no	no	no	no	no	**No**	**1**	**8**
Yes	**Yes**	no	no	no	no	no	**Yes**	**2**	**8**
Yes	no	**Yes**	no	no	no	no	**Yes**	**4**	**8**
Yes	no	no	**Yes**	no	no	no	**Yes**	**5**	**8**
Yes	no	no	no	**Yes**	no	no	**Yes**	**6**	**8**
Yes	no	no	no	no	**Yes**	no	**Yes**	**7**	**8**
Yes	no	no	no	no	no	**Yes (see list)**	**Depends on Specifics**	**7**	**8**

In some cases, children with the following communication concerns, may be eligible:

- **Disfluency** - normal and/or stuttering like disfluencies see page 10.
- When **English is not the primary language spoken in the home** see page 12.
- **Hearing children of deaf parents** see page 15.
- Children **adopted from non-English speaking countries** see page 15.

EXPRESSIVE LANGUAGE DELAYS

Children may have an expressive language delay when they don't communicate but they do understand what is said to them.

The term "***Specific Expressive Language Delay***" (SELD) is used when a child's ***expressive language*** skills are significantly delayed in relation to his/her ***receptive language*** skills and there are no other apparent developmental problems. That is, nonverbal cognitive skills, motor skills, and social-emotional development are within normal limits; there is no history of hearing impairment, mental retardation, autism/PDD or other significant developmental disabilities. SELD is usually defined as limited expressive vocabulary (less than 50 words) by 24 months of age (Paul, 1996).

The following characteristics of children with SELD have been identified in the literature:

- The majority are male
- Although there are mixed findings in the literature, many studies have found a higher incidence of language delay in families in which there is a history of language impairment or reading/learning problems
- Some oral motor and early feeding problems were found in some children with SELD
- Family size is large
- Parental interactions with children with SELD may be different than with children who develop expressive language without delays
- Higher rates of misbehavior have been noted
- Children use nonverbal communication more frequently

To date, three longitudinal studies have followed such children (expressive language delay between 24-36 months) in the United States (Fischel et al., 1989; Rescorla & Schwartz, 1990; Paul, 1996). Results have been similar among the studies. However, it is important to note that the subjects in these studies were from middle class families with NO other risk factors (e.g., normal birth history, no family dysfunction). These findings cannot be indiscriminately applied to other children.

Some of the subjects in these studies had therapy during the course of the study. Those parents that did not choose intervention were given suggestions for home activities to improve their child's language development and early literacy. Additionally, assessment is, in and of itself, a sort of intervention. It is possible that by virtue of being in the study, the parents changed the way they interacted with or perceived their children. So, in a sense, we do not really know what would have happened to these children without any intervention.

The following is a summary of the results from the three longitudinal studies:

- ◊ As children get older, they tend to move into the "normal" range. By Kindergarten age, most of the children (approximately 74%) performed in the low end of normal range on standardized language tests.
- ◊ Expressive vocabulary seems to be the first aspect of language to improve (by 5 1/2 years of age, almost all of the subjects' vocabularies had moved into the normal range).
- ◊ ***Syntactic*** problems in subjects gradually declined, again a majority of the children moving into the normal range by age 5.
- ◊ ***Phonologic*** problems persisted in about 22% of the children with SELD by age 5.
- ◊ Children with a history of SELD continued to score significantly lower on narrative tasks into first grade.
- ◊ Children with a history of SELD, although scoring in the low normal range on tests of early reading, showed a statistically significant gap between reading and math scores, suggesting some residual effects.

Early Identification of SELD

Eligibility evaluations are usually completed using a ***multi-domain standardized instrument*** assessing five developmental areas: ***cognition, motor***, communication, social/emotional and ***adaptive*** skills. Along with parent interview or questionnaire, these instruments can provide basic, defining information about a child's current developmental status. Multi-domain standardized instruments which are ***norm-referenced*** include the *Battelle Developmental Inventory*, the *Mullen Scales of Early Learning*, and the *Bayley Scales of Infant Development*. When a child is determined to be delayed with one of these tools, the underlying issues that are causing or influencing the delay may not be apparent. Some children may be delayed in all areas to approximately equal levels, and some children may have specific delays in one or two areas.

In the area of communication development, many factors may underlie a delay as measured by the instruments listed above. These tests may suggest a delay in comparison to typical development, when in fact, the issues underlying the delay may be the basis for a more involved and possibly long-term disorder. Thus for children with delays in the communication domain, other assessment measures are important in determining the nature and basis for the delay.

These tests need not be norm-referenced, but may be ***criterion-referenced*** or performance assessments. They may be standardized or non-standardized test instruments, profiles and inventories of the child's development, formal and informal observations with analysis of these observations, as well as parent report and case history. Specific indicators obtained via parental report and reason for referral will assist the evaluator in selecting the most appropriate measures to use as part of the eligibility evaluation.

The three sections that follow explore in greater detail some of the possible underlying issues and how to distinguish if indeed these are influencing the child's ability to make her needs known by speaking.

Otitis media

Otitis Media is defined as inflammation of the middle ear, usually with fluid, which may or may not be infected. The condition is very common in young children and is the reason for many visits to the pediatrician. A condition possibly associated with otitis media is fluctuating hearing loss. The effect of otitis media and fluctuating hearing loss on the development of speech and language skills is important to early interventionists.

Children with chronic otitis media as documented by a physician (duration of six months or longer) are currently determined to be eligible if they have a delay of -1.5 Standard Deviation (SD) below the mean in one domain (typically overall communication) based on the Connecticut Birth to Three procedures (diagnosed conditions list #2.) For children with episodes of ear infections, which are less frequent or shorter than six months, eligibility is determined by the standard processes. The research in relation to the effect of otitis media on the development of speech and language skills is, at best, confounding. Although it may be a factor in the delay of skills, the presence of otitis media with a language delay suggests that once the otitis media is successfully treated, there may be improvement in speech and language skills.

Children who have a delay in communication with no history of otitis media may, in fact, be at greater risk for continued poor performance.

It is the responsibility of the Birth to Three team to explore the potential of hearing loss as a factor in children with delays in communication development. The nature and importance of an audiological evaluation (formal hearing test) should be discussed with the child's family and physician. Infoline will be suggesting that children referred due to concerns about their communication skills have their hearing tested.

Children of any age can have their hearing tested and there is a nationwide movement to implement universal hearing screening of all newborns. Connecticut's newborn hearing screening mandate becomes effective in 1999 but some hospitals will be ready before then.

If the audiological exam is not completed before the child's eligibility evaluation, the Birth to Three evaluators can help the family prepare the child for the hearing test. These suggestions for preparation can include the importance of being well rested, selecting a time of day when the child is most alert and interactive, and practicing play audiometry techniques with older children. The evaluators can also be of service to the family by answering questions or explaining the nature and resolution of otitis media in children.

◊ **All children with delays in their development of communication skills should be referred for an audiological evaluation. It is important to try to rule out hearing losses: unilateral, bilateral and frequency specific losses. As a payer of last resort, it is the responsibility of Birth to Three to assure that an audiological evaluation is completed on all children who are eligible and have a communication delay.**

Phonology

The way children speak is more than the words, gestures and expressions they use. How they make the sounds, that is, their articulation, can impact their ability to be understood. Studies have shown that children who have articulation disorders experience educational, vocational, and social consequences (e.g., Shriberg, 1980). In the field of speech-language pathology, there is a lot of research about the many ways to define, analyze and improve the way speech sounds. Various terminology is used in the profession. For example, ***phonology*** refers to the rules for producing and combining sounds within a language. Phonological processes are operations which affect sound changes. These and additional terms are defined in the Glossary.

Speech sound development proceeds over time during the toddler and preschool years. There is a range of time when individual children may master particular sounds. Appendices 7 & 8 list the ages when *phonemes* typically are used correctly. As children develop, they also change in the way they use phonological rules and processes. Appendix 9 lists when phonological processes are present and when they begin to disappear and Appendix 10 lists some atypical processes.

A phonological disorder is characterized by the inaccurate production of sounds past the age at which correct production should occur. This is thought to be related to an underlying difficulty with the rules of how sounds are used in one's language. One of the most important considerations for determining the phonological status of a child and the need for intervention is the intelligibility of the child's spontaneous speech (Bernthal & Bankson, 1993).

A phonological approach differs from the traditional articulation approach to assessment and intervention with children who demonstrate poor intelligibility. Traditional articulation therapy focuses on teaching each sound with which the child has difficulty. This approach has not been successful for many children. In recent years, the emphasis has shifted to a phonological approach that emphasizes the rules or processes for producing speech sounds/words and systematic change (Shriberg & Kwiatkowski, 1982). For example, a young child may leave off the last sound of all words. In the traditional approach, each different sound would be targeted individually, while in a phonological approach, the process of "final consonant deletion" would be addressed. It is believed that the latter approach provides a more systematic and efficient way of helping the child with multiple speech sound errors.

Assessment of children with multiple speech sound errors should include phonological analysis and an analysis of a spontaneous speech sample. Shriberg and Kwiatkowsi (1982) offer a procedure for assessing the severity of involvement of the phonological system that provides a framework for assessment and management. When a child demonstrates delayed speech that is not associated with a clinical entity such as retardation, cleft palate, or sensorineural hearing loss, analysis of the phonological system should be completed by the speech-language pathologist. One method is calculating Percentage of Consonants Correct (PCC) in a five-minute continuous speech sample (Shriberg & Kwiatkowski, 1982). Their scale classifies and labels four divisions:

Degree	PCC
mild	85-100% PCC
mild-moderate	65-85% PCC
moderate to severe	50-65% PCC
severe	less than 50%

Please refer to the referenced article on how to determine PCC.

A child's first 50 words are apparently learned as whole words and not governed by phonological rules. Children who have 50 words but are not using or participating in spontaneous speech with the examiner can be assessed phonologically by using a scale identified by Preisser, Hodson, and Paden (1988) as listed in the Appendix 4. This has means and standard deviations for three chronological age groups from 1 year 6 months to 2 years 5 months.

◊ **Children are considered to have a phonological impairment when fewer that 65% of their consonants are correct or they use phonological processes that are abnormal or should have resolved.**

Oral Motor/Developmental Apraxia of Speech

Another significant factor which frequently impacts on the development of a child's expressive language skills is the development of the oral motor system or the use of the muscles in the mouth. These children may have an appropriate vocabulary size, however the quality of their sound production and utterances are of significant concern to the parents and/or evaluator. Children who demonstrate weakness or difficulty with their oral motor system may present with many of the same intelligibility and expressive language difficulties as children with phonological or developmental delay (e.g. they may consistently leave off final sounds).

- Oral motor impairments refer to impairments in muscle function which may include difficulties in movements for non-speech activities as well as speech. With that in mind, assessment should include information regarding feeding; the child's ability to handle different tastes, textures or temperatures; movement patterns of the jaw, tongue, and lips; and speech production. Speech tasks should include single words as well as conversational speech.

Several scales and checklists which provide a standard to follow when assessing oral motor skills are available. Please refer to the procedures listed in Appendix 4.

- Differential diagnosis between oral motor impairments and ***verbal dyspraxia*** or ***Developmental Apraxia of Speech*** **(DAS)** can be made primarily through non-speech and imitative tasks. Children with DAS do not present with difficulties in movements for non-speech activities. They have a speech disorder that interferes with their ability to correctly produce sounds, syllables, or words but generally there is no muscle weakness. Of significance, this disorder is, by definition, inconsistent. Parents may report that they have heard the child say a word "as clear as a bell" once, but the child has never said it again. Studies by Yoss and Darley (1974) found that there is a continuum of articulatory behaviors which result in a diagnosis of DAS.

Speech behaviors which may provide clues for diagnosing DAS are as follows:

1. Rates of oral ***diadochokinesis***, such as repetition of /pʌ/, /tʌ/, especially /kʌ/, and /pʌtʌkʌ/ are slower than normal. Repetitions of the combined syllables are often produced with incorrect syllable sequence. (e.g. "puh puh puh", or "puh kuh kuh" instead of "puh tuh kuh".)

2. Greater difficulty is evident with words that have more than one syllable. Syllables may be omitted, revised or added.
3. In a speech sample, a combination of error patterns may occur. These often include at least two or three error patterns such as, prolongations, repetitions of sounds or syllables, distortions, or additions.
4. The rate and rhythm of a child's speech may also seem "different." (It may have a halting pattern or quality.)

Characteristics of non-speech behavior which differ from a diagnosis of DAS may be as follows

1. There is difficulty in performing voluntary movements in the muscles of the mouth, especially those which involve the tongue and lips (e.g. can't imitate lifting their tongue on command but may do it when licking peanut butter off their lip.)
2. Demonstration is needed to perform movements that require more than one pattern.
3. There is a high incidence of other difficulties in fine motor coordination, gait, and alternating movements of the extremities and tongue.

These difficulties may be due to a movement disorder related to abnormal muscle tone, in coordination, and / or impairment in motor planning.

Motor planning refers to the ability to plan or make one's muscles move in a particular way. If there is motor planning difficulty documented in another area of a child's movement patterns (such as how the child moves under a table or climbs onto a riding toy), then the child's oral motor skills should also be assessed.

Identification of oral motor disorders should include the following:

1. Assessment of sound production skills in conversational speech as well as single words.
2. Analysis of the phonological systems for children who have a vocabulary of more than 50 words and who continue to have issues related to the quality of their speech sound production.
3. Assessment of sensory and oral motor movement patterns both in speech and non-speech activities.
4. Differential assessment of speech sound production during imitative vs. non-imitative tasks.

Children who have Oral Motor Problems	**Children who have Developmental Apraxia of Speech**
may have other developmental delays	do not typically have other developmental delays
often demonstrate difficulty with feeding	have good feeding skills
often drool when playing	can do particular movements at one time and not another (e.g. you may hear "lalala" during play, not when you request it)
may be described as "picky" eaters	
have patterns of sound errors apparently related to specific muscles.	look as if they are struggling to make the requested sound
have consistent difficulties	have inconsistent difficulties
repeat simple syllables (bababa) quickly and easily	have significantly more difficulty imitating more than one simple syllable

Determining Eligibility for Connecticut's Birth to Three System

Children with a delay of -2 standard deviations below the mean in expressive language ONLY may be eligible for Connecticut's Birth to Three System if one of the following BIOLOGICAL FACTORS is present:

- ◊ Oral motor disorders
- ◊ Developmental Apraxia of Speech
- ◊ Phonological impairment
- ◊ Family history of language impairment or developmental delay
- ◊ Significant birth history including
  - congenital infection (e.g., toxoplasmosis, syphilis, rubella, cytomegalovirus)
  - craniofacial anomalies
  - birth weight less than 1500 grams (about 3 pounds)
  - hyperbilirubinemia at a level requiring exchange transfusion
  - ototoxic medications (harmful to the ear)
  - bacterial meningitis
  - Apgar scores of 0-4 at one minute and 0-6 at five minutes
  - mechanical ventilation lasting more than 5 days
  - head trauma associated with loss of consciousness or skull fracture

(American Academy of Audiology, Joint Committee on Infant Hearing, 1994)

Many of the factors listed under "Significant Birth History" are also considered diagnosed conditions. The Birth to Three System recognizes two levels of diagnosed conditions that are used to determine eligibility: list #1 (automatic eligibility) and list #2 (eligibility with the presence of a delay of 1.5 SD below the mean in one area of development). This remains unchanged by anything in this guideline. These lists can be found in the Connecticut's Birth to Three System Procedures Manual in the section on Eligibility.

The children described in the box above differ from the children in the studies that indicate that "late talkers" catch up. The biological factors listed raise specific concerns for a more significant developmental delay in language. It is important that the evaluation report identifies specifically how a child was determined to be eligible including the presence of biological factors in combination with delays in speech that led to the eligibility decision.

Although there are also risk factors identified in current research that may be related to future delays in children's language, reading, or educational progress, these factors such as family psycho-social issues or environmental issues cannot be considered in determining eligibility for the Birth to Three System. There may be other agencies or programs that can address the areas of concern identified during the evaluation.

Other suggestions for families and children who are determined to be not eligible for Connecticut's Birth to Three System can be found later in this section.

Intervention for children with expressive language delays who are found to be eligible for the Birth to Three System

Intervention begins with the way families are included in the evaluation/assessment process and the writing of a family-centered report (Alvares, 1997). If a child is eligible, strategies to work with the family so that they may enhance the child's language skills throughout their daily routines may consist of (but not be limited to) the following:

- Short-term Individualized Family Service Plans (IFSPs) of 3-6 months
- Small group settings with typical peers in natural environments for general language stimulation (See CT Birth to Three System Service Guideline #2: Natural Environments)
- Consultation and training resources for parents (See resources listed in Appendix 5)

Intervention for children who demonstrate phonological or oral motor disorders includes direct intervention from a trained speech and language pathologist with parent involvement to ensure ongoing practice and carryover to everyday activities. This can be done most successfully in the child's natural environment where specific objectives and goals can be incorporated into the child's and family's daily routine.

Intervention for children with Developmental Apraxia of Speech should involve ***visual stimuli, auditory stimuli*** and ***tactile stimuli***. Strategies using augmentative communication (such as pictures pasted on kitchen cabinets) may also be beneficial and should be considered. Sensitivity for and training of the family of children with DAS is also an important aspect of intervention. There is currently a web site which connects families to each other and allows for networking and support systems to be built. This web site can be found on the internet at: http://planet-hawaii.com/7thwave/das.html

Strategies for children found not to be eligible for the Birth to Three System

For children with SELD who are similar to the subjects in the "late talker" studies, Paul (1996) recommends a policy of "watch and see." By this, she means "careful and consistent monitoring of these children throughout the preschool period, with mandated re-evaluations every 3-6 months between the ages of 2 and 3 and every 6-12 months between the ages of 3 and 5".

Parents should be offered suggestions for improving the child's language development and emergent literacy skills. Monitoring ensures that expressive language continues to be the only area of concern, that significant progress is being made even though the child may continue to score below normal range, and that the child is understood by family, friends, and peers (Paul, 1996). Otherwise, services should be initiated promptly.

If a child is not eligible for Connecticut's Birth to Three System, supports offered may include:

- Packet of information given to parents on facilitating language development at home
- Videotapes and books as listed in Appendix 6 of this guideline
- Re-evaluation every three months by the Birth to Three System
- List of community resources given to parents for activities to foster language (e.g., daycare, play groups, library story hours)
- Referral to other agencies for family support as needed (Parent Aids, Family Resource Centers, Parents as Teachers and other programs.)
- Parents may choose to access speech therapy services directly outside of the Birth to Three system

FLUENCY

It has long been recognized that young children learning language demonstrate normal developmental ***disfluencies*** (interruptions to the flow of talking) early on, which disappear as their expressive language skills mature. These developmental disfluencies are characterized by:

- ⇒ hesitations,
- ⇒ interjections of sounds, syllables, and words
- ⇒ word and phrase repetitions.

This characteristic of speech and language development is considered to be normal and therefore does not require any type of intervention, except to allay the parents' fears and concerns by explaining this course of normal development.

There is another category of young children generally between the ages of two and four who have disfluencies that are characteristic of true stuttering. They demonstrate Stuttering–Like Disfluencies (SLDs) which are characterized by:

- ⇒ part word and monosyllabic word repetitions
- ⇒ disrhythmic phonations

For a complete description of SLDs as compared to normal developmental disfluencies see Appendix 10 & 11.

The presence of these characteristics indicates the possibility of ***stuttering*** rather than just normal developmental disfluencies. Age of onset for stuttering behavior ranges from 20 months to 69 months with the mean age being 32.76 months (Yairi & Ambrose, 1992).

The appropriate intervention for very young children who stutter is greatly debated in the research literature. There is general agreement that young children who stutter show greater improvements than older children or adults during treatment (i.e. they require fewer hours of treatment and treatment more often results in permanent remissions of stuttering.) However, there is considerable disagreement about the necessity of treating every child who stutters as soon after onset as possible and about the risks involved if their treatment is postponed for a while (Curlee & Yairi, 1997).

There are a number of published studies which demonstrate that anywhere from 32% to 80% of children diagnosed with stuttering experience spontaneous remission within 2 to 3 years of onset (and as soon as six months from onset) without intervention (Andrews & Harris, 1964; Ryan, 1990; Yairi & Ambrose, 1992; Yairi et al, 1996). These results have raised considerable questions as to the need for early intervention for young children who stutter. However, there is no conclusive research to provide the clinician a tool or checklist to use to definitively determine which children will and will not experience spontaneous remission.

Yairi and his colleagues in a longitudinal study (Yairi et al, 1996) compared children who experienced spontaneous remission with those who continued to stutter. The results indicated that children who stopped stuttering:

- ⇒ were younger
- ⇒ usually began to stutter before three years of age
- ⇒ were girls
- ⇒ had many more family members who stopped, rather than continued to stutter
- ⇒ frequency of SLDs per 100 syllables decreased by the 12th month post onset

Those children who continued to stutter

- ⇒ were older
- ⇒ began stuttering after age three
- ⇒ were boys
- ⇒ had relatives whose stuttering persisted
- ⇒ were children who continued to stutter 12 months after onset

Although this provides good prognostic information for the family and the clinician, it does not definitively determine which children will have remission and which are at risk for continuing to stutter into adulthood. Researchers are asking for more studies to be completed before recommended clinical practice or public policy with regard to fluency can be determined (Curlee & Yairi, 1997). Meanwhile, according to Zebrowski (1997), speech and language pathologists cannot wait for the research to be completed before forming clinical relationships with children who are stuttering and their families. The recommended intervention for these children prior to age three is usually done on an indirect basis, providing consultation to parents, monitoring, and documenting the changes in the child's stuttering behavior.

Early Identification of Stuttering Like Disfluencies (SLDs)

The incidence of children under the age of three who are diagnosed as having SLDs is difficult to determine. The incidence of preschool children (age 2 through 5) is considered to be less than 1%. With the mean age of onset being 32.76 months, a significant number of the less than 1% would be over the age of three, leaving a very small number of children under the age of three.

The first step in early identification is to be able to make the differential diagnosis between normal developmental disfluencies and stuttering-like disfluencies (see Appendices 11 & 12.) Evaluators must be able to collect a thorough child and family history to determine:

- ⇒ the presence of stuttering among other family members
- ⇒ the exact age of onset of stuttering
- ⇒ the amount of time since the stuttering began
- ⇒ the number of SLDs per 100 syllables demonstrated during evaluation
- ⇒ type of stuttering behavior at onset
- ⇒ changes in the behavior since onset

This information is critical to making sound decisions regarding intervention and monitoring as the child matures and the length of time from onset of stuttering increases and the stuttering behavior changes. Please refer to Appendix 4 for more assessment information.

Intervention for children determined to be eligible for the Birth to Three System

Any child under the age of three, diagnosed by a speech-language pathologist as having true stuttering like disfluencies, should be determined to be eligible for intervention. The incidence of this is quite low and there is no conclusive method for identifying the children who will spontaneously stop stuttering.

Recommended intervention is determined by a number of factors such as age and sex of the child, time lapse since onset, family history, presence or absence of associated behaviors and coexisting language problems. Based upon these factors, intervention would most likely be delivered through an indirect method and could include:

- ⇒ Providing information to parents regarding stuttering and its early progression
- ⇒ Monitoring the change in the frequency or type of disfluencies
- ⇒ Counseling families, especially when there is a family history of stuttering
- ⇒ Counseling families to evaluate and modify the verbal environment of the child
- ⇒ Counseling parents about their own possible anxiety surrounding the child's stuttering

This could be accomplished with a short term (3-6 month) IFSP and a re-assessment.

The issue of transition to supports and services when the child and family exit Birth to Three at age three is particularly important for the child who is stuttering. The family history and the documentation of the progression of the stuttering behavior must be given to the speech pathologist responsible for intervention after age three. That information is critical to setting the course for ongoing treatment.

Strategies for children found not to be eligible for the Birth to Three System

Since these children were found to be normally disfluent, this characteristic of speech and language development does not require any type of intervention, except to allay the parents' fears and concerns by explaining this. The family should be instructed to call Infoline or their school district if the disfluencies do not decrease within 12 months after they began.

CHILDREN FROM HOMES IN WHICH ENGLISH IS NOT THE PRIMARY LANGUAGE

Many families are living in the United States with limited or no English skills. At the same time, there are a number of resources being developed to meet the needs of these families. Connecticut's Birth to Three System respects individual differences and requires that programs communicate with families in their preferred language, to the extent possible. A child's and family's proficiency in English should be considered before any evaluation is conducted. This consideration will give the clinician information regarding evaluation protocols and tests to use, and whether a monolingual clinician, bilingual clinician, or a monolingual clinician using an interpreter would be "best practice" when conducting an evaluation or assessment.

When communication is the concern, if the parent or primary caregiver is:

- ⌘ Bilingual English Proficient - use a Speech-Language Pathologist (SLP) proficient in English
- ⌘ Limited English Proficient - use a bilingual SLP or a monolingual SLP with an interpreter

Early Identification

It is important to ask more than whether or not the parent can speak English. More appropriate inquiries should explore how often English is spoken to the child and how often the parent talks to child in the non-English language.

The evaluation team should use a standardized test normed in the family's language whenever possible. A partial listing of available assessment instruments for children with limited English proficiency is provided in Appendix 4. Some of these instruments are literal translations of English tests that have not been validated for use in other languages. This list also includes several non-standardized inventories, checklists, and questionnaires that were developed or translated specifically for bilingual, bicultural assessments.

- ◊ **Given that a child should be assessed in the primary or dominant language of the home, the eligibility criteria are the same as for a native English speaking child. The child would have to show a significant language delay in their primary or dominant language. Connecticut's Birth to Three System does not serve children if they are only significantly delayed in their second language. Other programs may be available to enhance those skills.**

When assessing bilingual children, it is important for clinicians to be cognizant of second language acquisition. Second language acquisition is similar to, although not identical to, first language acquisition and because acquisition is a developmental process, children need adequate time to acquire a second language: 1-2 years for conversational skills (grammar, basic vocabulary, pronunciation), and 5-7 years to develop the academic linguistic proficiency (literacy, problem-solving, and critical thinking skills) needed for academic success (Moore & Beatty, 1995.) The development of competence in English is a function of the level of competence previously developed in the first language (Cummins, 1984; Ortiz, 1994.)

It is the responsibility of the Birth to Three team to raise families' level of awareness about second language acquisition and bilingual issues and how they can best support their child's development. The parents should be supported for acknowledging the importance of the child's language development and then encouraged to communicate with the child in their native language, to enhance the child's intellectual, cognitive, and linguistic development (Moore & Beatty, 1995.) Learning a second language is easier for children if they have a good language base in their first language (Erickson, 1992.) According to Ortiz (1994), "...the native language is the foundation upon which English competence is built."

The following is a list of considerations team members should be cognizant of when they work with young children who live in homes in which English is not the primary language (Moore & Beatty, 1995):

1. The child with limited proficiency in English cannot be compared to a monolingual English speaker in the social-emotional, academic, cognitive, or communication domains. He or she can, however, be compared to his or her culturally and linguistically matched peers (e.g., in the rate of acquisition of English).
2. The child who is not fluent in English may appear hyperactive, or shy and withdrawn in an unfamiliar situation, depending on the child's personality or culture. This is not clearly indicative of a disorder.
3. The personality of the child and his or her adaptability may determine the way that he or she reacts to a new situation, such as an unfamiliar, English-speaking preschool classroom.
4. Learning the child's experiential background is essential in adapting a test that appropriately measures the child's skills.
5. The child's motivation and attitude towards learning English and interacting with English-speaking peers may affect his or her development of English proficiency.

Programs should use "best practice" strategies to procure speech pathologists who meet the requirements to assess and serve individuals who are limited English proficient including 1) establishing contacts, 2) establishing cooperatives, 3) establishing networks, or 4) establishing interdisciplinary teams. However, programs may need to use a monolingual speech pathologist with an interpreter.

Guidance for using an interpreter

An interpreter is under the supervision of the speech pathologist at all times. An interpreter's activities should be reviewed and assigned by the clinician. The following "best practice" list should be considered when using an interpreter (Moore & Beatty, 1995.):

- ⌘ Interpreter should receive training in basics of assessment (role of the interpreter, functions of the SLP and interpreter, testing protocols), intervention, and conferencing.
- ⌘ In assessment, the interpreter should have an understanding of the rationale, procedures, and information that is obtained from tests.
- ⌘ Interpreter should have a high degree of proficiency in both English and minority language.
- ⌘ Interpreter should have high school diploma, adequate communication skills, ability to relate to clinical population.
- ⌘ Interpreter should understand both mainstream American culture and the culture of the child and family.
- ⌘ Interpreter should not be a family member or family's friend unless they have had proper training.

Appendix 13 has a list of other rules for using an interpreter.

It is important to remember that all reports, correspondences and the IFSP must be translated. Skilled verbal interpreters are not necessarily also skilled written translators.

Intervention for children determined to be eligible for the Birth to Three System when tested in their primary language

While it is preferable to have someone work with the family who is fluent in the primary language of the home and who is very familiar with the particular culture, it is also clear that few early interventionists meet these characteristics. This is even more true as families from an ever wider variety of countries and cultures move into Connecticut. Given this, the order of preference would be as follows:

Primary Interventionist as Service Coordinator	Consultant	Interpreter
bilingual/bicultural speech-language pathologist		
bilingual/bicultural other interventionist	bi- or monolingual speech-language pathologist	
bilingual speech-language pathologist		
bilingual other interventionist	bi- or monolingual speech-language pathologist	
monolingual speech-language pathologist		bilingual/bicultural if possible or solely bilingual
monolingual other interventionist	monolingual speech-language pathologist	bilingual/bicultural if possible or solely bilingual

See Appendix 14 for Amiercan Speech-Language-Hearing Association (ASHA's) recommendations.

Other suggestions include:

- ⌘ If the parent is interested, help connect them with English as a Second Language (ESL) classes.
- ⌘ Small group settings with typical peers in child's native language in a natural environment.

Strategies for children found not to be eligible for the Birth to Three System

- ⌘ If possible, give family information regarding normal speech language development in native language.
- ⌘ Parent training (e.g. Hanen program); or information given to family on how to facilitate and monitor child's language development in the home.
- ⌘ Encourage family to call Infoline again to re-refer if they have questions or don't feel child is making progress in 3-6 months.
- ⌘ Give family list of community resources available or activities to foster language development in the family's native language.
- ⌘ Encourage family to enroll child in community playgroups if appropriate.
- ⌘ Offer families who speak Spanish the Spanish version of "Ages and Stages".

International Adoptions

Children from non-English speaking countries who are adopted by families in Connecticut should be tested in the language they *currently* hear daily. When communication is the only area of concern, it may be prudent to allow time for the child to adjust to his or her new culture and language before making a referral to Birth to Three.

Hearing Children of Deaf Parents

Early Identification

There are several systems of signing used in this country, such as, ***Signing Exact English*** (SEE) and ***American Sign Language*** (ASL). Clinicians should be aware they may need to find interpreters who are proficient in the family's sign language. Connecticut has a Commission on Deaf and Hard of Hearing that may be of assistance.

Research has shown that a hearing child of deaf parents may have sign as a first language and that oral language skills typically will develop normally (Prinz & Prinz, 1979). It is important for early interventionists to have a working knowledge of beginning sign.

As with other languages, programs should be encouraged to use interventionists fluent in the primary sign language; if none are available, use monolingual interventionists with a sign language interpreter for the parents. See Appendix 6 for resources.

Eligibility for these children is the same as for other children.

Intervention for children found to be eligible for the Birth to Three System

- IFSPs with family's goals; the plan should support family if they would like intervention conducted in both sign and speech
- Encourage family to contact the Commission on Deaf and Hearing Impaired for possible support groups
- Encourage family to participate in small group settings with their child in the company of typical speaking peers and also peers with deaf parents
- Primary interventionists should be fluent in spoken language and sign or monolingual with a sign interpreter

Strategies for children found not to be eligible for the Birth to Three System

- Provide family with information regarding normal speech language development
- Encourage family to contact the Commission on Deaf and Hearing Impaired for possible support groups
- Parent training programs; videos and books
- Encourage family to re-refer if they have questions or they don't feel the child is making progress in 3-6 months
- Give family list of community resources available or activities to foster language development
- Offer the family "Ages and Stages"
- Encourage family to enroll child in community playgroups

CONCLUSION

The fields of speech-language pathology, early intervention and second language acquisition have a great number of talented researchers and practitioners. The findings and recommendations included in these guidelines represent the current standard for those fields of study as well as Connecticut's Birth to Three System. As time passes, it will be important to revisit the topic of children with expressive language delays and the impact of early development on later learning.

New attention to early brain development and the importance of the first three years of life is being given at many levels including the media and in Congress. New initiatives in areas such as school readiness and child-care will ultimately enhance young children's language learning. Our ability to identify earlier than before issues such as fluency and oral motor skills that influence later language skills can help early interventionists with differential diagnoses. As the global village shrinks, we will surely encounter families who speak languages that a decade ago might have seemed rare.

Given all this, the responsibility of the early interventionist, the family and the community at large to enhance each child's development will be no less than dynamic.

Connecticut's Birth to Three System is currently designed to support the families of those children who have significant developmental delays. Within and beyond this framework, these guidelines should be helpful to anyone who is concerned about a child who may be challenged by a speech-language delay or disability.

Specifically for families, a one page summary of these guidelines is provided as the last pages of this document. Programs are encouraged to reproduce it and have it available to give to families who have questions.

QUESTIONS AND ANSWERS

Q: Is it OK to use criterion referenced tests now?

A: You still need to use a standardized test as a part of eligibility determination but if you suspect that the child has one of the biological factors, there may be no standardized test available. Use behavioral observations of the child to document the presence of oral motor problems or other factors as listed.

Q: How will the re-referrals happen? Is it the program's job to track that?

A: Parents will be asked to call Infoline after three months if they still have concerns or do not see specific progress. Programs may develop a system to remind parents if they wish or it can just be written into the report. Enrolling the child in the Ages and Stages monitoring system may also help to remind parents that they can re-refer.

Q: Most of these kids with SELD aren't talking at 24 months or only have 10-15 words. How do you assess for DAS or Phonological disorders in that case?

and

Q: I am uncomfortable diagnosing DAS at such a young age. Do we have to?

A: The intent of the guideline is to determine which children should indeed be eligible. A formal diagnosis is not necessary but the speech-language pathologist should document which behaviors were observed that may be indicative of one of the biological risk factors such as dyspraxia or phonological processes that are abnormal or late in resolving. Then a short term IFSP may be developed to further assess the observed behaviors.

Q: Sometimes the parents or a sibling can tell us what the child is saying but we can't understand him. Do we go by parent report or actual observation?

A: This depends on the age of the child. Having someone interpret for an older child (30 months) isn't functional. If the evaluators cannot understand an older child, they should check for oral motor concerns or phonological disorders and base their decision on what they observe.

Q: Does otitis media have to be documented by a physician?

A: If it is being used as the reason the child is eligible (diagnosed conditions list #1), then yes.

Q: What about a child who had more than 10 words but now uses none of them?

A: This could be an indication of other developmental issues. Programs are required to determine eligibility and report on the child's current level of functioning.

Q: Is a child with a total score of 77 on the PLS and -1.5 SD below the mean in another domain eligible?

A: No, 77 is not in the -1.5 to -2 SDs below the mean range.

Q: Ages and Stages doesn't look at phonology. How can that be monitored?

A: The program should show the caregiver how to track sound development and use during a three month period to help decide if a re-referral is warranted.

Q: If a child has -2 standard deviations in expressive language but a total communication score of -1 SD below the mean and none of the listed biological factors and then also has -1.5 SD below the mean in the social emotional domain, is he eligible?

A: No

Q: What about a child with a score of -2 SD below the mean in expressive language and significant frustration or behavioral concerns or self esteem issues or a combination?

A: The child would need to score -2 SD below the mean on a social emotional scale to be eligible. Many personal/social items are heavily influenced by communication abilities.

Q: What are the three month trials about?

A: The guideline refers to "3 months" in two ways. For the child who is eligible, short term IFSPs of 3-6 months may be developed. For children who are not eligible, families may request another evaluation after three months by calling Infoline. There is no three month screening or trial period.

Q: When a parent calls Infoline to re-refer, does the program have to complete a multidisciplinary, comprehensive evaluation of all five domains or just the speech section?

A: Three months is a long time to a toddler. Programs need to do a complete evaluation of all five areas but the information you collect is in addition to the previous information. You may not need to establish the basal again.

Q: Does a speech pathologist have to be on the evaluation team?

A: Many parents ask for that discipline however we realize that there are not that many speech pathologists around. The guidelines state that a speech-language pathologist should be involved.

Q: If a child has a score of -2 SD below the mean in expressive language and 70% of their consonants correct, is he eligible?

A: No, children must have fewer than 65% of their consonants correct for it to be a biological factor.

Q: What about a child who is severely unintelligible but speaking in sentences, they may have fewer that 65% of their consonants correct and many phonological errors but still come out with a score of only -1 SD below the mean in expressive language?

A: That child would not be eligible for Birth to Three. The parent may wish to see a private speech pathologist.

Q: To whom should we refer if a child needs some speech therapy but not a comprehensive system of supports like the Birth to Three System?

A: This is up to each program or agency. Birth to Three recommends giving families the names of at least speech pathologists. The Connecticut Speech and Hearing Association (CSHA) is also a good resource.

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Appendix - One

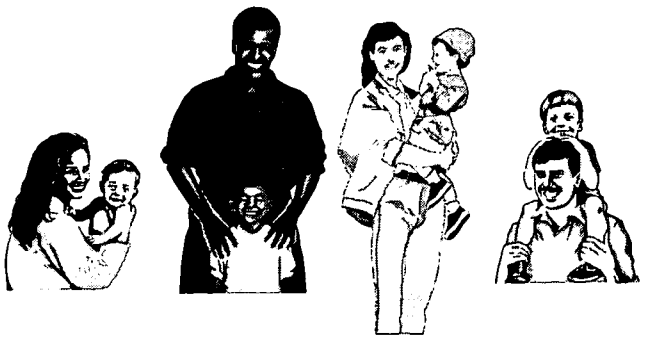
Connecticut's Birth to Three Mission

Mission

of the Connecticut Birth to Three System

The mission of the Connecticut Birth to Three system is to strengthen the capacity of Connecticut's families to meet the developmental and health-related needs of their infants and toddlers who have delays or disabilities. The system will ensure that all families have equal access to a coordinated program of comprehensive services and supports that:

- ***foster collaborative partnerships***
- ***are family centered***
- ***occur in natural settings***
- ***recognize current best practices in early intervention***
- ***are built upon mutual respect and choice***



- collaboration - partnerships - family centered - opportunity - equal access - inclusion - choice - - natural environments - best practice - comprehensive programs - mutual respect - teamwork -

Partnerships: *Supporting families requires a collaborative approach which encourages partnerships between the family, their community, service and health-care providers, schools and child care programs. Close coordination between and integration of health care and developmental services is critical. Partnerships should attempt to enhance the competence of families to develop and strengthen lasting networks of natural support.*

Family Centered: *A family centered approach places the whole family as the focal point for supports. Evaluation, planning and services are based upon the uniqueness of the family and its culture. Strategies for promoting a child's development are integrated into the family's daily activities and routines and strengthen the role of family members.*

Natural Environments: *Services and supports should occur in settings most natural and comfortable for the child and the family. They should foster opportunities for the development of peer relationships with children without disabilities. Home-based intervention and inclusive community group settings are preferred. The unique characteristics of the family's community - and the development of a natural system of supports within that community - should be promoted at all times.*

Best Practice: *Services and supports should reflect the current values for best practice accepted in the field of early intervention in order to yield the most positive outcomes. Interventionists and families should work in teams, sharing their knowledge and skills, communicating, planning and collaborating with each other. Plans should be outcome oriented and understandable by families. They should be based on developmentally appropriate practices geared to the individual needs of the child. Transitions should be well planned and collaborative in nature. The knowledge about best practice is always increasing. Therefore, service provision should be based on the most accurate and recent research available.*

Respect & Choice: *Recognition and inclusion of the knowledge, beliefs, aspirations, culture and preferences of families should be a cornerstone of all planning and delivery of supports and services. Professionals should openly share roles and assist one another in expanding competencies. Teamwork, wherein the family is an important participant, should guide all decisions. Families should be provided with opportunities to choose programs whenever possible. Their satisfaction with services should be an important factor in selecting and evaluating providers of support.*

Appendix - Two

Connecticut's Birth to Three Programs

For a complete description of each program, call The Connecticut Birth to Three System at 1-800-505-7000 or visit the Birth to Three Website at: http://www.birth23.org, or look them up in the Birth to Three Central Directory at your local public library.

Connecticut Health and Human Service Regions

	North West	North Central	Eastern	South West	South Central
Ahlbin Centers for Rehabilitation Medicine, Inc.				X	
American School for the Deaf	X	X	X	X	X
ARC, Greenwich				X	
Board of Education & Services for the Blind	X	X	X	X	X
Cheshire Public Schools	X				
Child & Family Network				X	
Children's Therapy Services	X				
Connecticut Children's Medical Center		X			
Cooperative Educational Services/Beginnings				X	
CREC Birth To Three Program		X			
CREC Soundbridge	X	X	X	X	X
Danbury Public Schools	X				
Early Connections	X	X	X	X	X
East Hartford Public Schools		X			
EASTCONN			X		
Easter Seals of Central CT, Meriden					X
Easter Seal Rehabilitation of Stamford				X	
Easter Seal Rehabilitation of Waterbury	X				
Education Connection / SEED	X				
HARC Steppingstones		X			
Hill Health Corporation					X
Jane Bisantz & Associates, LLC		X			
Kangaroo's Korner	X				X
Key Service Systems		X			
LEARN			X		X
McLaughlin & Associates, LLC		X	X		
Project Interact	X	X			
REACHOUT, Inc.					X
Rehabilitation Associates of CT., Inc.	X			X	X
SARAH, Inc.					X
St. Vincent's Special Needs Services				X	X
STAR/Rubino Center				X	
The Kennedy Center, Inc.				X	
Therapy Solutions Center, Inc.	X				

Appendix - Three

Evaluation/Assessment Protocol

The primary purpose of an eligibility evaluation is to determine whether or not the child meets eligibility requirements for Connecticut's Birth to Three System by having a significant developmental delay. The following should be seen as reminders for speech-language pathologists and prompts for other disciplines. It is not expected that all the elements of this can be completed during the initial evaluation, however attention should be paid each area, especially if communication is the only area of concern. A family history and assessment of phonology / oral motor skills may provide the information needed to determine eligibility if the child's delay is in expressive language only. If the child is determined to be eligible, all the areas can be explored in greater detail during ongoing assessments as a part of service delivery.

REFERRAL - Where communication is a concern, Infoline will suggest to families that they should pursue a hearing assessment with their physician prior to their evaluation.

1ST PHONE CALL - Explore with the family whether communication is the only area of concern. Discuss what the child understands and how the child is understood.

AREAS TO CONSIDER DURING EVALUATION/ASSESSMENT

- Confirm audiological exam to rule out hearing loss / Suggest if needed
- Family history of language delays and disorders including fluency
- Medical history (any significant birth history or history of otitis media)
- Presence of pre-linguistic skills
- Standard communication skills including vocabulary, syntax and semantics
- Other ways of communicating; gestures, sounds, facial expressions.
- Oral motor skills; including
  - imitation - note any struggle
  - feeding; taste, texture and temperature
  - patterns of speech production - typical or atypical error patterns
  - degree of intelligibility
  - child's apparent frustration
- Phonological skills
  - note pattern of phonological processes
  - degree of intelligibility
  - stimulability (need auditory cues, visual cues, tactile cues)
  - child's age
  - child's apparent frustration
- Pragmatics (how the child uses language)
  - reasons why child communicates (e.g., requesting, protesting, commenting)
  - means by which child communicates (e.g., pointing, vocalizing)
  - joint attention and referencing
- Symbolic Play
- Fluency
  - type and frequency of disfluent speech
  - child's awareness of speaking difficulties
  - any secondary behaviors
  - parental response to disfluent speech

Appendix Four

Assessment Instruments and Procedures

The following is a listing of suggested instruments and techniques which will assist the team in determining the presence or absence of delayed communication, as well as further assessing the underlying causal or influencing factors. For the purpose of eligibility evaluation, instruments or parts of instruments, as well as more informal measures supported in the literature, provide the basis for most effectively determining the presence of a significant delay or disorder in a timely fashion. This is the purpose of the eligibility evaluation.

Once determined eligible, part of the IFSP process will most likely include a plan for more in-depth assessment of the child's skills to form the basis of an effective treatment plan. This list is not meant to be complete or exhaustive, but provides an overview of many current tests and procedures.

⇨Suggested Evaluation Instruments and Procedures: Expressive Language Delays

Instruments:

Preschool Language Scale-(3rd. Ed.) (Source: Psychological Corporation)

Assessment of speech and language development (auditory comprehension and expressive communication), articulation screening and other supplemental areas, for children 2 weeks to 6-11 months. Responses obtained via testing and parental report. Provides standard scores, percentiles and age equivalency. Spanish edition available (see below)

The Rossetti Infant-Toddler Language Scale (Source: LinguiSystems)

Assesses pre-verbal and verbal areas, within specific areas: Interaction-Attachment, Pragmatics, Gesture, Play, Language Comprehension and Language Expression. Responses are observed, elicited, and/or reported. Criterion-referenced, with basal and ceiling levels for children age birth to 36 months.

Early Language Milestone Scale (2nd. Ed.) (Source: Pro-Ed)

Assesses language development for children birth to 36 months and speech intelligibility for children 18 to 48 months. Responses obtained by history, testing and incidental observation. Provides standard scores, percentiles and age equivalency.

MacArthur Communicative Development Inventory: Words and Gestures and Words and Sentences (CDI) (source: Singular Publishing Group)

An inventory completed by parents/caregivers to assess language development in children 8 to 30 months of age. CDI scores are converted to percentile ranks. Spanish adaptation available (see below).

Receptive-Expressive Emergent Language Scale (2nd. Ed.) (Source: Pro-Ed)

Assesses language development (Receptive Language and Expressive Language) for children birth to 36 months, via parent/caregiver interview. Yields receptive and expressive language ages.

Sequenced Inventory of Communication Development-Revised (SICD-R) (Source: University of Washington Press)

Assesses receptive and expressive language for children 4 months to 4 years. Responses are obtained via testing and parent report. Scoring is a record of successes and failures, with comparison of the percentage of successes at each age range with normative data to determine receptive and expressive communication ages. Spanish version available (see below).

Transdisciplinary Play Based Assessment-Revised Edition (Source: Brookes Pub. Co.)

Assessment of a child's developmental skills and influencing factors in a transdisciplinary play approach for children from infancy to 6 years of age.

Communication and Symbolic Behavior Scales (Source: Riverside)

Assesses communicative and symbolic skills of children 8 to 24 months via a rating scale. Videotaping recommended.

Vineland Adaptive Behavior Scales & Vineland Social-Emotional Early Childhood Scales (SEEC) (Source: AGS)

Assesses personal and social skills for children from birth and older. Standardized measure, obtained via questionnaire format, providing standard scores, percentile ranks and age equivalent scores. The SEEC is reported to be available in early 1998 and focuses upon children birth to 5-11.

Procedures:

Spontaneous Language Sampling:

Obtain a spontaneous language sample during play. Tape-record and transcribe the sample. From this sample, information can be obtained regarding the child's syntactic skills, semantic development, pragmatic use of language and speech intelligibility. For children 18 months or older, a mean length of utterance (MLU) may be calculated to further evaluate the child's syntactic and morphologic development (Miller & Chapman, 1981, JSHR, 24).

⇨Suggested Evaluation Instruments and Procedures: Phonology/Oral Motor Skills

Instruments:

Goldman-Fristoe Test of Articulation (Source: AGS)

Assesses articulation skills in picture naming and story retelling format for children 2 years and older. Scoring is converted to percentile ranks.

Khan-Lewis Phonological Analysis (Source: AGS)

Assessment of 15 common phonological processes for children 2.5 years and older. Information is transferred from the Goldman-Fristoe Test of Articulation and analyzed. Norms are provided for comparison, with percentile ranks and age equivalencies.

Assessment of Phonological Process-Revised (Source: Pro-Ed)

Assesses phonological processes with emphasis on presence and severity of disorder. The task involves a picture or object naming format. Responses are taped, phonetically transcribed and analyzed. Percentage of occurrence scores, phonological deviancy scores and severity intervals are obtained.

Oral Motor/Feeding Rating Scale (Source: Therapy Skills Builders)
Rating scale to evaluate oral motor/feeding dysfunction.

Apraxia Profile (Source: Therapy Skills Builders)
Profile of apraxic characteristics in children 2 years and older.

Oral Motor Checklist (Source: LinguiSystems)
Checklist of oral motor movements.

Three Part Treatment Plan for Oral Motor Therapy (Source: Innovative Therapies International)
Assessment and treatment guidelines for children with oral motor and motor planning difficulties.

Procedures:
Percentage of Consonants Correct (PCC): (Shriberg & Kwiatowski, 1982)
Obtain and transcribe a 5-minute continuous speech sample to analyze the child's phonological system.

Scale developed by Preisser, Hodson and Paden: (JSHD, 1988)
Method of phonological assessment which provides means and standard deviations for children 18 months to 29 months.

Assessment of Speech Intelligibility:
Based on informal sample, determine percentage of intelligibility with familiar and unfamiliar listeners, in known and unknown context.

Assessment of the presence or absence of typical and idiosyncratic phonological processes:
See Appendices 9 and 10 for characteristics of phonological development of children as reviewed in the literature.

Pre-Feeding Skills: Suzanne Evans-Morris & Marsha Dunn Klein (Communication Skill Builders)
A comprehensive resource guide for feeding development.

⇨Suggested Evaluation Instruments and Procedures: Fluency

Instruments:

Stuttering Prediction Instrument for Young Children (SPI): (Source: Slossen)
Assesses type and frequency of disfluent speech to directly measure severity and predict chronicity in children ages 3-8 years.

Systematic Fluency Training: (Source: The Speech Bin)
Training program with assessment component. Provides direct procedures for assessment for children ages 3-9 years.

The Fluency Companion: (Source: LinguiSystems)
Manual of checklists and guidelines for assessment and diagnosis of stuttering for children ages 3-18 years. Easily used in interview format.

Procedures:

Percentage of Stuttered Syllables (%SS)

Obtain a spontaneous speech sample in several speaking contexts (structured, semi-structured, unstructured). Tape record and transcribe the sample. Calculate the number and type of disfluencies. Assess the rate of stuttering and co-occurrence of non-verbal behaviors, as well as type of disfluency and situations in which disfluency occur.

⇨Suggested Evaluation Instruments: Children with Limited English Proficiency

Instruments:

Assessment of Phonological Processes (Source: ProEd)

Assesses phonological processes in children with fair to poor intelligibility. This is a direct translation of the English version into Spanish.

Bilingual Language Proficiency Questionnaire (Source: Academic Communication Associates)

Means to gain information about speech and language developmental milestones and skills, functional use of Spanish and English and parental concerns. Questions provided in Spanish and English. English/Vietnamese Edition also available.

BRIGANCE Assessment of Basic Skills – Spanish Edition (Source: Curriculum Associates, Inc.)

Criterion referenced measure that can be used as part of a play based assessment. Spanish adaptation of **Comprehensive Inventory of Basic Skills.**

Fundacion MacArthur Inventario del Desarrollo de Habiliidades Comunicativas: (Source: Dr. Larry Fenson)

Spanish adaptation of MacArthur Communicative Development Inventory (see above). Does not yield a standard score.

Preschool Language Scale-3rd. Edition.-Spanish: (Source: Psychological Corporation)

This is a direct translation of the English version (see above). No normative information for native Spanish speakers.

Sequenced Inventory of Communication Development: (Source: University of Washington Press)

Cuban-Spanish translation of the English version. Assesses receptive and expressive language for children 4 months to 4 years of age. Direct translation of the English version (see above).

Spanish Articulation Measures (SAM): (Source: Academic Communication Associates)

Spontaneous word production tasks using familiar pictures. Assesses production of phonemes and processes.

Spanish Language Assessment Procedures (SLAP): (Source: Academic Communication Associates)

Assessment tasks for children age 3-9 years. Criterion referenced measures included.

Publisher Information for Instruments and Procedures:

Therapy Skills Builders	**LinguiSystems Inc.**	**The Psychological Corporation**
Psychological Corp.	3100 4th Avenue	PO Box 839954
555 Academic CT.	East Moline, IL 61244	San Antonio, TX 78283
San Antonio, Texas 78204	1-800-PRO-IDEA	1-800-211-8378
1-800-211-8378		
Paul H. Brookes Publishing Co.	**Singular Publishing Group Inc.**	**Innovative Therapies International**
PO Box 10624	401 West "A" Street, Suite 325	210 Oakridge Commons
Baltimore, MD 21285	San Diego, CA 92101	South Salem, NY 10576
1-800-638-3775	1-800-521-8545	1-914-533-5058
American Guidance Service (AGS)	**Pro-Ed**	**Slossen Educational Publications**
4201 Woodland Rd.	8700 Shoal Creek Boulevard	PO Box 280
PO Box 99	Austin, Texas 78757	East Aurora, NY 14052
Circle Pines, MN 55014	1-800-897-3202	1-800-756-7766
1-800-328-2560		
The Speech Bin	**Curriculum Associates, Inc.**	**University of Washington Press** PO Box 50096
1965 Twenty-Fifth Ave.	5 Esquire Rd.	Seattle, WA 98145
Vero Beach, Florida 32960	North Billerica, MA 01862	
1-800-4-SPEECH	1-800-225-0248	
Academic Communication Associates	**Dr. Larry Fenson**	**Communication Skill Builders**
4149 Avenitia de la Plata	Developmental Psychology Lab	Psychological Corp.
PO Box 586249	Dept. of Psychology	555 Academic CT.
Oceanside, CA 92058	San Diego State University	San Antonio, Texas 78204
1-619-758-1604	San Diego, CA 92182	1-800-211-8378

Internet and Websites

www.asha.org - the professional association for speech pathologists and audiologists
www.speechpathology.com - contains links to a large number of related sites
www.nectas.unc.edu - National Early Childhood Technical Assistance System
www.valdosta.peachnet.edu/coe/coed/sped/tactic/tsource.html - Project TACTICS resource page
alt.support.stuttering - a newsgroup
http://planet-hawaii.com/7thwave/das.html - Developmental Apraxia of Speech
www.hanen.org - information and links on language development
www.hanen.org/lllexcpt.html - a page about simultaneous bilingualism (2 languages before 3yr)

Appendix Five

Resources

VIDEOS

◎ ****Communicating Effectively with Young Children, Yvonne Gillette, 38 minutes
This video offers several vignettes and the viewer is instructed to note the mother's communication skills and suggest strategies in the study guide. Then the clinician shows how each vignette demonstrates different skills and strategies and offers simple social routines in the study guide. The clinician appears genuine, expert and sincere. Communication Skill Builders 1-800-211-8378 $72.50

◎ Hanen Teaching Tapes, 1984, 1 hour, 47 minutes
This video shows numerous vignettes of children with S&L problems and delays and different ways that parents relate to their children. Main principles are: Following the children's lead; respond so that the child will learn; label what child is doing and wait; taking turns. This tape is too long and at times it may be painful for a parent to watch. Might be effective if one vignette was chosen to demonstrate each of the four principles. Child Development Media, Inc. 1-800-405-8942 $75

◎ And the Word If Any, Hanen, 1988, 20 minutes
This video portrays the fears and frustrations of parents with speech-delayed children. The tape offers the following advice to parents: Abandon your agenda; adapt your activities; add information with simple language. The advice is good but most of the tape is about parents' fears and frustrations (which the viewers already have). Child Development Media, Inc. 1-800-405-8942 $55

◎ Talking is Sharing, Dr. Rae Banigan, 31 minutes
Vignettes of the clinician and children are offered to demonstrate the following principles: Tune into the child; get the child to tune into you; target your words. The clinician seems too polished, her advise too simplistic and you do not see how parents handle these situations. The Speech Bin 1-800-4-Speech $60

COMPUTER CD-ROM

◎ Normal Communication Acquisition, Kristine S. Retherford
This CD allows you to search for developmental behaviors by age range in the following areas: Motor, cognition, semantics, syntax, phonology and pragmatics. It includes animated examples and offers research citations.
Thinking Publications 1-800-225-GROW $59

LITERATURE

◎ ****Your Child's Speech and Language - Guidelines for Parents, Pro-Ed (52 pages)
This booklet offers good, easy to understand S&L milestones from 3 months to 5 years, plus vocabulary and speech sound development. It offer good activities at each age level. Also offers good warning signs for S&L disorders (but does not include frequent ear infections nor chewing problems as warning signs). Good material on stuttering and offers national organization and resources for parents. A nice addition is a section in the back where parents can keep a record of their child's progress. Very user-friendly.
Pro-Ed 1-800-897-3202 $14

◎ ****You Make the Difference - Hanen Program, Ayala Manolson, Barb Ward and Nancy Dodington (90 pages)
Excellent, illustrated, colorful, parent-friendly book focusing on the 3A method: Allowing children to lead; Adapting to share the moment and Adding new experiences and words. Good everyday activities are highlighted. Child Development Media, Inc. 1-800-405-8942 $15

◎ ****Parent Articles for Early Intervention, edited by Marsha Dunn Klein
Reproducible articles in several areas. There are more articles available in cognitive development than in S&L. There is a nice section on the use of music. 220 loose-leaf pages in a ring-binder. Communication Skill Builders 1-800-211-8378 $52

◎ ****Pro-Ed Pads (single sheets) English and Spanish
Single sheets for each age level (6 months, 1 year, 18 months, 2 years, 2-1/2 years) that include S&L development on one side and activities on the other side. Very user-friendly. This would be an excellent handout to child-care providers and to hospitals/pediatricians to give to new mothers and other patients. Pro-Ed 1-800-897-3202 $9 for 50 per pad

◎ It Takes Two to Talk, Ayala Manolson (145 pages)
This workbook offers the 3A system with a lot of poems and cartoons. It is long but the summary pages are very effective. Child Development Media, Inc. 1-800-405-8942 $25

◎ Making Everyday Living a Meaningful Language Learning Experience, Kathleen Studva, (three-fold)
This pamphlet offers information on speech sounds and age appropriate S&L. Pro-Ed 1-800-897-3202 $9

◎ Is My Child's Speech Normal? Jon Eisenson (162 pages)
Very good sections on brain development, stuttering and language milestones, but does not go into detail on what constitutes delayed speech. Pro-Ed 1-800-897-3202 $16

◎ Helping the Child to Listen and Talk, Joan M. Sayre (43 pages)
A more appropriate resource for teachers rather than parents. Pro-Ed 1-800-897-3202 $3

◎ Early Communication Games, Deborah G. Casey-Harvey (229 pages)
Offers a good parent checklist but activities seem geared for clinicians. Communication Skill Builders 1-800-211-8378 $55.50

◎ Growing Together - Series of 3 Books, Monica Devine (approximately 25 pages per book)
Offers some nice activities in S&L and motor skills and gives the *how* and *why* for each activity. Books for 1-12 mos, 12-14 mos, and 24-36 mos. Communication Skill Builders 1-800-211-8378 $23 for set of 5 books.

◎ Home Program Audiotapes for Speech and Language Intervention, Dennis C. Tanner and Wendy M. Lamb (4 pages and 2 audiotapes)
Discusses the rewards, punishments and structuring of the language environment. Academic Communication Associates (760) 758-9593 $16

****=Parent recommendation

Appendix Six

Language Interpretation and Translation Services in Connecticut

Braille Transcription

• Conn. Braille Assn.- West Hartford	(860) 953-9692
• Conn. Braille Assn.- Westport	(203) 227-5243
• Conn. Institute for the Blind/Oakhill- Hartford	(860) 242-2274
• Southeast CT Community Center of the Blind- Waterford	(860) 447-2048

Language Interpretation

• American Red Cross- Greater Hartford Chapter	(860) 678-2802
• American Red Cross- Greenwich Chapter	(203) 869-8444
• American Red Cross- Stamford Chapter	(203) 363-1041
• Casa Boricua de Meriden	(203) 235-1125
• Casa Otonal- New Haven	(203) 773-1847
• Centro de la Comunidad- New London	(860) 442-4463
• Centro de la Comunidad- Norwich	(860) 886-6001
• Community Action Committee of Danbury	(203) 798-2855
• CTE- Stamford	(203) 327-3260
• Diocese of Norwich- Haitian Ministries- Uncasville	(860) 848-2237
• Diocese of Norwich-Hispanic Ministries- Norwich	(860) 437-1285
• International Institute of Conn.- Bridgeport	(203) 336-0141
• International Institute of Conn.- Hartford	(860) 520-4050
• New Opportunities for Waterbury	(203) 356-9889
• Puerto Rican Organization Program- Willimantic	(860) 423-8476
• Spanish American Development Agency- Bridgeport	(203) 333-5193
• Spanish Community of Wallingford	(203) 265-5866
• World Affairs Council- West Hartford	(860) 594-4100

Language Translation

• Spanish Speaking Center- New Britain	(860) 224-2651

Sign Language Interpretation

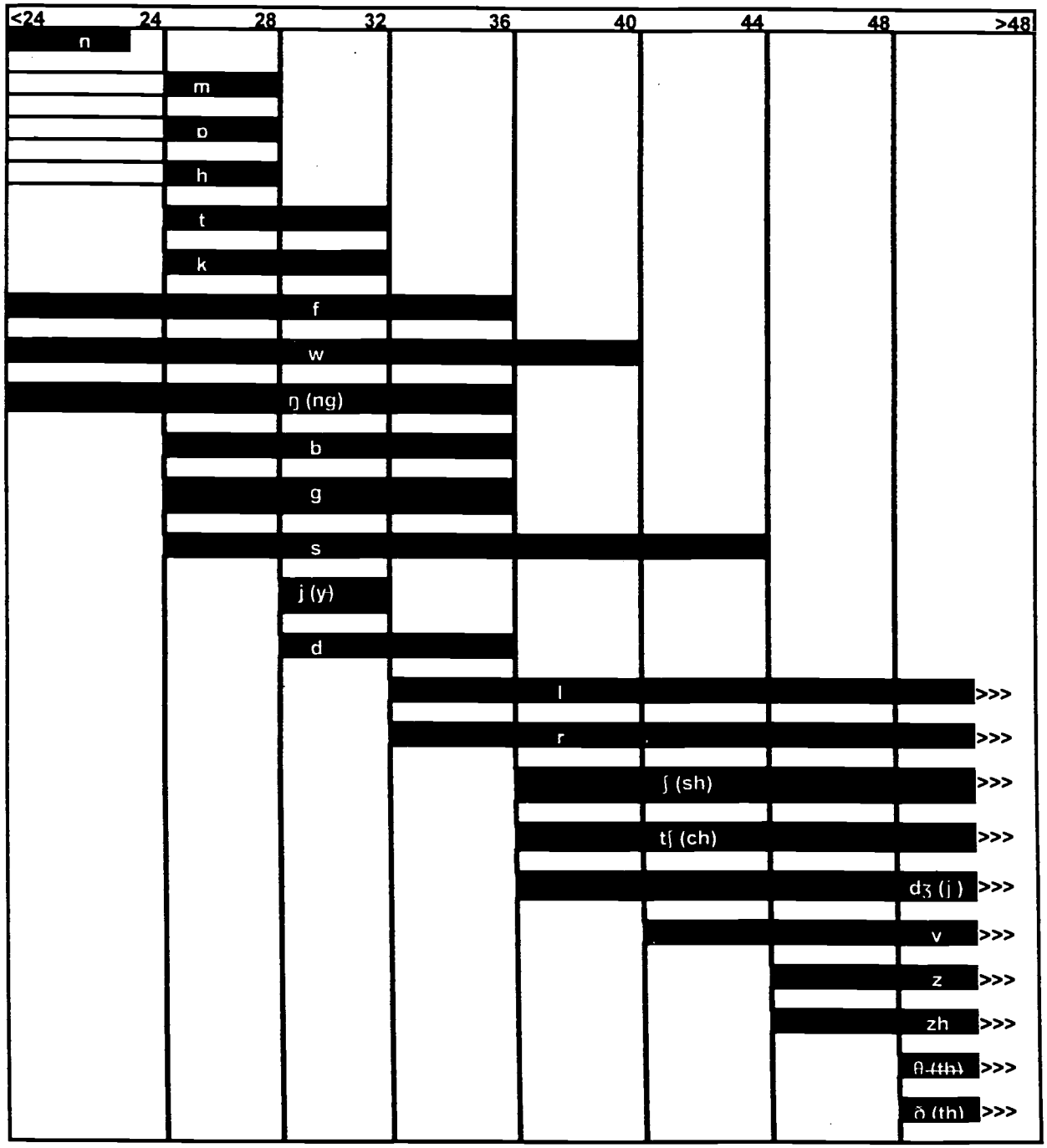
• American School for the Deaf- West Hartford	(860) 570-2339
• Catholic Deaf Apostolate- West Hartford	(860) 523-7530 VTDD
• Commission on Deaf and Hearing Impaired- West Hartford	(860) 561-0196 VTDD
• Diocese of Norwich- Ministry to the Deaf- Norwich	(860) 886-1281 (860) 887-3933 TDD
• National Theatre of the Deaf- Chester	(860) 526-4974 TDD (860) 526-4971

Telecommunication Relay Services

• Relay Services	(800) 842-9710 TDD (800) 833-8134

Appendix Seven

English Phonological Development

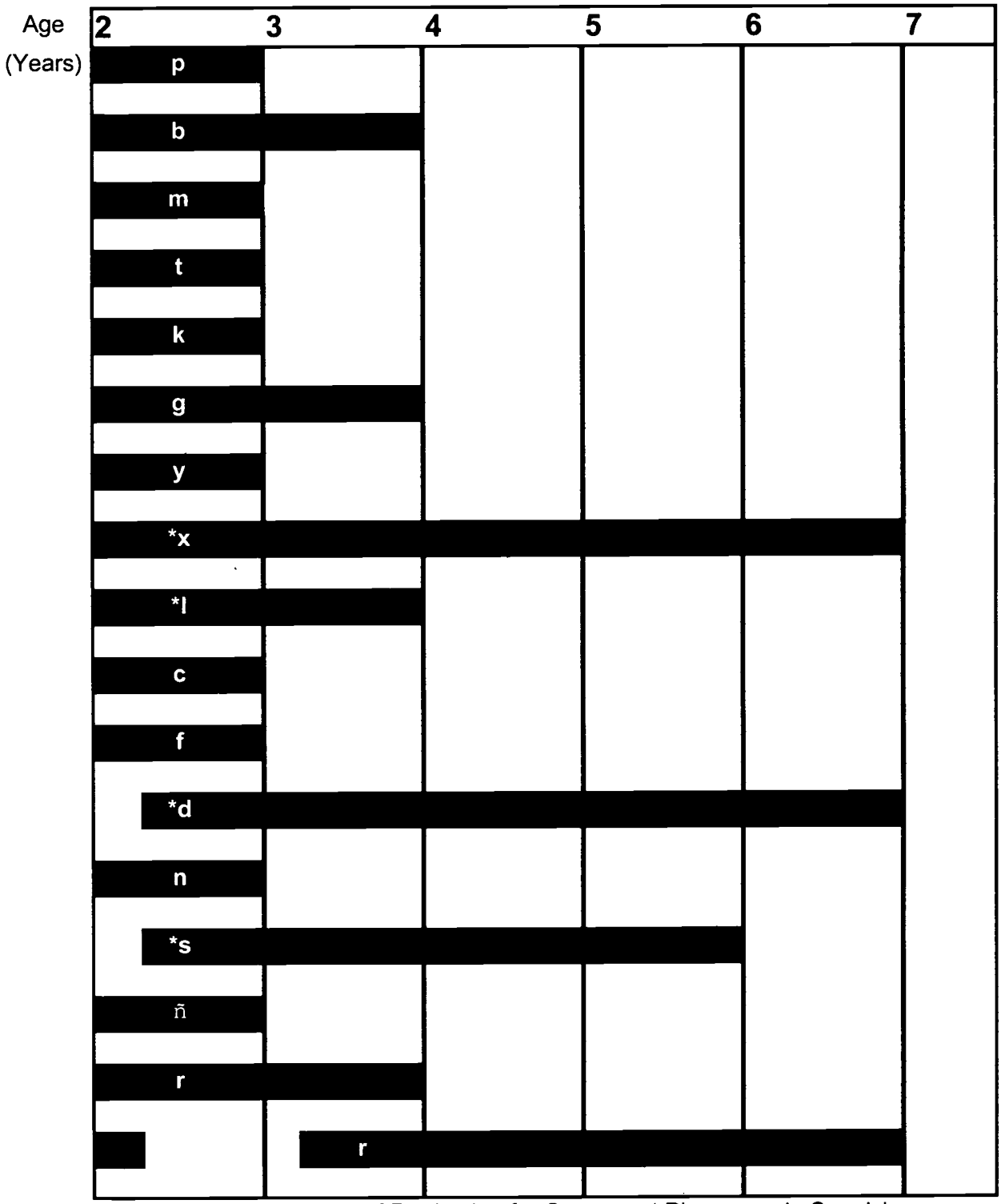


Average age estimates (50%) and upper age limits (90%) of customary consonant production. When the percentage correct at 24 months exceeds 70%, the bar extends to "less than 24." When 90% level was not reached by 48 months, the bar extends to "greater than 48." (After Prather, D. Hedrick, and C. Kern, Articulation development in children aged two to four years. Journal of Speech and Hearing Disorders, 40, 179-191, 1975.)

From: Hixon, T., Shriberg, L. & Saxman, J. (1980) (Eds.). Introduction to Communication Disorders. Englewood Cliffs: Prentice-Hall.

Appendix Eight

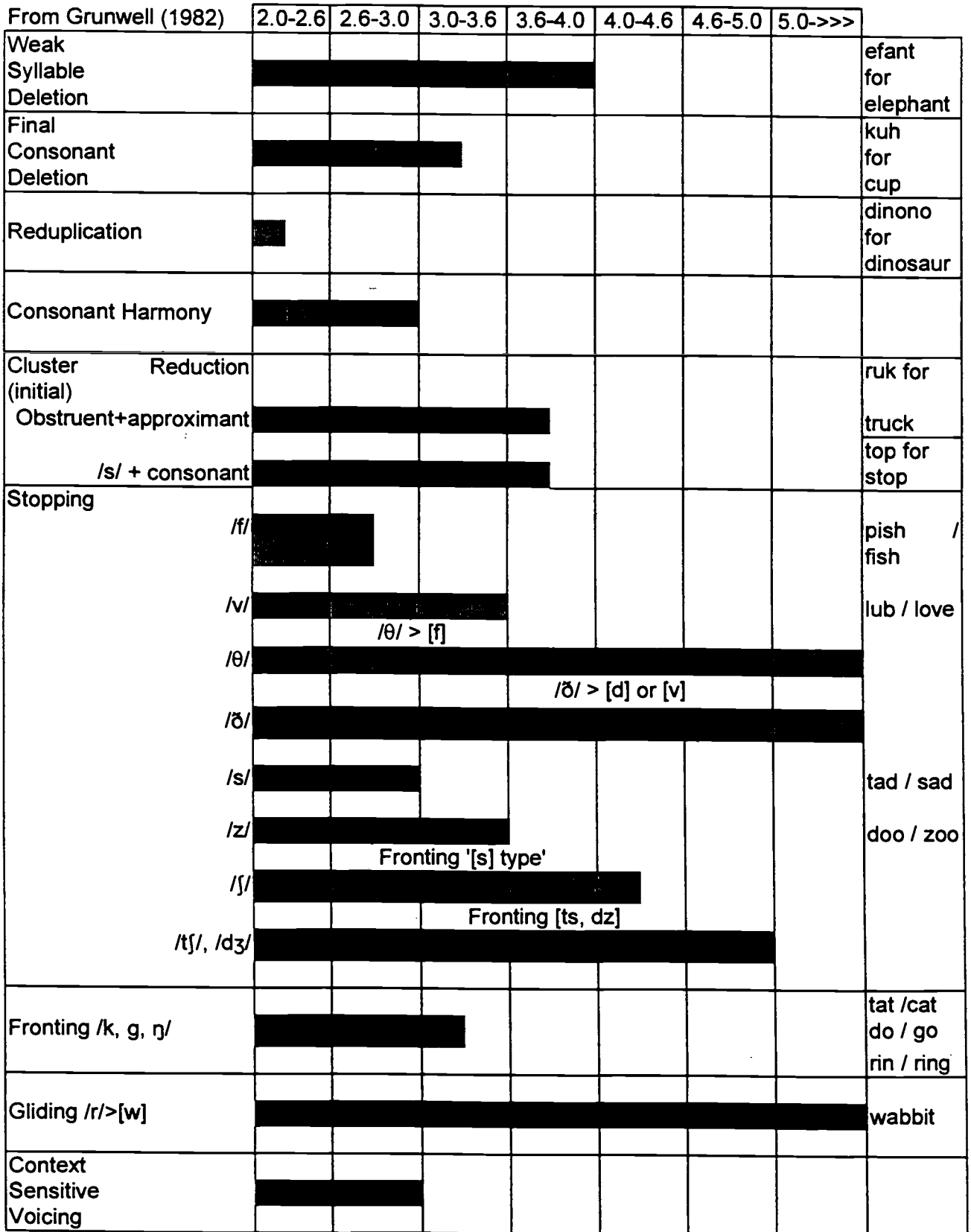
Spanish Phonological Development



Average Customary Age of Production for Consonant Phonemes in Spanish.
Data from Melagra(1976) and Merino (1983a).
*Age discrepancies between the two studies.

Appendix Nine

Chronology of Typical Phonological Processes



Solid line = typical age at which the pattern is seen, Dashed line = process begins to disappear

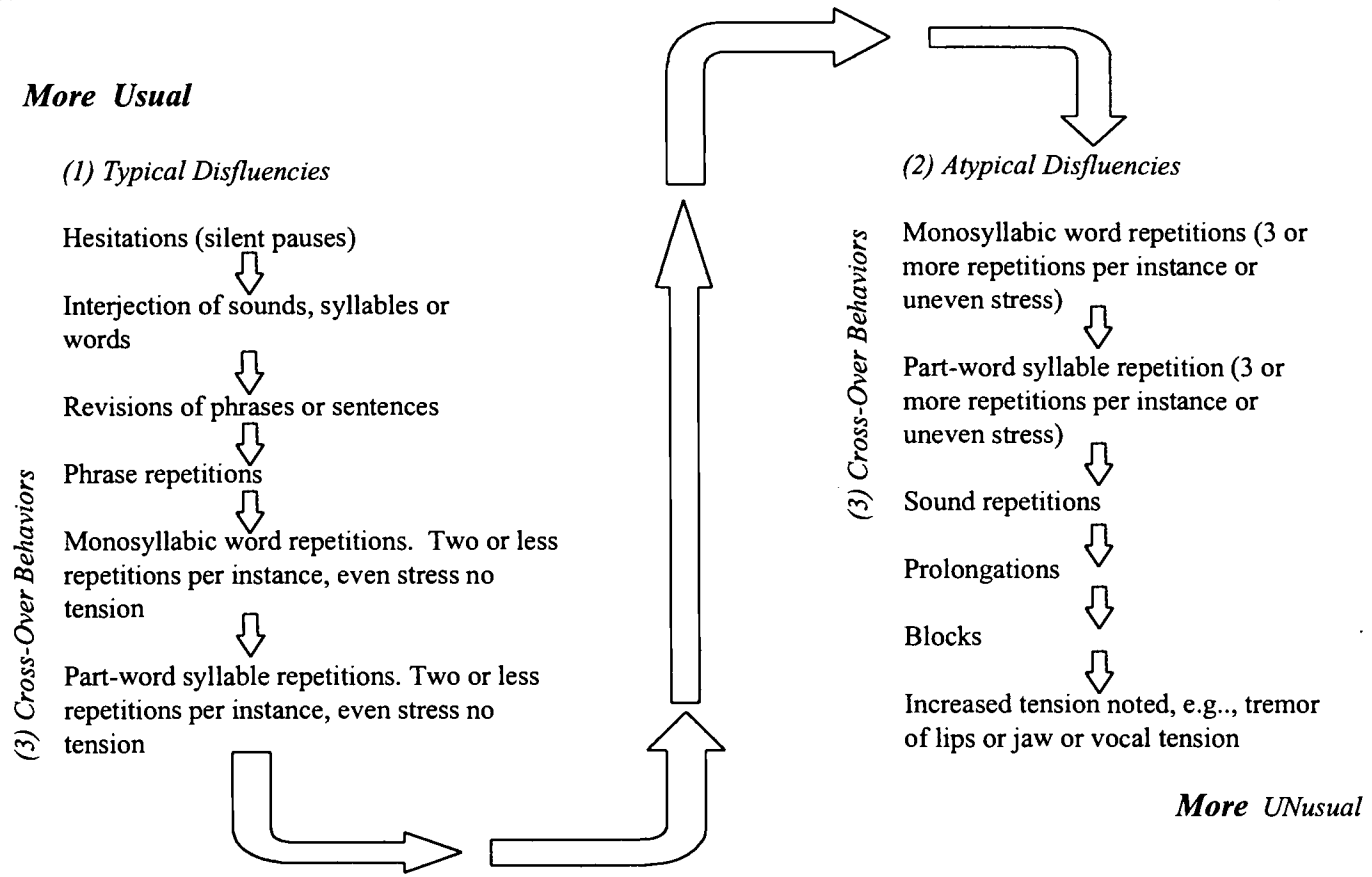
Appendix Ten

Unusual / Idiosyncratic Phonological Processes

Process	Definition and Example
Atypical Cluster Reduction	Deleting the member that usually remains play → [le]
Initial Consonant Deletion	Deletion of the word-initial consonant or cluster shoe→ [u]. star→ [ar]
Medial Consonant Deletion	Deleting intervocalic consonants beetle → [bio]
Backing of Stops	Replacing a front consonant by phonemes made posterior to the target (typically velars) toe → [ko]
Apicalization	A labial is replaced with an apical (tongue tip) consonant bow → [do]
Glottal Replacement	Substitution of a glottal stop for a consonant usually in the medial or final position bat → [baʔ]
Backing of Fricatives	Replacing fricatives with ones made in more posterior positions suit → [ʃut]
Medial Consonant Substitutions	Replacing intervocalic consonants with one or more phonemes butter → [bʌja]
Denasalization	Substituting a nasal consonant with a homorganic nonnasal no → [do]
Devoicing of Stops	Replacing a voiced stop with a voiceless phoneme (usually a stop) in word-initial positions daddy→ [tædi]
Fricatives Replacing Stops	Substituting a fricative consonant for a stop consonant bat → [bæs]
Stops Replacing Glides	Substitution of a stop for a glide yellow → [dɛlo]
Metathesis	Revering the position of two sounds; the sounds may or may not be adjacent most → [mots]
Migration	The movement of a sound from one position in a word to another position soap → [ops]
Sound Preference Substitutions	Replacing groups of consonants by one or two particular consonants /s/, /z/, /ʃ/, /tʃ/, /dʒ/ → [ʟ]

From: Lowe (1994)

Continuum of Disfluent Speech Behavior



(1) *Typical disfluencies* in preschool children's speech listed in the order of expected frequency (hesitations the most frequent). These disfluencies are relatively relaxed, as, for example, noted by repetitions being even in rhythm and stress however, if any are noticeably tense, then they are considered atypical

(2) *Atypical disfluencies* that are very infrequent in the speech of children. More characteristic of what listeners perceive as stuttering. If in a speech sample of 200 syllables or more there is more than 2% atypical disfluency this should be a basis for concern, especially if airflow or phonation is disrupted between repetitions or if a schwa sounding vowel is substituted in the repetitions of a syllable. Blocks and other signs of increased tension and fragmentation of the flow speech should be the basis for immediate concern.

(3) *Cross-over behaviors* on the continuum, such qualitative features as the number of repetitions per instance, the stress pattern involved and the presence of tension distinguish typical and atypical disfluencies

From Curlee, 1993, p.26

Appendix Twelve

Guidelines for Differentiating Normal from Abnormal Disfluencies

Behavior	*Stuttering*	*Normal Disfluency*
Syllable repetitions:		
a) Frequency per word	More than two	Less than two
b) Frequency per 100 words	More than two	Less than two
c) Tempo	Faster than normal	Normal tempo
d) Regularity	Irregular	Regular
e) Schwa vowel	Often present	Absent or rare
f) Airflow	Often interrupted	Rarely interrupted
g) Vocal tension	Often apparent	Absent
Prolongations:		
h) Duration	Longer than one second	Less than one second
i) Frequency	More than 1 per 100 words	Less than 1 per 100 words
j) Regularity	Uneven or interrupted	Smooth
k) Tension	Important when present	Absent
l) When voiced (sonant)	May show rise in pitch	No pitch rise
m) When unvoiced (surd)	Interrupted airflow	Airflow present
n) Termination	Sudden	Gradual
Gaps (silent pauses):		
o) Within the word boundary	May be present	Absent
p) Prior to speech attempt	Unusually long	Not marked
q) After the disfluency	May be present	Usually absent
Phonation:		
r) Inflections	Restricted; monotone	Normal
s) Phonatory arrest	May be present	Absent
t) Vocal fry	May be present	Usually absent
Articulating Postures:		
u) Appropriateness	May be inappropriate	Appropriate
Reaction to Stress:		
v) Type	More broken words	Normal disfluencies
Evidence of Awareness:		
w) Phonemic consistency	May be present	Absent
x) Frustration	May be present	Absent
y) Postponements (stallers)	May be present	Absent
z) Eye Contact	May waver	Normal

From Van Riper, C. (1971) p.28.

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Appendix Thirteen

Guidelines for Working with an Interpreter

1. Learn proper protocols and forms of address (including a few greeting and social phrases) in the family's primary language, the name they wish to be called, and the correct pronunciation.
2. Introduce yourself and the interpreter, describe your respective roles, and clarify mutual expectations and the purpose of the encounter.
3. Learn basic words and sentences in the family's language and become familiar with special terminology they may use so you can selectively attend to them during interpreter-family exchanges.
4. During the interaction, address your remarks and questions directly to the family(not the interpreter); look at and listen to family members as they speak and observe their nonverbal communication.
5. Avoid body language or gestures that may be offensive or misunderstood.
6. Use a positive tone of voice and facial expressions that sincerely convey respect and your interest in the family, and address them in a calm, unhurried manner.
7. Speak clearly and somewhat slowly, but not more loudly.
8. Limit your remarks and questions to a few sentences between translations and avoid giving too much information or long complex discussions of several topics in a single session.
9. Avoid technical jargon, colloquialisms, idioms, slang, and abstractions.
10. Avoid oversimplification and condensing important explanations.
11. Give instructions in a clear, logical sequence; emphasize key words or points, and offer reasons for specific recommendations.
12. Periodically check on the family's understanding and the accuracy of the translation, by asking the family to repeat instructions or whatever has been communicated in their own words, with the interpreter facilitation, but avoid literally asking. "Do you understand".
13. When possible, reinforce verbal information with materials written in the family's language and visual aids or behavioral modeling if appropriate. Before introducing written materials, tactfully determine the client's literacy through the interpreter.
14. Be patient and prepared for the additional time that will inevitably be required for careful interpretation.

INTERPRETERS

Interpreters must:

- understand their role and why they are being used
- maintain confidentiality
- have in depth knowledge of culture
- recognize person in authority and responsibility
- have a thorough knowledge base of the language
- participate in regular on-going training
- maintain impartiality
- follow the professional's directions

Who can interpret?

- professionals from a language bank
- bilingual professionals from a health or education background
- family member or friend of client
- someone who can read, write and use the two languages fluently

Role of interpreters

- screen speech, language, and hearing
- conduct evaluations or management programs designed by professionals
- record, chart, graph or display data relative to client's performance
- maintain clinical records
- report changes in client's performance for the professional in charge
- prepare clinical materials
- test hearing aids
- participate with professionals in activities such as research, in-service training, and public relations

The interpreter should not:

- interpret obtained observations or date
- determine case selection
- transmit clinical information verbally or in writing to others
- independently compose clinical reports except for progress notes
- refer a client to other professionals or agencies
- use any title verbally or in writing other than that assigned by professional

From Lynch, E.W., & Hanson, M.J. (1992). Developing cross-cultural competence: A guide for working with young children and their families. Baltimore, MD: Paul H. Brookes Publishers.

Appendix Fourteen

ASHA Guidelines for Monolingual and Bilingual Speech-Language Pathologists

Monolingual Speech-Language Pathologists and Audiologists

Guidelines for practitioners who do not speak the language of the client should include the ability to:

- describe the process of normal speech and language acquisition for both multilingual and monolingual individuals by using a trained interpreter/cultural mediator to gather information and data from the client/family/caregiver and being familiar with behaviors that reflect the typical acquisition process of monolingual and multilingual individuals;
- conduct culturally and linguistically appropriate assessments by knowing the limitations and possible cultural and linguistic biases of standardized test;
- know the types of and need for alternative forms of assessment;
- identify individuals who need to be referred to multilingual clinicians;
- distinguish behaviors that are attributed to cultural or linguistic differences; and
- utilize interpreters, translators, cultural mediators, and multilingual professionals to involve the family in the assessments process and to share results of the assessment.

Bilingual Speech-Language Pathologists and Audiologists

To be defined as a multilingual speech-language pathologist or audiologist and provide assessment and intervention services in the client's home language, it is mandated that the speech-language pathologist and audiologist possess the following competencies:

- language proficiency-native or near native fluency in both the client's language and in English;
- normative processes- ability to describe the process of normal speech and language acquisition for both bilingual and monolingual individuals and how these processes are manifested in oral and written language;
- assessment-ability to administer and interpret formal and informal assessment
- procedures to distinguish between communication differences and communication disorders;
- intervention-ability to apply intervention strategies for communication disorders in the client's home language; and
- cultural sensitivity-ability to recognize cultural factors which affect the delivery of speech-language pathology and audiology services to non-English speakers.

Appendix Fifteen

Glossary

Adaptive - eating, dressing
American Sign Language - a language using signs with its own rules for combining words
Auditory Stimuli - something you can hear (tapping the table to help with rhythm)
Bilateral - both sides (both ears)
Cognition - thinking, problem solving, playing
Criterion referenced - performance is based on passing a criteria rather than on what a sample did
Developmental Apraxia of Speech (DAS) - trouble coordinating the mouth muscles for speech only (Also called Developmental Verbal Dyspraxia [DVD])
Diadochokinesis - the rapid repetition of syllables
Disfluency - a disruption in the smooth flow of sounds and words
Dyspraxia / Apraxia - difficulty coordinating the mouth muscles with no impaired muscles (the prefix "DYS" means there is some problem, "A" means one can't do it at all)
Expressive Language - what we communicate to others, how we let others know what we want
Frequency Specific Hearing Loss - some sounds cannot be heard because the hearing loss affects only that frequency (like radio signals that fade out while others stay clear)
Monaural - one ear
Motor - using big (gross) and small (fine) muscles
Motor Planning - preparing and moving muscles to do something like climb onto a tricycle
Multi-Domain Instrument -a test that looks at communication, cognition, motor, etc.
Norm-referenced - performance is compared to a sample (called a norming sample)
Oral Motor - the muscles in and near the mouth
Otitis Media - an ear infection, with or without pain but with fluid in the middle ear
Phoneme - / / the smallest sound that makes a difference in meaning
Phonemics - studying meaningfully distinct sounds (bat vs. pat)
Phonetic Analysis - [ ] analyzing each perceptibly different sound meaningful or not (nap vs. pan)
Phonological rules - regularly occurring events like deleting a weak syllable (efant for elephant)
Phonology - the system of speech sounds used and the rules for putting them together
Receptive Language - what we understand from others,
Signing Exact English - using signs to communicate following English syntax (rules)
Specific Expressive Language Delay - when understanding is fine and there are no other problems
Speech - what we say, one way to express what you want
Standard Deviation - a statistical measure that spreads the difference in scores out evenly from the average. Negative standard deviations (SD) are below average and -2 SD is lower than -1 SD
Stuttering - interruptions to the flow of speech that are more frequent or intense than regular disfluencies, stuttering may include a reaction to having trouble speaking smoothly
Syntax - the rules for sentence structure
Tactile Stimuli - something you can feel (touching your neck as a cue for the "k" sound)
Verbal Dyspraxia - difficulty coordinating the mouth muscles just for speech in the absence of a muscle disorder (used as a synonym for apraxia of speech)
Visual Stimuli - something you can see (like pointing to your neck or lips to show someone else from where the sound comes)

Appendix Sixteen

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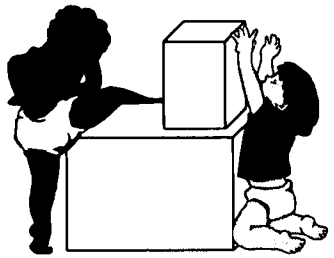
your child is found not to be eligible for Birth-3 and you are still concerned three months later, you may call 1-800-505-7000 to request another evaluation.



RECOMMENDATIONS TO HELP LANGUAGE DEVELOP:

- Read to your child every day.
- Talk about what you are doing or seeing throughout the day.
- Limit display speech, (e.g. "Show Grandma how you count to ten.")
- Follow what your child is interested in playing with or talking about.
- Use repetition in stories and songs.
- Take turns with your child. Say: "Daddy's clapping, now you clap!"
- Use clear, simple, language when talking and speak a bit slowly.
- If your child has frequent or prolonged ear infections, talk to your doctor. It may be appropriate to see an Ear Nose & Throat doctor (ENT)

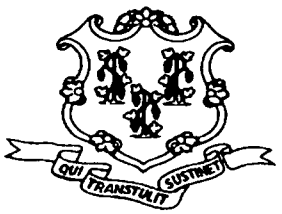
Connecticut's Birth to Three System is designed for families who have a child with a significant developmental delay in at least one area

The service guideline booklet includes many appendices, lists, charts and resources. A lot of the information is written for speech-language pathologists but anyone on an early intervention team can help with questions you may have.

For a full copy of the guideline...

- ask any CT Birth to Three program
- call 1-860-418-6147
- you can access all of the Connecticut Birth to Three service guidelines on the World Wide Web at:

www.birth23.org



A Summary of the Connecticut Birth to Three System's Service Guideline

for children referred solely because of a concern about their speech or language

With the help of many people, service guidelines were developed for evaluating and supporting families with children who have communication development as the only concern.

This is a brief summary of the main points in the guidelines.

Expressive Language

- Expressive language is how we communicate to others such as talking and signing.
- Some children have delays in their *expressive* language but they understand a lot (called good *receptive* language since they can receive language.)

The Birth to Three service guideline #3 explains that some children are just late talkers and catch up without speech therapy. Their parents may just need to learn about regular activities to do at home to help language develop and to create opportunities for play time with children their age who talk well.

The guideline recommends that if there are still concerns, these children can be re-evaluated every three months to make sure they are making progress.

However...

Some children have certain biological factors that can indicate the possibility of a more significant communication delay or disorder.

If one of the biological factors listed below is present, then the child may indeed be eligible for Birth to Three and the family might benefit from some short term early intervention services and supports.

- *Oral Motor Impairment* -trouble coordinating the muscles in the mouth for eating and speaking
- *Developmental Apraxia of Speech (DAS)* - trouble coordinating the muscles of the mouth only for speech but not when eating
- *Phonological impairment* - no trouble with the muscles of the mouth but the sounds they use and the rules they use to make sounds into words are impaired or delayed (e.g. saying "ta" for "cat" and "gah" for "dog" at 2½.)
- *Family history of language impairment or developmental delay*
- *Significant birth history* (there is a list of what is significant for speech development)

The speech-language pathologist on your team will help to determine whether your child and family need a comprehensive system of support like Birth to Three.

Fluency

- If speech does not flow smoothly, it may sound like stuttering.

It is normal for children to not speak smoothly when they are learning to talk.

Children have to think about what they want to say, breathe, and make their mouth work. (That is a lot to do, especially when you're excited.) The Birth to Three team determines if your child has Stuttering Like Disfluencies that require intervention or normal disfluencies which do not.

For some children, English is not the primary language that they hear each day

The guidelines state that children must be tested in the language they are consistently exposed to each day. This is usually the primary language of the home and includes sign language for hearing children of deaf parents. Also, children adopted from non-English speaking countries should be tested in English after they have had some time to adjust to their new home.

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