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Roles and Responsibilities of Speech-Language Pathologists in Early Intervention: Technical Report

Ad Hoc Committee on the Role of the Speech-Language Pathologist in Early Intervention

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About This Document

This technical report was developed by the American Speech-Language-Hearing Association (ASHA) Ad Hoc Committee on the Role of the Speech-Language Pathologist in Early Intervention and was approved by the ASHA Board of Directors (BOD 4-2008) in February 2008. Members of the Committee were M. Jeanne Wilcox (chair), Melissa A. Cheslock, Elizabeth R. Crais, Trudi Norman-Murch, Rhea Paul, Froma P. Roth, Juliann J. Woods, and Diane R. Paul (ex officio). ASHA Vice Presidents for Professional Practices in Speech-Language Pathology Celia Hooper (2003–2005) and Brian B. Shulman (2006–2008) served as the monitoring officers. This technical report replaces the 1989 ASHA document *Communication-Based Services for Infants, Toddlers, and Their Families*.

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Historical Perspective and Background Information

In this report, the term "*early intervention*" is used to refer to services provided to children from birth up to age 3 years who are at risk for or have developmental disabilities or delays. The Federal Program for Infants and Toddlers was established in 1986 (P.L. 99–457) as Part H in the Education for the Handicapped Act, and as Part C in the establishment of the Individuals with Disabilities Education Act (IDEA) in 1990, and all subsequent reauthorizations of IDEA (1997, 2004). Therefore, infants and toddlers with developmental disabilities or delays are served nationally through early intervention programs established in each state under Part C of IDEA. Although Part C programs are similar to those for preschool- and school-age students authorized under Part B of IDEA, they differ in a number of fundamental ways. First, the criteria for Part C program eligibility are established at the state level, and the characteristics of children who are eligible for services, as well as the lead agency for organizing services, differ from state to state. Second, the program recognizes that infants and toddlers cannot be appropriately served in isolation from their families. Therefore, services are to be centered on families and children within the context of families' activities and routines. Third, services are not based in traditional education settings. In other words, children do not have to receive educational services but may receive one or more of a wide array of services including therapies (e.g., speech-language pathology, physical therapy, occupational therapy), special instruction (e.g., education), nutrition, social work, respite care, psychology, and other services that may not typically be provided for children served through Part B.

An infant or toddler may receive one or more of these services as determined by a team that includes the family and as specified in an individualized family service plan (IFSP). The team bases decisions on assessment data about the child's current ability to function in developmentally appropriate settings and activities, on health status, and on gathering information about family priorities, needs, and concerns. Although the IFSP, like the Individualized Education Program (IEP) is a document detailing plans, the focus of the IFSP is on outcomes to be achieved through services, and these outcomes may be focused on the family or the child as determined through the assessment process and the family's preferences. Finally, all children served through Part C are entitled to receive service coordination, to assist families in integrating input from the many different agencies and individuals with whom they are involved. While Part B is designed to enhance students' participation in the general education curriculum and to improve their achievement, Part C has a broader focus on children's successful participation in the activities and routines that they engage in at home and in community settings (e.g., child care program, family outings, library, religious institution, recreational activities).

In recognition of the unique needs, service delivery models, and policies regarding provision of services to infants and toddlers with disabilities, ASHA created a committee in the late 1980s to generate a position statement and technical report focused on the roles and responsibilities of speech-language pathologists (SLPs) in providing services to this young population (ASHA, 1989, 1990). Although many aspects of that original work remain pertinent, other aspects require updating. Federal and state programs have evolved, some aspects of policy have changed, the scope of speech-language pathology practice has expanded, and research has begun to reveal evidence for effective practices. These changes have been addressed as the present committee has crafted a revised position statement, this technical report, and associated guidelines and essential knowledge and skills (ASHA, 2008a, 2008b, 2008c).

Overview

Communication skills develop through a dynamic process that is shaped by interdependent factors intrinsic to the child and his or her environment. A core set of developmental concepts provides a framework for ASHA-certified SLPs working in early intervention and informs their practice. These concepts have been summarized in the National Research Council and Institute of Medicine (2000, pp. 3–4) publication titled *From Neurons to Neighborhoods: The Science of Early Childhood Development*. They include the following:

1. Human development is shaped by a dynamic and continuous interaction between biology and experience.
2. Culture influences every aspect of human development and is reflected in child-rearing beliefs and practices designed to promote healthy adaptation.
3. The growth of self-regulation is a cornerstone of early childhood development that cuts across all domains of behavior.
4. Children are active participants in their own development, reflecting the intrinsic human drive to explore and master one's own environment.
5. Human relationships, and their dynamic interactions, are the building blocks of healthy development.
6. The broad range of individual differences among young children often makes it difficult to distinguish normal variations and maturational delays from transient disorders and persistent impairments.
7. The development of children unfolds along individual pathways whose trajectories are characterized by continuities and discontinuities, as well as by a series of significant transitions.
8. Human development is shaped by the ongoing interplay among sources of vulnerability and sources of resilience.
9. The timing of early experiences can matter, but, more often than not, the developing child remains vulnerable to risks and open to protective influences throughout the early years of life and into adulthood.

10. The course of development can be altered in early childhood by effective interventions that change the balance between risk and protection, thereby shifting the odds in favor of more adaptive outcomes.

Recognizing the various influences on the child and family and the possibility that early intervention offers for promoting positive developmental outcomes, SLPs who work with young children and their families and who are committed to best practices will align their assessment and intervention plans with these developmental concepts.

Characteristics of Infants and Toddlers Who May Receive Early Intervention

It is estimated that 17% of children in the United States have had a developmental disability (Centers for Disease Control and Prevention, 2007). Many children with developmental disabilities have communication and feeding/swallowing problems for which the services of an SLP are needed. These disabilities may appear as limited interest in social interactions, failure to respond to speech or name, reduced or atypical babbling, restricted prelinguistic communication acts such as sharing attention or engaging in reciprocal "baby" games, limited use of communication gestures such as pointing, delayed acquisition of first words, slow growth or regression in vocabulary or utterance length, poor speech intelligibility for developmental level, and/or limited or poor feeding and swallowing skills (Nelson, 1998; Tager-Flusberg, Paul, & Lord, 2005). To gain access to early intervention services, a child first must qualify for intervention according to state agency guidelines. Services provided by an SLP may be indicated for children identified as having, or being at risk for, a communication or feeding/swallowing impairment.

Established risk factors include genetic or congenital conditions that are known to have an adverse effect on developmental outcomes (e.g., cleft palate, CHARGE syndrome, Down syndrome, fragile X syndrome), severe sensory impairments (e.g., deafness, blindness), inborn errors of metabolism (e.g., Hunter's syndrome), severe neuropsychiatric disorders (e.g., autism spectrum disorders), and family history of disability. Biological/medical risk factors include conditions—such as low birth weight, respiratory distress syndrome, severe asphyxia, fetal alcohol syndrome, or severe brain hemorrhage—that may result in concurrent or later difficulties. Environmental risk factors include conditions—such as maternal age, parental substance use, parental emotional or mental disturbances, parental abuse or neglect, exposure to chemical toxins, or poverty—that may interfere with a normal developmental progression. Risk factors can occur singly or in combination and can result in a range of deficits. In general, the greater the number of risk factors, the greater the developmental risk (Bradley et al., 1994; McGauhey, Starfield, Alexander, & Ensminger, 1991; Paul, 1997). Because research has demonstrated that early identification and intervention mitigate the impact of various risk factors and impairments (Guralnick, 1997, 1998; National Research Council, 2001; Thelin & Fussner, 2005), it is imperative that SLPs and other early interventionists recognize these risk factors and use this knowledge in service delivery.

SLPs who provide services in early intervention settings may play a variety of roles such as direct service provider, consultant, service coordinator, resource locator, advocate, insurance liaison, administrator, and policy maker. Thus, SLPs may have a multitude of responsibilities in relation to infants and toddlers and their families, depending on the role(s) they assume in the provision of services. This document provides guidance on the range of roles and responsibilities that may be assumed by the SLP in early intervention practice and the principles that guide this practice.

Guiding Principles

Since the establishment of the Federal Program for Infants and Toddlers in 1986, nearly 2 decades of literature (e.g., Guralnick, 2001, 2005; Sandall, Hemmeter, Smith, & McLean, 2005; Shonkoff & Meisels, 2000) has focused on establishing guiding principles or concepts underlying best practice for early assessment and intervention. From the outset, it has been federal policy that infants and toddlers having, or at risk for, disabilities represent a population for whom the traditional models of professionally directed services are not always appropriate. Indeed, data indicate that practices aligned with newer models (e.g., family-centered empowerment models) are viewed more positively by consumers than are the more traditional, professionally directed practices (Dinnebeil, Hale, & Rule, 1996; Dunst, 2000, 2004; Dunst & Trivette, 1997; Trivette & Dunst, 2005). Federal mandates and general practice patterns support the goal of enhancing developmental outcomes for the targeted population of infants and toddlers. Moreover, practices that feature family-centered, culturally sensitive, developmentally appropriate, and collaborative components have been deemed desirable (Sandall et al., 2005). Still, there is no one model or precise set of therapeutic approaches that can guide all early intervention services. The guiding principles articulated in this document have evolved over the past 2 decades and are based on consumer input and preferences, provider experiences and observations, recognition of evolving societal values, research, state regulations, federal policies as set out in IDEA 2004, and recommended practice documents (Sandall et al., 2005). These considerations constitute what we refer to as "internal evidence." In addition, when external evidence, in the form of support from peer-reviewed, systematic empirical research, is available, an attempt to incorporate this form of evidence is made as well.

Four guiding principles should be considered in the design and delivery of services to infants and toddlers with disabilities:

1. Services are family centered and culturally and linguistically responsive.
2. Services are developmentally supportive and promote children's participation in their natural environments.
3. Services are comprehensive, coordinated, and team based.
4. Services are based on the highest quality evidence that is available.

The following sections delineate each principle and the major roles and responsibilities of SLPs as they put these principles into practice.

Guiding Principle One: Services Are Family Centered and Culturally and Linguistically Responsive

The term "*family centered*" refers to beliefs, values, and practices that emphasize the role of the family as central in all aspects of the decision-making process regarding the young child (Bruder, 2001; Dunst, 2000). In adherence to the guiding principles of family-centered practice, the aim of early intervention is to address the child's strengths and needs within the social unit most important and immediate to the child—the family. As families enter and move through the early intervention system, there are many opportunities for collaboration between families and professionals. Family members' first encounter with the early intervention system may initiate this collaboration and can set the tone for the relationships that follow. It is essential to recognize that interventions and supports take place within the context of relationships, and that both child and family outcomes can be affected by the quality of the relations developed (Dinnebeil et al., 1996). To share their expertise most effectively, SLPs and families need to be able to establish a therapeutic alliance on behalf of the child. This transmittal of information and expertise involves the mastery of key skills such as the ability to (a) establish a positive affiliation, (b) use collaborative problem-solving strategies, (c) understand professional and familial boundaries, (d) use partnering strategies (as alternatives to direct instruction), and (e) be aware of the impact of one's own values, beliefs, attitudes, and past experiences on interactions, as well as the potential impact on the family of the information shared. In addition, effective interpersonal and communication skills are essential to developing collaborative relationships (Dinnebeil et al., 1996; Trivette, Dunst, & Hamby, 1996a, 1996b; Winton & Winton, 2005).

With the demographic changes in the United States in recent years, SLPs are increasingly charged with developing collaborative relationships with the increasing diversity of family structures, languages, and cultures (Hanson & Lynch, 2004). Families of children with disabilities also reflect this increasing diversity, which may be seen in the languages used, communication style, ethnicity, religious beliefs, family constellation, socioeconomic status, educational background, and mental/physical condition (ASHA, 2004a). Culture affects the development of concepts, language, cognition, values, beliefs, and perceptions, and permeates family roles, child-rearing practices, and expectations for child behavior at different developmental stages (Anderson, 1991; Barrera & Corso, 2002; Erickson & Kurz-Riemer, 1999). SLPs face the challenge of providing services in ways that are responsive to this array of differences, including differences that may occur between particular families and the professionals who work with them. As Barrera and Corso (2002) noted, “the key to cultural competence lies more in our ability to craft respectful, reciprocal, and responsive interactions, both verbal and nonverbal, across diverse cultural parameters than in the breadth of our knowledge about other cultures” (p. 103).

To make appropriate decisions *with the family* regarding assessment and intervention, it is important for SLPs to understand the dynamic interplay between a communication disability and an individual family's culture and functioning. Cultural perceptions may influence a family's attitude toward disabilities, whether they choose to seek early intervention services for their child, the degree to which they participate in those services if they are chosen, and their priorities and expectations for their child (Hanson, 1992; Hanson & Lynch, 2004). The goal of fostering optimal relationships with families will benefit from efforts by SLPs to understand how their own beliefs and assumptions may influence their interactions with others. In addition, planning with the family includes being able to communicate in a language or mode that is familiar to the family. Thus, working with a family who speaks, reads, and/or writes in a language that is different from the SLP will warrant careful consideration of how effective communication will take place. Close work with interpreters and translators will be necessary in these instances (Langdon & Cheng, 2002; Langdon & Quintanar-Sarellana, 2003).

A family-centered approach creates opportunities for the family to be involved in all aspects of the child's services, with individual families selecting their desired levels and types of involvement (Crais, Poston Roy, & Free, 2006). Family-centered services should include the opportunity for the family to play a variety of roles, including

1. identification of any concerns about the child and the verification of those concerns through the screening process;
2. identification of priorities, resources, and expectations of the family in relation to the development of the child;
3. decision making regarding parameters of assessment appropriate for the child, including setting, time, formal and/or informal assessment, formulation of assessment questions, and other factors that families believe will allow the assessor to obtain a representative sample of their child's behavior;
4. information gathering from a variety of sources (e.g., other caregivers, professionals);
5. assessment/evaluation of the child's strengths, needs, daily routines, and natural environments;
6. seeking information for additional assessments, resources, or services related to the child's development or other needs of the family;
7. formulation and implementation of service or follow-up plans that may include the development of an IFSP;
8. implementation of early language, assistive technology, and/or feeding/swallowing intervention strategies within daily activities and routines;
9. sharing information with those who are or will be involved with the child;
10. providing feedback regarding the effectiveness of all aspects of service delivery;
11. identifying the information and resources needed to facilitate family-implemented approaches to support the child's development.

The focus of family-centered speech-language pathology services will naturally revolve around enhancing the child and family's communication interactions. For some children, feeding/swallowing skills also will be important areas of intervention.

Guiding Principle Two: Services Are Developmentally Supportive and Promote Children's Participation in Their Natural Environments

Effective early intervention services and supports are based on theoretical, empirical, and clinical models of child development that assume the acquisition of communication occurs within a social and cultural framework and that make use of commonly accepted theories about how individual children learn communication, speech, language, and emergent literacy skills (Apel, 1999; Leonard, 1998; Paul, 2007). Services should support children's development across the variety of settings within which they learn and grow and promote functional and authentic learning experiences. To this end, SLPs require a comprehensive understanding of the importance of early social and emotional development as an organizer of overall development (Bloom, 2001), general child development across domains, and the interrelationships of developmental areas, as well as of caregiver–child relationships. Early identification and intervention practices that are developmentally supportive are thought to include active exploration and manipulation of objects; authentic experiences; and interactive participation appropriate to a child's age, cognitive level and style, strengths, interests, and family concerns and priorities (Bredekamp & Copple, 1997; Roth & Baden, 2001; Sandall et al., 2005).

Federal policy requires that to the extent possible, early intervention services be provided in natural environments, which are defined as “the home, and community settings in which children without disabilities participate” (IDEA Reauthorization Act of 2004, § 634(4)(G)). When conceptualizing natural environments, it is important to recognize that they are defined by more than location and include “the experiences afforded children in the context of activity settings that make up the fabric of family and community life” (Dunst, Hamby, Trivette, Raab, & Bruder, 2000, p. 161). Hence, natural environments may include a child's home, other family members' homes, early care and education programs, early care home, playground, or playgroup, as well as other community settings in which children and their families gather. Natural environments allow for the use of communication-enhancing strategies not just during daily routines such as diapering, feeding, and bathing, but throughout the child's day and across multiple settings, contexts, and interactive partners.

Guiding Principle Three: Services Are Comprehensive, Coordinated, and Team Based

Provision of services and supports that address all areas of child and family concerns and are delivered by professionals who actively collaborate with each other and with family members will help to ensure that the service plan developed and implemented with infants, toddlers, and their families is appropriate and effective.

Infants and toddlers who have, or are at risk for, delays and disabilities demonstrate a wide range of strengths and needs. Regardless of whether a child has severe or mild, single- or multiple-domain disabilities, comprehensive service provision will include any and all types of supports or resources the child needs and is eligible to receive (e.g., service coordination, assistive technologies, amplification).

With regard to the coordination of services, the importance of forming a family–professional team to plan and implement services for infants and toddlers has been discussed frequently in the literature (Boone, McBride, Swann, Moore, & Drew, 1998; McWilliam et al., 1998). Harbin, McWilliam, and Gallagher (2000) demonstrated that the outcomes for children and their families are improved in service delivery systems that are more comprehensive and coordinated. With the growing specializations within disciplines, the increasing complexity of medical and developmental care for infants and toddlers with disabilities, and the requirements of the social systems surrounding them, the need for collaboration is clear.

Thus, one of the major roles of the SLP is to serve as a member of professional programming teams. In that role, the SLP should (a) provide information regarding speech, language, social communication, and feeding/swallowing risk factors, development, and disorders; and (b) design and implement, directly or through consultation, assessments and interventions that are integrated with the overall early intervention plan. In addition, for infants and toddlers demonstrating deficits primarily in communication, language, speech, and/or feeding/swallowing skills, the SLP should assume a primary role and, if appropriate, service coordination responsibilities as an active member of the team.

Guiding Principle Four: Services Are Based on the Highest Quality Evidence That Is Available

Early intervention practices are based on an integration of the highest quality and most recent research, informed professional judgment and expertise, and family preferences and values (ASHA, 2005a; Glass, 2000; Meline & Paradiso, 2003; Schlosser & Raghavendra, 2003). Evidence can be classified as external or internal: Internal evidence is drawn from a variety of sources including informed clinical opinion, values and perspectives of both professionals and consumers, professional consensus, and the mandates of public policy. External evidence is based on empirical research published in peer-reviewed journals (Gillam & Laing, 2006; Porzsolt et al., 2003; Sackett, Strauss, Richardson, Rosenberg, & Haynes, 2000).

Informed clinical opinion is a type of internal evidence reflecting the values and beliefs of professionals, their prior and continuing education, their personal and professional experiences, and their application of the theory and scientific evidence for early intervention practices. Informed clinical opinion is displayed through a professional's ability to observe, document, apply, and evaluate the efficacy and effectiveness of early intervention practices and procedures for specific children and families. Internal evidence also takes into account the values and perspectives of the professionals and families involved. These values and perspectives are influenced by sociocultural, linguistic, educational, and economic factors, and they in turn influence and are influenced by the relationships among professionals, children, families, and the services delivered, as well as professional consensus, whereby experts in the field have reached general agreement about certain principles and practices through consideration of theory, a review of existing evidence and policies, and their collective clinical experience. Statements of consensus often are published as recommended practices. A final component of internal evidence is the policy outlined in federal, state, and agency legislation and guidelines, as well as the recommended practices of ASHA and related professional organizations.

When evaluating external evidence, there are several factors that require consideration, and numerous classification systems have been developed for this purpose (e.g., Dollaghan, 2004; Fey & Justice, 2007; Finn, Bothe, & Bramlett, 2005; Porzsolt et al., 2003; Robey, 2004; Sackett, Rosenberg, Muir Gray, Haynes, & Richardson, 1996). Classification systems are designed to reflect the degree of confidence with which the reader can ascribe the outcomes of the study to the experimental manipulations used. In evidence-based classification systems, the degree of confidence is evaluated according to several characteristics of the research design (e.g., random assignment to conditions, use of blind raters, prospective designs) and the degree of experimental control present in the design. Other factors that are considered in evaluating research quality include practice fidelity, validity of outcome measures, and data analysis procedures.

Most classification systems view the strongest external evidence as that derived from meta-analysis and systematic reviews of a number of well-designed and controlled studies. Weaker external evidence is accorded to literature reports that vary from these standards, including quasi-experimental designs, case studies, and groups without random assignment to conditions. "Best practice" recommendations, consensus panels, and expert opinion are not regarded as providing external evidence but rather as components of internal evidence.

The early intervention practices described in the guidelines document accompanying this report include a discussion of available internal and external evidence (ASHA, 2008b). Some of the practices detailed are based predominantly on internal evidence. Others have external evidence; however, this evidence varies in strength of the research design and implementation (e.g., randomized control vs. observation without controls). The discussion of evidence bases in the guidelines document reflects the state of research in early assessment and intervention. SLPs will need to consider both the strengths and the limitations of current empirical studies when evaluating the preponderance and quality of evidence for a practice in early intervention.

Functions of the SLP in Infant/Toddler and Family Services

The SLP is qualified to provide services to families and their children who are at risk for developing, or who already demonstrate, delays or disabilities in language-related play and symbolic behaviors, communication, language, speech, and/or swallowing and feeding. In providing these services, the SLP may participate in the following primary functions: (a) prevention; (b) screening, evaluation, and assessment; (c) planning, implementing, and monitoring intervention; (d) consultation with and education for team members, including families and other professionals; (e) service coordination; (f) transition planning; (g) advocacy; and (h) advancing the knowledge base in early intervention.

Prevention

The goal of prevention activities is to reduce the risk or mitigate the effects of risk factors on a child's development so as to prevent future problems and to promote the necessary conditions for healthy development (ASHA, 1991). SLPs have the opportunity to play an important role in the prevention of communication and feeding/swallowing disorders, especially in the field of early intervention. Prevention can be conceptualized at three levels: primary, secondary, and tertiary. To assume an effective role in prevention, SLPs should be knowledgeable about the various factors that place a child at risk for communication and feeding/swallowing disorders, as detailed in the next section.

Prevention activities often extend beyond the traditional intervention settings (e.g., clinic, Part C early intervention programs) into various community settings. In their implementation of prevention activities, SLPs have the responsibility to collaborate with local partners such as early care and education providers and pediatric medical providers, provide information regarding known risk factors, and offer in-service training and written resource materials. Establishing personal relationships with other providers in the community and being responsive to their inquiries for information or referral will likely increase their use of available screening and diagnostic resources and contribute to prevention efforts.

Screening, Evaluation, and Assessment

Screening for communication needs in infants and toddlers is a process of identifying young children at risk so that evaluation can be used to establish eligibility and more in-depth assessment can be provided to guide the development of an intervention program. Its aim is to make a determination as to whether a particular child is likely to show deficits in communication or feeding/swallowing development. Screening is also an important component of prevention, family education, and support that is particularly relevant for young children and their families.

Federal regulations governing infant and toddler services under IDEA 2004 distinguish between the terms "*evaluation*" and "*assessment*." *Evaluation* refers to the procedures used to determine the child's initial and continuing eligibility, including identifying the child's level of functioning across cognitive, physical (including vision, hearing, feeding, and swallowing), communication, social/emotional, and adaptive development. The regulations further specify that the initial evaluation must be comprehensive, nondiscriminatory, and conducted by qualified personnel representing at least two disciplines. In contrast, the regulations define "*assessment*" as the *ongoing* procedures used throughout the child's eligibility that include (a) identification of the child's unique strengths and needs; (b) a family-directed assessment of the concerns, priorities, and resources of the family related to the development of the child; (c) identification of the nature and extent of the early intervention services needed by the child and family; and (d) the identification of supports necessary to enhance the family's capacity to meet the developmental needs of the infant or toddler (§ 636(a)(2)). At times, the two sets of activities may be performed separately. For example, in some states, select teams of professionals determine eligibility, whereas other professionals assess the children over time in order to plan and provide intervention services. In contrast, in other states, evaluation and assessment activities overlap and the same professionals perform both types of activities. The regulations also specify that evaluation and assessment must be based on appropriate methods as well as "informed clinical opinion." The addition of clinical opinion serves as a safeguard against the determination of eligibility based solely on test scores and encourages the use of both quantitative and qualitative information. The role of SLPs in evaluation and assessment will vary depending on the model used by the agency or state; however, the informed clinical opinion of the SLP plays a central role in determining eligibility for speech, language, and other services. In addition, clinical opinion and experience are particularly helpful where language differences or the age or responsiveness of the child may affect the results of tests or measures.

Evaluation and assessment will, to as great a degree as possible, be conducted in all the languages a child may use. For very young children, much of the SLP's assessment will focus on preverbal behaviors including play, gesture, and other forms of nonverbal communication and interaction, as well as feeding skills. Many of these behaviors can be observed independently of verbal language, and, when augmented with caregiver report obtained through the help of interpreters and cultural mediators, can serve as a foundation for informed clinical opinion regarding communication status. It is useful to keep in mind the fact that cultural factors may influence both preverbal behaviors and communicative interactions. For verbal children, each language a child speaks may be considered because children can develop complex language systems across the languages they are learning. In addition there is evidence from the work of Paradis (2004) that determining a child's language dominance may not only be difficult but may also be deceiving in providing information about a bilingual child's language development. ASHA has compiled a list of readings and related materials on communication development and disorders in multicultural populations focused on bilingualism, limited English proficiency, and English as a second language, available at www.asha.org/about/leadership-projects/multicultural/readings/bilingual_lep_esl.htm. Several articles may be helpful in the assessment of infants and toddlers learning more than one language (Baker, 2000; Patterson, 2000, 2004; Rescorla, 2004; Rescorla & Achenbach, 2002).

When evaluation/assessment indicates a specific expressive language delay, a recommendation may be made for ongoing monitoring, combined with caregiver training in language facilitation. For these children, the role of the SLP is to reassess all areas of communication function periodically throughout the second and third years to determine whether steady expressive growth relative to that of peers is adequate or requires more direct intervention. With children who have a positive family history of language and/or learning deficits, particular vigilance is needed due to the increased risk for poorer outcomes (Lyytinen & Lyytinen, 2004; Lyytinen, Poikkeus, Laakso, Eklund, & Lyytinen, 2001; Tomblin et al., 1997). For other infants and toddlers, with clear-cut deficits in aspects of communication or feeding/swallowing skills beyond speech and/or other deficits, further assessment is warranted. This assessment will focus on the following areas:

- background and developmental history
- history of language exposure and proficiency
- family concerns, priorities, and resources
- hearing status
- cognitive development
- motor development
- emotional/social development
- feeding and swallowing behaviors, oral motor skills, and productions of speech sounds
- expression of communicative functions and means used to express communicative intents
- need for assistive technology (AT)
- understanding of language and use of words, word combinations, and emerging grammar
- play skills
- emerging literacy
- caregiver–child interaction
- environmental stressors

The process of conducting this range of assessments can include a variety of tools, such as standardized tests, criterion-referenced measures, parent report formats, play-based observations, assessment of daily routines and authentic contexts, and dynamic methods. These processes also will consider the family and child's cultural and linguistic background in choosing the most appropriate range of tools.

Planning, Implementing, and Monitoring Intervention

Once it is determined that a child has a communication or feeding/swallowing delay or disorder, the SLP, in conjunction with other members of the early intervention team, develops a plan for services and supports (i.e., the IFSP or an equivalent) that includes intervention outcomes, approaches, methods, and settings. This plan will be based on information from the assessment regarding overall concerns, priorities, and resources of the family combined with the SLP's analysis (and the team's observations) of the child's communication, language, speech, and feeding/swallowing behavior. Because it is known that a variety of family–child interactive styles can facilitate children's development (Guralnick, 2005; Snow & Ferguson, 1978), the design of both assessment and intervention tasks and procedures should reflect the particular family's preferred style and level of involvement.

The purpose of early intervention provided by SLPs is to maximize the child's ability to communicate effectively and to enhance the family's ability to support their child's development. Early intervention services and supports are individualized for each child and family, necessitating multiple models and formats for intervention that embrace the values of quality services described in this technical report. Various service delivery models, intervention approaches, and strategies are available for early intervention.

Service delivery models are defined by the location, agent, and organization of service provision. In early intervention, location of services is mandated to include natural environments, that is, those that facilitate the child's participation in age-appropriate activities and settings. Natural environments can include the home and early care or education program or preschool, as well as libraries, playgrounds, playgroups, and other places where infants and toddlers participate. Agents of intervention can include both professional direct service providers, such as SLPs and other members of the early intervention team, as well as trained paraprofessionals, early care and education teachers, preschool teachers, family members, and peers. In addition, service delivery can be organized as traditional, direct one-to-one instruction; collaboration with family, team members, or other caregivers; or consultation to educate family members, teachers, caregivers, or peers who work with the child about ways to increase the child's communication, feeding/swallowing skills, and participation in natural activities. The SLP may, then, function as an interventionist or primary service provider, as a team member, as an advocate, as a collaborative partner in educating others on how best to facilitate communicative development, and as a consultant to children who are at risk for or have communication, language, speech, or feeding/swallowing disorders, and their families. In assuming these roles, the SLP

1. engages in consultation with families and team members to determine individualized, culturally responsive, and developmentally supportive intervention approaches, methods, and locations based on potential for functional improvement in a reasonable and period of time;

2. joins in the specification of child and family outcomes that address the identified concerns, priorities, and resources, and are linked to the assessment;
3. implements a continuum of service delivery models that may include combinations of individual, parent–child, and group interventions individually designed in conjunction with the family for their infant/toddler, all of which include providing information and supports to family members that facilitate teaching and learning for functional outcomes in all settings;
4. embeds evidence-based interventions within family-identified, preferred routines and activities, and/or a comprehensive curriculum (for early care and education group settings) that targets meaningful outcomes individualized for the child and linked to assessment data;
5. consults with families about the use of adaptations, including AT, in intervention and implements these adaptations to promote development of feeding/swallowing skills, communication, engagement, independence, and participation within the context of child and family preferences and authentic activities;
6. monitors intervention results and progress toward goals on an ongoing basis, revising goals or establishing new goals as appropriate. Because young children often change very rapidly, and families respond differently to their children at various periods in development, the team, including the SLP and the family, will devise systematic plans for periodic assessment of progress. This includes continuous monitoring of the child and family priorities and concerns and identifying the optimal models of service delivery to meet them.

Strategies for supporting and enhancing early child communication are generally thought of as falling along a continuum from directive to responsive with naturalistic or hybrid approaches forming the middle ground (Fey, 1986; Wolery & Sainato, 1996). All of the strategies share a focus on increasing the frequency and complexity of the child's communication and language. With directive interaction strategies, the adult structures the interaction by selecting ways to elicit a particular communicative act, expecting and supporting the child in the interaction to gain the desired response and often providing a tangible reward for correct performance. Responsive interaction strategies are designed to encourage the child's engagement and interaction, to provide opportunities for child-initiated behavior, and for reciprocity and balanced turn taking with communication partners. Some strategies, individually and in combination, provide varying amounts of directiveness and responsivity to promote communication competence and may be described as more naturalistic or hybrid (Goldstein, Kaczmarek, & Hepting, 1996). At present, conclusive evidence is not available to guide selection of the most effective approach and/or strategy for infants and toddlers with varying types of delays and disabilities (McCauley & Fey, 2006; Yoder & Stone, 2006). Further, it is clear that no single approach or strategy will be equally effective for all children or their families, and not all children in outcome studies have benefited to the same degree (Sandall et al., 2005; Yoder & Stone, 2006). There is an obvious need for additional research that focuses on what works best for young children with varying types of delays and disabilities.

Within the context of a collaborative partnership with the family and other team members and mindful of the guiding principles of intervention for infants and toddlers as outlined at the beginning of this document, the SLP selects among the available approaches and strategies, provides direct implementation of intervention, shares information and resources, offers information to family members to enhance informed decision making, and implements practices that enhance family confidence and competence. A continuum of service delivery models may include combinations of clinician-delivered and parent-implemented interventions that are individually designed in conjunction with the family for their infant/toddler. With some children, it may be determined that the best approach is for the SLP to provide services directly to the child in a one-on-one format; with others, it may be best for the SLP to teach caregivers and/or other team members providing direct services to implement communication and language-enhancing strategies, and in yet other cases a combination of these two approaches may be warranted. Irrespective of the approach, however, it is essential that the SLP and family collaboratively determine what is best given the child's needs and family priorities.

Regardless of the approach used, SLPs have the responsibility of embedding their best assessment of evidence-based interventions within family-identified, preferred routines and activities and/or a comprehensive curriculum (for early care and education group settings) that target functional outcomes individualized for the child within the IFSP. A number of teaching strategies and techniques for promoting communication and emergent literacy skills in young children have empirical support within the literature, such as environmental arrangement (which may include AT adaptations; Demchak & Downing, 1996; Kaiser, Yoder, & Keetz, 1992); milieu approach (Kaiser & Hancock, 2003); responsive adult interaction patterns (MacDonald & Gillette, 1988; Mahoney & Powell, 1986); and parent-implemented interventions (Arthur, Butterfield, & McKinnon, 1998; Hemmeter & Kaiser, 1994). These techniques have emerging evidence in the literature to support their use (Hepting & Goldstein, 1996; Shelden & Rush, 2001). They also typically include basic features of following the child's lead, providing natural consequences, embedding techniques throughout the child's daily routines and activities, and providing caregiver support/training in multiple settings and contexts (Bricker, Pretti-Frontczak, & McComas, 1998; McWilliam, 1996). Implementation of intervention techniques that are appropriate to the individual family and child as well as the individual(s) who will be responsible for implementing and monitoring the outcomes will be outlined in the IFSP to ensure that the techniques are used consistently, systematically, and accurately (Wolery, 2005). For more information on evidence-based practices for enhancing feeding and swallowing skills in young children, including those needing services in a neonatal intensive care unit, see ASHA (2001, 2002, 2004a, 2004b, 2004c, 2004d, 2005b).

Because young children often change very rapidly, and families respond differently to their children at various periods in development, an additional role for SLPs, in collaboration with the family and other team members, is to devise systematic plans for monitoring progress. Behavior changes in communication and/or feeding/swallowing, as well as the success of intervention techniques, models of service delivery, and service settings, will need to be monitored on an ongoing basis. When little or no progress has been made, the SLP will consult with the family and other team members to make adaptations and revise or establish new goals, as appropriate.

As noted by Wolery (2004), the three broad purposes of monitoring are to (a) validate the conclusions from the initial evaluation/assessment, (b) develop a record of progress over time, and (c) determine whether and how to modify or revise intervention plans. Federal mandates require that a review of the IFSP take place at least once every 6 months. But monitoring includes attention to both the child's IFSP as well as broader aspects of the child's development and behaviors, such as participation in routines, play, social interactions, and problem behaviors, to determine appropriate goals in these areas.

Consultation and Collaboration With the Family and Other Team Members

In delivering early intervention services and supports, SLPs assume central roles including direct service and collaboration consultant functions with team members, including the family and other caregivers as well as other agencies and professionals. The functions SLPs can serve in birth-to-3 services include:

1. facilitating a family's ability to enhance their child's communication, feeding, and swallowing development through consultation and education;
2. educating family members about the importance and value of early communication development and intervention, and the family's role in their child's communication development;
3. enhancing the family's abilities in planning for and making decisions about their child's development;
4. conveying information in a manner that is consistent with individual family members' preferred ways of learning;
5. consulting with parents and other professionals to include language stimulation within other activities being addressed in the child's program;
6. evaluating the effect of some aspect of early intervention (e.g., educational or motor) so that a child's communication, language, speech, or feeding/swallowing development may be improved;
7. providing consultation and education to families, professionals, and agency representatives on the communication function of challenging behavior;
8. increasing public awareness regarding speech, language, communication, and feeding/swallowing concerns.

Wesley and Buysee (2004) recommend that collaboration and consultation should be processes aimed at achieving reciprocity, solving problems, and sharing information that addresses immediate concerns, promotes future competence, and are essential components within the early intervention service delivery system.

Service Coordination

Service coordination is mandated under IDEA Part C. The service coordinator, who should come from the discipline most immediately relevant to the child or family's needs (or who is otherwise qualified to carry out all the applicable duties) is responsible for ensuring that every eligible child and family receives (a) a multidisciplinary evaluation and assessment; (b) an IFSP that addresses the family's concerns, resources, and priorities; (c) services that are provided in natural environments; (d) services that are coordinated within the team and across services delivered by other agencies and providers; and (e) access to transition services.

The SLP is qualified to assume service coordination functions for families and their infants and toddlers. Specific service coordination responsibilities include

1. ensuring that families are informed of their rights and procedural safeguards, and attend to the various timelines specified by federal legislation;
2. informing families right from the start that a primary purpose of early intervention is to help them best support their child's development;
3. establishing collaborative and respectful relationships with families;
4. gathering information about family priorities, resources, concerns, languages used by the child and family, and daily routines and activities;
5. supporting the family's own problem-solving skills in determining a course of action;
6. helping families and other team members plan the assessment, formulate questions that reflect the family's concerns, and address state eligibility standards;
7. integrating information from various sources into a comprehensive developmental profile of the child;
8. facilitating communication among the various team members and the family so that together they can develop functional outcomes that are meaningful within the daily routines and activities of the child and family;
9. ensuring that intervention services are directly related to functional outcomes;
10. maintaining ongoing communication and active collaboration among team members;
11. overseeing the evaluation and review of the IFSP;
12. monitoring services specified in the IFSP;
13. taking a lead in planning for the child's transition from the early intervention system.

Transition Planning

A major goal of IDEA 2004 is to ensure a seamless transition process for families moving from one program to another as well as timely access to appropriate services. To this end, it is stipulated that there be a transition plan, that representatives of the sending and receiving programs take part, and that families play an active role.

Although there are several types of transitions—including hospital to community-based programs, home-based to center-based programs, provider to provider, and early intervention to community-based preschool—the most dramatic transition generally occurs when the child moves at age 3 from Part C early intervention to Part B school-based services. In this transition, a range of options exist, and the SLP will offer the level of assistance to families and team members appropriate for his or her particular role with that family. Families should have the opportunity to begin to consider the transition to preschool services at the time of the first IFSP—as highlighted by the requirement for notation of the Transition Plan date on the original IFSP document. SLPs working in early intervention may, if they are performing the functions of service coordinator, have direct responsibility for oversight of transition activities and should be knowledgeable about a wide range of resources in the community. Alternatively, as members of the IFSP team, SLPs will assist the family and the other team members during the transition planning process. Whatever the specific role, whether as IFSP team member or service coordinator, the SLP has the responsibility to help make the transition process as smooth and as positive as possible for the family and to provide information about the range of resources available in the community for preschool children.

Advocacy

Key factors in the provision of family-centered and culturally and linguistically appropriate services are the policy decisions that guide the implementation of these practices. The early intervention system continues to evolve, with families and professionals working together to identify the most efficient and effective means to address the concerns and priorities of individual children and their families while enhancing the availability of needed resources. This includes the provision of funding, infrastructure (e.g., workload parameters), and time necessary for productive, collaborative partnerships among providers. Resources also must be dedicated to conducting research in evidence-based practices. This includes enriching our understanding of internal evidence (based on policy, informed clinical opinion, values and perspectives of consumers and professionals, and professional consensus) as well as the information obtained from external evidence, that is, empirical research.

Advocacy activities and products that raise awareness about the importance of early intervention are essential. Mechanisms include working with other professionals; writing and editing textbooks and other resource materials to provide up-to-date and accurate developmental information; getting involved in local, state, and national efforts to influence public policy; and developing and disseminating information to families, health care professionals, and others involved in the care of young children. ASHA and state speech, language, and hearing associations provide a number of products and strategies to promote Better Hearing and Speech Month, as well as advocacy campaigns to promote the services of SLPs and audiologists. Periodic announcements appear on the ASHA Web site, along with requests for comment on drafts of position statements and policy papers. In this way, SLPs can have an impact on the early intervention policies developed for the Association. In addition to the Association advocacy activities, ASHA encourages individual practitioners to contact their local and national political leaders about policy positions and legislation related to working with children with disabilities. Through this process, individuals can collectively have an influence on national policies. For more information related to advocacy activities, visit the ASHA Web Site, www.asha.org.

Awareness and Advancement of the Knowledge Base in Early Intervention

There is a collective responsibility to maintain awareness of emerging information and to advance the knowledge base regarding provision of early intervention services to infants, toddlers, and their families. Such efforts should focus at all levels, including (a) university and other personnel preparation providers, (b) individual practitioners who function as service providers, (c) researchers engaged in the study of infants and toddlers, (d) policy makers at all levels, and (e) the general public.

It is important for university training programs to integrate course work and practicum experiences that develop student knowledge and expertise in early development and disabilities. This includes training in models of interdisciplinary team collaboration in clinical service and research settings as well as preparation in counseling and educating families and other professionals about early childhood developmental issues. Providing in-service and other professional development opportunities on contemporary evidence-based early intervention practices is another essential role of personnel preparation providers.

Practicing SLPs, both novice and experienced, benefit from engaging in ongoing professional development that includes but is not limited to actively evaluating evidence for new practices; collaborating with data-based clinical and research projects; maintaining affiliations with professional organizations at local, state, and national levels; participating in community education activities focused on infant and toddler communication; providing consultative services to other professionals and relevant agencies; creating, field testing, or evaluating new tools or intervention methods; presenting new models and techniques for clinical practice at local, state, and national meetings; seeking opportunities to collaborate with other professionals and agencies; contributing to or developing preschool curricula for infants and toddlers; and seeking opportunities to participate in local, state, and national organizations, committees, and panels related to early intervention.

Continued experimental and clinical research is needed to obtain information and insight into several areas, including identification of risk factors; clarification of the interactions between risk and resilience factors that affect the likelihood or severity of early communication difficulties; development and refinement of identification methods to increase the accuracy of detecting children in need of services; development and refinement of interventions to prevent and treat communication difficulties; and scientifically sound studies to demonstrate the efficacy and effectiveness of current intervention approaches and collaborative models of service delivery.

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