Date: 09/05/2012

Title: The Speech-Language Pathologist's Role in Early Intervention for Children, Ages Birth-to-Three Years, with Speech-Language Disorders

Clinical Question

P: In children birth-to-three years with primary speech-language disorders

I: does receiving early intervention (EI) services facilitated by speech-language pathologists (SLPs)

C: compared to a wait and see approach (not receiving services)

O: result in improved communication skills as shown through formal speech and language test results?

Target Population

Inclusion criteria: Children, ages birth-to-three years, with a diagnosed primary speech and language delay/disorder/impairment.

Exclusion Criteria: Children older than 36 months, children in specialty populations such as (but not limited to) autism, developmental delay, Down syndrome, English as second language, hearing impairment.

Definitions

Primary speech and language delay/disorder/impairments: diagnosed when a child's speech and/or language does not develop normally and the difficulties cannot be accounted for by disorders such as physical abnormality of the speech structures, autistic disorder, acquired brain damage or hearing loss *(ASHA, 2008 [5a])*.

Early Intervention (EI): Services provided to ages birth-to-three years, including speech and language services *(ASHA, 2008 [5a])*.

Recommendation *(See Table of Recommendation Strength)*

It is recommended that speech-language intervention services facilitated by SLPs be provided for young children with primary speech and language delay/disorder/impairments, to improve language, learning and communication skills *(Schooling 2010 [1b]; Paul & Roth 2011 [5a]; Local Consensus [5]*).

Note: The Individuals with Disabilities Education Act (IDEA) suggests that early intervention will "expand opportunities for children under 3 years of age who would be at risk of having substantial developmental delay if they did not receive early intervention services" *(IDEA, 2004, SEC 631[5a])*.

Discussion/Summary of Evidence related to the recommendation

"Effective communication is fundamental to all aspects of human functioning, particularly learning and social interaction. The development of communication skills begins at birth. Families with infants and toddlers (birth to 36 months) who are at risk for or have disabilities [may] receive developmentally supportive care that addresses a broad spectrum of priorities and concerns" *(ASHA, 2008[5a])* including teaching/facilitating the parents to implement a home program *(Schooling, 2010 [1b]; Paul & Roth, 2011 [5a])*. SLPs serve as consultants to the family to improve language and communication skills *(Paul & Roth, 2011 [5a])*. EI services for children with speech and language disorders increase the child's opportunity for better communication and learning outcomes *(Paul & Roth, 2011 [5a], ASHA, 2008 [5a]; Local Consensus [5])*. Local consensus is in agreement with the National Research Council & Institute of Medicine (2000) and Paul & Roth (2011) that the earlier speech and language interventions are provided, the better the outcome. Consequently, EI therapy provided by SLPs for children ages birth-to-three years, who are identified with primary speech and language delay/disorder/impairment, is better than no intervention.

All available evidence consistently support the role of SLPs as an EI service provider *(Paul &Roth, 2011 [5a]; ASHA, 2008 [5a]; Local Consensus [5])*. A primary role for SLPs is in providing EI services independently or in collaboration with other providers *(Schooling, 2010 [1b]; Paul & Roth, 2011 [5a])*. Additionally, SLPs have the responsibility to prevent further communication decline *(Paul & Roth, 2011 [5a])* and are "qualified to address delays and disabilities in communication, language, speech, emergent literacy, and feeding/swallowing" disorders *(ASHA, 2008 [5a])*.

Dimensions for Judging the Strength of the Recommendation

Reflecting on your answers to the dimensions below and given that more answers to the left of the scales indicates support for a stronger recommendation, complete one of the sentences above to judge the strength of this recommendation.
(Note that for negative recommendations, the left/right logic may be reversed for one or more dimensions.)

1. Grade of the Body of Evidence	☐ High	☐ Moderate	☒ Low
Comments:			
2. Safety/Harm (Side Effects and Risks)	☒ Minimal	☐ Moderate	☐ Serious
Comments:			
3. Health benefit to patient	☐ Significant	☒ Moderate	☐ Minimal
Comments: Children ages birth-to-three years who receive EI services are more likely to achieve greater language outcomes (National Research Council & Institute of Medicine, 2000, [5a]).			
4. Burden on patient to adhere to recommendation	☐ Low	☐ Unable to determine	☒ High
Comments: The burden is on the parent/caregiver for the carry-over of services at home. It is accepted practice for SLPs to train parents to continue therapy at home.			
5. Cost-effectiveness to healthcare system	☒ Cost-effective	☐ Inconclusive	☐ Not cost-effective
Comments: When EI is provided, the likelihood of remedial services in the later years is diminished (Paul & Roth, 2011 [5a]; ASHA, 2005 [5a]).			
6. Directness of the evidence for this target population	☒ Directly relates	☐ Some concern of directness	☐ Indirectly relates
Comments:			
7. Impact on morbidity/mortality or quality of life	☐ High	☒ Medium	☐ Low
Comments: Quality of life is improved due to associated gains in language and learning outcomes (National Research Council & Institute of Medicine, 2000 [5a] ; Local Consensus[5]).			

Reference List *(Evidence Level in [ ]; See Table of Evidence Levels following references)*

American Speech-Language-Hearing Association. (2008). *Roles and responsibilities of speech-language pathologists in early intervention: Position statement.* Retrieved February 7, 2012, from: www.asha.org/policy. [5a]

Local Consensus: During BESt development time frame, 2012, [5]

Individuals with Disabilities Education Act Amendments (PL 108-446). (2004). Retrieved February 7, 2012, from: http://idea.ed.gov/part-c/statutes. [5b]

National Research Council & Institute of Medicine. (2000). Shonkoff, J. P. & Phillips, D. A. (Eds.). *From neurons to neighborhoods: The science of early child development.* Washington, DC: National Academy Press. [5a]

Paul, D. & Roth, F. P. (2011). Guiding Principles and Clinical Applications for Speech-Language Pathology Practice in Early Intervention. *Language, Speech, and Hearing Services in Schools, 42,* 320-330. [5a]

Schooling, T. V., R. & Leech, H. (2010). "Evidence Based Systematic Review: Effects of Service Delivery on the Speech and Language Skills of Children From Birth to 5 Years of Age." ASHA's National Center for Evidence Based Practice in Communication Disorders: 230. [1b]

SUPPORTING INFORMATION

Background/Purpose of BESt Development

Children are not always referred for speech-language pathology services at a young age, but rather follow a "wait-and-see" approach , suggesting that the child will outgrow the delay *(ASHA, 2008 [5a]; Local Consensus [5])*. This BESt was developed to identify the evidence regarding SLP led EI services provided to the birth-to-three year population.

Applicability Issues

Applicability for implementation of this recommendation is the continuation of speech-language intervention services facilitated by SLPs for young children with primary speech and language delay/disorder/impairment in the birth-to-three population. Young children develop the majority of their speech and language skills in the first three years of life *(ASHA, 2008 [5a])* and therefore, early intervention is important. Physicians are encouraged to make referrals for the birth-to-three population as soon as a delay/disorder/impairment is noted. Education of physicians, staff, and parents can reduce potential barriers to the implementation of EI services. Early intervention is important for infants, toddlers and preschoolers because they are in an optimal stage of speech and language development *(ASHA, 2008 [5a])*. If there is a problem with that development, therapy should be initiated, to take advantage of this period of normal brain development *(Local Consensus [5])*.

Outcome and Process Measures

The following represents a sample of standardized and non-standardized measures used to assess speech and language functioning in the birth-to-three population: *Preschool Language Scale Fifth Edition* (PLS-5), *The Rossetti Infant Toddler Scale*, *The Receptive-Expressive Emergent Language Test—Third Edition* (REEL-3) and *MacArthur-Bates Communicative Development Inventory – Second Edition*. These tests are used at initial evaluation and, typically, prior to discharge.

Outcomes planning on measuring include: improved functional communication. Specifically, using speech and language skills such as vocabulary, articulation/speech production skills and grammar to initiate conversations, make requests, and participate in turn-taking.

Outcomes that may be measured include: mean length utterance, vocabulary scores, grammatical markers, speech sound production, speech intelligibility, and pragmatics.

Search Strategy

Search 1

Date Range: January, 2005 to December, 2011
Keywords: early intervention, speech, language, therapy, developmental delay, speech therapy and language therapy.
Limits: English, 0 to 36 months
Databases: American Speech-Language Hearing Association Database, Medline, Cochrane Library, and CINAHL.

Search 2

A search was completed of governing bodies and position statements:
American Speech-Language Hearing Association, Retrieved February 7, 2012, from: www.asha.org.
Individuals with Disabilities Education Act Amendments (PL 108-446). (2004). Retrieved February 7, 2012, from: http://idea.ed.gov/part-c/statutes.

Relevant CCHMC Evidence-Based Documents

Division of Speech Pathology; Handouts on E-Chirp: http://ecenterlink.cchmc.org/content2/29412/ "Language Stimulation for Infants"; "Language Stimulation", "Music" and "Reading Books".
Division of Speech Pathology; Handouts on E-Chirp: http://ecenterlink.cchmc.org/content2/29522/ "Talking about normal speech and language development Birth to 12 months and 12 to 36 months"; "Talking about early intervention".

Group/Team Members

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Conflicts of Interest were declared for each team member:

☒ No financial conflicts of interest were found.
☐ The following financial conflicts of interest were disclosed:

Note: Full tables of evidence grading system available in separate document:

- Table of Evidence Levels of Individual Studies by Domain, Study Design, & Quality *(abbreviated table below)*
- Grading a Body of Evidence to Answer a Clinical Question
- Judging the Strength of a Recommendation *(abbreviated table below, dimensions table above)*

Table of Evidence Levels *(see note above)*

Quality level	*Definition*
1a† or 1b†	Systematic review, meta-analysis, or meta-synthesis of multiple studies
2a or 2b	Best study design for domain
3a or 3b	Fair study design for domain
4a or 4b	Weak study design for domain
5a or 5b	General review, expert opinion, case report, consensus report, or guideline
5	Local Consensus

†a = good quality study; b = lesser quality study

Table of Recommendation Strength *(see note above)*

Strength	*Definition*
It is strongly recommended that… It is strongly recommended that… not…	There is consensus that benefits clearly outweigh risks and burdens (or visa-versa for negative recommendations).
It is recommended that… It is recommended that… not…	There is consensus that benefits are closely balanced with risks and burdens.
There is insufficient evidence and a lack of consensus to make a recommendation…	

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This Best Evidence Statement has been reviewed against quality criteria by 2 independent reviewers from the CCHMC Evidence Collaboration.

For more information about CCHMC Best Evidence Statements and the development process, contact the Evidence Collaboration at EBDMinfo@cchmc.org.

Note

This Best Evidence Statement addresses only key points of care for the target population; it is not intended to be a comprehensive practice guideline. These recommendations result from review of literature and practices current at the time of their formulation. This Best Evidence Statement does not preclude using care modalities proven efficacious in studies published subsequent to the current revision of this document. This document is not intended to impose standards of care preventing selective variances from the recommendations to meet the specific and unique requirements of individual patients. Adherence to this Statement is voluntary. The clinician in light of the individual circumstances presented by the patient must make the ultimate judgment regarding the priority of any specific procedure.