California Speech-Language-Hearing Association

Position Paper

Best Practice in Early Intervention Services by Speech-Language Pathologists with Children Birth to Three Years of Age and their Family Members

Developed by the CSHA Early Intervention Force

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with

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Table of Contents

Executive Summary

        In 1986, the enactment of legislation to require early intervention services for infants and toddlers with disabilities and at-risk conditions from birth up until age 3 years of age ushered in a new paradigm of services and supports for families and very young children which has been compared to the *Copernican Revolution* (Turnbull & Summers, 1987). The shift in focus from *family members revolving around services* to *families and children being the center of services* had far-reaching effects in developing new models of service delivery and influenced professional practice to develop partnerships with families. As the field of speech-language pathology evolved with increased participation in EI services, research regarding positive outcomes of early intervention informed practice. Greater understanding of the beginnings of language development in the very first stage of life and the vulnerability of infants and toddlers with compromised developmental outcomes due to disabilities and risk conditions led to improved and earlier identification methods. Over the past three decades, research and policy continued to reveal the positive effects of early intervention on the neurological development of children born with disabilities and conditions that include health and environmental risks and the related improvements in parent-child interaction.

        Through professional training, the SLP is fully prepared to join the EI team in the provision of services with families and their infants and toddlers in the California Early Start system. The SLP is the professional who is qualified to conduct screening, assessment and intervention in all aspects of communication and swallowing. Following a review and analysis of legislative requirements, regulations, policy, research, and professional documents regarding SLP practice in EI services, the CSHA Early Intervention Task Force reached the following conclusions and recommendations that are further elaborated in each section of this position paper.

Section 1. SLP Preparation for Employment in EI

        Based on the professional qualifications of the SLP, the CSHA EI Task Force supports the position that graduating SLPs who are entering their first year of practice to complete the CF/RPE, with a temporary license, are eligible to be employed as EI service providers, given the required CF mentoring is completed as outlined by ASHA and the state of California.

        In addition, experienced SLPs with ASHA certification and appropriate licensing are qualified to serve the birth-to-three population and their families within the context of professional ethics requiring consideration of individual competence.

Section 2. Scope of SLP Services in Early Intervention

        The CSHA EI Task Force supports the position that the SLP is central in the provision of EI services, as the professional qualified in the areas of communicative and swallowing development in infants and toddlers. These areas encompass a comprehensive body of knowledge and skills, requiring the SLP's participation in the entire process of EI services and

determination of eligibility. Further, the SLP brings research-based clinical expertise to the EI team and the responsibility for selection of appropriate assessment and intervention approaches to promote communication and swallowing development.

Based on research results regarding the effectiveness of early intervention and the central role of speech, language and communication for all areas of child development and learning, the CSHA EI Task Force recommends that all children with identified disabilities and those considered at-risk of disabilities require access to SLP services to determine the need for further intervention.

Section 3. SLP Services Regarding Natural Environments

In keeping with research, legislation, and policy, the CSHA EI Task Force identifies the goal of EI services provided by the SLP to integrate strategies to support communicative development throughout daily routines and natural environments experienced by each child and family. The CSHA EI Task Force further supports the position that the EI team, including family members and the SLP, determines the appropriate settings for EI services, based on individual needs and the goal of inclusion in natural environments with typically developing peers.

Section 4. SLP Role in EI Swallowing and Feeding Services

Based on the professional qualifications of the SLP and defined scope of professional practice to conduct pediatric swallowing and feeding services, the CSHA EI Task Force supports the position that SLPs are uniquely qualified to conduct screening, assessment and intervention to support effective feeding and swallowing development in direct service, consultation and collaboration with early intervention teams, children and families. Further, individual SLPs who lack this expertise are bound by professional ethics to seek additional training in pediatric swallowing and feeding or to refer to appropriate specialists.

Section 5. SLP Role in Emerging Technologies in EI

Given the critical role of early intervention to develop communication, speech and language as a foundation to later development, the CSHA EI Task Force supports the application of emerging technologies with young children that interactive media and Telepractice within the following parameters:

- Application of technology within current evidence-based guidelines;
- Completion of individualized assessment to determine appropriate technology applications;
- Application of technology as a tool to achieve communication in the context of human interaction (including considerations of the use of APPs versus AAC devices); and
- Follow-up evaluation to determine the effectiveness of technology applications.

Background and Introduction

Since Early Intervention (EI) services for children from birth to age three years became required through the Individuals with Disabilities Act (IDEA) enacted in 1986, societal changes have influenced professional practice, particularly for Speech-Language Pathologists (SLPs). Policy and principles of practice remain constant, as families are central to EI programs. Changes in population demographics in the U.S. include increasing diversity in languages and cultures represented among families with young children. In addition, medical advances that enable vulnerable infants to survive; earlier identification of risk factors for hearing and communicative difficulties in infants and toddlers; technology applications to support early learning and communication; and rising prevalence of certain types of disabilities and risk factors in young children such as Autism Spectrum Disorders have changed the landscape of EI programs and services. Further, research regarding the pivotal role of communicative development prior to verbal language (prelinguistic communication) became more clearly understood as a result of research conducted in the late 1970s and beyond (Bates, Bretherton, Snyder, Shore, & Volterra, 1980; Bruner, 1981). Understanding of the role of prelinguistic development and the importance of caregiver interactions with their young children led to greater involvement of Speech-Language Pathology as a discipline in the provision of EI services. As result, the scope of practice for SLPs includes a central role in EI services in the areas of communication and swallowing.

The American Speech-Language and Hearing Association (ASHA) published a series of position papers regarding the roles of SLPs in EI services, most notably the *Roles and Responsibilities of Speech-Language Pathologists in Early Intervention: Guidelines* in 2008. In addition, CSHA's position paper in 2002, *Preferred Practice Patterns for Speech-Language Pathologists in Service Delivery to Infants and Toddlers and Their Families: Guidelines for Intervention Planning and Delivery*, by Ruth Harris and the Ad Hoc Committee on Early Intervention defined the parameters of SLP practices in early intervention in accordance with federal law and policy. The above guidelines for best practice by ASHA and CSHA facilitated improved understanding regarding the roles and scope of practice by SLPs in early intervention services (EI). More recently, changing family demographics, and the needs of young children with disabilities and those at-risk of disabilities have created questions regarding the roles and responsibilities of providers who serve families and children in EI programs. The CSHA EI Task force was convened in January 2013 with SLPs and SLPAs throughout the state that met monthly through telephone conferences to define issues and recommendations in the formation of a new position paper. The CSHA EI Task Force determined that revised guidelines were needed to expand upon ASHA and CSHA documents. Key issues defined by the CSHA EI Task Force included the following areas of SLP practice in EI services.

1. Professional preparation of SLPs and the qualifications to provide EI services following graduation from a master's degree program;
2. Clarity regarding the scope of practice for SLPs in EI Services;
3. Determination of eligibility, location, models, and approaches for SLP services in EI;

4. Roles of SLPs in pediatric swallowing and feeding services; and
5. The roles of SLPs related to emerging technologies in EI Services.

Following a series of discussions, the above issues were analyzed in the context of legal mandates, policy, research and practice guidelines to develop current best practice guidelines for SLPs who provide EI services with California's young children ages birth to three years of age and their families. The resulting document represents a summary of current evidence-based practice that serves as a guideline for best practice for SLP services in EI programs. This document is not meant to supplant or replace federal or state legislation and policy, but to clarify professional practice of SLPs that is consistent with said laws and policy.

Early Intervention (EI) services for infants and toddlers, birth to three years of age, are critical for young children with identified disabilities and for those at-risk of developmental delay. Laws and policies at the federal and state levels require that these youngest and most vulnerable children with special needs and their families have access to EI services within established timelines and procedures. Four guiding principles assure that EI services by SLPs for infants and toddlers are: (a) family-centered and culturally responsive; (b) developmentally supportive and promote children's participation in their natural environments; (c) comprehensive, coordinated, and team-based; and (d) based on the highest quality internal and external evidence that is available (ASHA, 2008). Each of these core principles guide the practice of EI services and affect the role of each professional on the team.

Foremost, EI teams include family members. In addition, professionals of several disciplines including Early Intervention Specialists, Nurses, Nutritionists/Dietitians, Physicians, Occupational Therapists, Physical Therapists, Psychologists, Social Workers, Speech-Language Pathologists, Speech-Language Pathology Assistants, and Behavioral Interventionists each provide critical expertise on the EI team. The SLP often plays a key role as coordinator in the treatment process, due to the prevalence of communication needs that occur among young children with special needs (including those with identified disabilities and those who are considered at-risk of disabilities or developmental delays). Speech and language delays are reported as the most common of childhood disabilities, affecting about 1 in 12 children or 5 to 8 percent of the preschool population under age 5 years of age (Prelock, Hutchins & Glascoe, 2008). The central role of speech, language and communication for all areas of child development and learning positions the SLP as a key resource to children, families, and EI team members.

Foundations of Early Intervention in Research, Legislation and Policy

Early Intervention (EI) for young children with special needs, birth until three years of age, is based on both theoretical and longitudinal studies that show improved child and family outcomes as a result of participating in EI services. As demonstrated in three decades of research, EI services improved developmental outcomes for children and the quality of family experiences with their children (Bailey & Bruder, 2005; Guralnick, 2011; Shonkoff & Phillips,

2000). Further, the importance of EI programs are supported by longitudinal studies such as the National Early Intervention Longitudinal Study (NEILS, 2007) that demonstrated that children with disabilities achieved positive gains toward meeting developmental milestones at 36 months and maintained these gains at the kindergarten level.

For nearly 30 years, federal legislation and policy have required states to develop and to provide EI services for eligible children. Beginning in 1986, Part H of the Education for Handicapped Act (now Part C of the IDEA) established federal requirements for states to develop EI services for children from birth to 36 months of age and allowed states to define the parameters of the population served (US DOE, n.d.). In California, the California Early Intervention Services Act (CEISA) (CA DDS, 2014a) was updated in 2014 to define infants and toddlers from birth through age 2 years who are eligible for EI services as those with developmental delays and at-risk conditions. Developmental delay is defined by Section 90154 of the CEISA as a significant delay (33% or more) in one or more of the following five areas: cognitive development; physical and motor development, including vision and hearing; communication development; social or emotional development; or adaptive development. At-risk conditions include established risk, defined as conditions of known etiology or conditions with established harmful developmental consequences with high probability of leading to developmental delays, and those at high risk of having substantial developmental disability due to a combination of biomedical risk factors (CA DDS, 2014a). As stated in a memo from CA DDS (2014), expansion in the definition of eligibility *is particularly significant for those children currently receiving Prevention, Resource and Referral Services (PRRS) through the Family Resource Centers (FRC), who may be eligible for Early Start services beginning January 1, 2015.*

California's Children Served in Early Intervention

In 2013, nearly 35,000 children, ages birth to 36 months of age were served in EI programs in California, or 1.75 percent of the general population of infants and toddlers in the state (US DOE, 2013; Kids Count, 2013). This compares to the national average of 2.2 percent of the general population served in EI programs nationwide, showing that California ranks below the US average regarding the percentage of children who receive EI services, relative to the general population. Among those children served in EI, the most frequent need identified is in the area of communication. In 2007, 52% of the children in EI programs were reported to receive services by a speech-language pathologist (NEILS, 2007). Intervention to support children to develop communication in EI has a far-reaching impact, as communication difficulties are often the first identified marker of developmental delays in other areas. Further, effective communication abilities contribute to learning and positive developmental outcomes. The NEILS study also underscored the critical role of the SLP in EI services, both as a direct service provider to families and children and as a consultant on the EI team regarding integrating strategies to support communication development throughout daily routines.

Long-range studies have established the effectiveness of early intervention with young children with disabilities and their families to improve developmental outcomes in later school and adult life. Due the prevalence of communication needs of approximately 10% of children under 5 years of age and the central role of speech, language and communication for all areas of child development and learning, the CSHA EI Task Force recommends that all children with identified disabilities and those considered at-risk of disabilities require access to SLP services to determine the need for further intervention.

Professional Preparation and Qualifications of
Speech-Language Pathologists to provide Early Intervention Services

The academic and clinical education of the SLP requires a master's degree in preparation for national certification, state licensing, and credentialing by the California Commission on Teacher Credentialing, equipping them with mastery of knowledge and skills to serve individuals with communication disorders across the lifespan, including infants and toddlers and their family members. Core areas of knowledge and skill include theoretical knowledge and a minimum of 375 hours of supervised clinical practice plus 25 hours of observation in nine major areas of communicative disorders including the following (ASHA, 2013):

- Articulation;
- Fluency;
- Voice and resonance, including respiration and phonation;
- Receptive and expressive language (phonology, morphology, syntax, semantics, pragmatics, prelinguistic communication and paralinguistic communication) in speaking, listening, reading, writing;
- Hearing, including the impact on speech and language;
- Swallowing (oral, pharyngeal, esophageal, and related functions, including oral function for feeding, orofacial myology);
- Cognitive aspects of communication (attention, memory, sequencing, problem-solving, executive functioning);
- Social aspects of communication (including challenging behavior, ineffective social skills, and lack of communication opportunities);
- Augmentative and alternative communication modalities.

The American Speech-Language and Hearing Association and Council on Academic Accreditation accredit professional training programs in the US in speech-language pathology according to professional standards that include evidence-based practice in EI services. Upon completing the master's degree in speech-language pathology from a CAA/ASHA accredited program, graduate SLPs may apply for a temporary California license and enter the profession in a variety of clinical, school, community, and medical settings.

The first year of practice is referred to as the Clinical Fellowship (CF) by ASHA and the Required Professional Experience (RPE) by the California Speech-Language Pathology and

Audiology and Hearing Aid Dispensers Board. Following the completion of the CF or RPE, the SLP is eligible to apply for a permanent license with the state of California and national certification with ASHA, the Certificate of Clinical Competence. During the CF/RPE, the entry-level SLP is supervised by a licensed and certified SLP who acts as a mentor, evaluating the SLP's professional competencies and recommending the SLP for licensure and certification upon completion of the experience.

The role of the newly graduated SLP to enter professional practice in EI services was further described in communication between Robert Powell, former Legislative Counsel for CSHA, and State of California Developmental Services Regional Centers' Early Start Programs. As stated in policy guidelines and endorsed by the California DDS, Mr. Powell stated:

"*Prior to SLP licensing, all SLP's must graduate from a Master's degree program in Communication Disorders which includes training in services for infants and toddlers communication development and disorders. The new SLP, upon receiving their professional entry-level Temporary SLP license (for the Required Professional Experience Year-RPE) is supervised by a fully licensed and certified SLP. It was for these reasons [professional training and supervision] that the Title 17 regulations required [allowed] the California SLP license without any additional specific experience such as a one-year experience period. Both the state license as well as CSHA and ASHA ethics require SLP's only provide services for which they have competencies-or under supervision of those such competencies.*"

Professional certification and licensing requirements for SLPs clearly prepare the entry-level SLP as a highly qualified professional to serve the EI population during their CF/RPE-Year, under the CF mentor. Consistent practice and application of this policy allows the beginning SLP to deepen expertise in the provision of communication intervention to meet the needs of individual children with special needs in the birth-three population. Encouraging new graduates to enter the field of EI is important to expand services to a population who are underserved, on waiting lists, and unserved during a critical time of the child's development.

In addition to the new graduate in speech-language pathology, experienced and fully licensed speech-language pathologists who seek to enter the field of early intervention are encouraged to do so given their education and training during their graduate program. Further, they are able to apply work experience with other populations such as preschool and school age children to the EI population. In order for SLPs to maintain their California state license and ASHA certification, continuing education units are required. Increasingly, opportunities to take courses in early intervention are readily available to the SLP through organizations in California such as CSHA, Early Start and the Infant Development Association; and nationally through ASHA and the ZERO TO THREE: National Center for Infants, Toddlers and Families National Training Institute.

Based on the professional qualifications of the SLP, the CSHA EI Task Force supports the position that graduating SLPs who are entering their first year of practice to complete the CF/RPE, with a temporary license, are eligible to be employed as EI service providers, given the required CF mentoring is completed as outlined by ASHA and the state of California. In addition, experienced SLPs with ASHA certification and appropriate licensing are qualified to serve the birth-to-three population and their families within the context of professional ethics requiring consideration of individual competence.

Speech-Language Pathology Scope of Practice Relevant to Early Intervention

The scope of practice for the SLP is defined by ASHA (2007) as follows: *"The speech-language pathologist is the professional who engages in clinical services, prevention, advocacy, education, administration, and research in the areas of communication and swallowing across the life span from infancy through geriatrics…. The overall objective of speech-language pathology services is to optimize individuals' ability to communicate and swallow, thereby improving quality of life."*

In EI services for infants, toddlers and their families, the SLP focuses on areas that contribute to (a) effective communication including: prelinguistic communication, social development, verbal language development, and alternative forms of communication; and (b) swallowing including: development of sucking, swallowing liquids, and the development of oral feeding and swallowing with progressive textures of solid foods. As stated in ASHA policy guidelines regarding SLP roles in EI 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, emergent literacy, and/or feeding and swallowing behavior (ASHA, 2008)."*

Speech-Language Pathologists are bound the ASHA Code of Ethics (ASHA, 2010), to provide services for individuals with communication disorders that are of the highest standard, within the scope of practice and competency of the practicing SLP. There are four principles of ethics that define practice for the SLP:

Principle of Ethics I: Individuals shall honor their responsibility to hold paramount the welfare of persons they serve professionally or who are participants in research and scholarly activities, and they shall treat animals involved in research in a humane manner.

Principle of Ethics II: Individuals shall honor their responsibility to achieve and maintain the highest level of professional competence and performance.

Principle of Ethics III: Individuals shall honor their responsibility to the public by promoting public understanding of the professions, by supporting the development of services designed to fulfill the unmet needs of the public, and by providing accurate information in all communications involving any aspect of the professions, including the dissemination of research findings and scholarly activities, and the promotion, marketing, and advertising of products and services.

Principle of Ethics IV: Individuals shall honor their responsibilities to the professions and their relationships with colleagues, students, and members of other professions and disciplines.

The roles of SLPs in EI services were comprehensively described by ASHA to include the areas of prevention; screening, evaluation, and assessment; planning, implementing, and monitoring intervention; consultation with and coaching of team members, including families and other professionals; service coordination; transition planning; advocacy; and awareness and advancement of the knowledge base in early intervention (ASHA, 2008, 2008a, 2008b, 2008c). Each area is briefly summarized regarding SLP practice in EI services in California.

Prevention

Involvement of the SLP on the EI team is key to identifying potential risks for communication delays or disorders in young children. In this role, the SLP consults with family members and the EI team to provide guidance regarding positive steps for early communicative interactions with infants and toddlers with identified disabilities and risk conditions that compromise communicative and/or swallowing development. As defined by ASHA (2008), prevention can be conducted has three levels; primary, secondary, and tertiary. In primary prevention, SLPs provide guidance to families and providers, regarding the stages of early communication development and strategies to promote contingent interaction, imitation, vocalization and social development. In secondary preventative methods, SLPs may participate with the EI team in screening programs to identify children at-risk of developmental delays in communication and language and to ensure these children and families have access to EI services. At the tertiary level, the SLP becomes directly involved in providing EI services as a means to prevent more significant disabilities at the preschool and school levels. Prevention roles conducted by the SLP occur in collaboration with EI team members and in community settings, which may include literacy and language development with parents, language stimulation in child care centers, and other public education and awareness activities.

Screening, Evaluation and Assessment

The SLP brings knowledge and skill to identify risk factors that impact communication and swallowing development in very young children. The SLP recognizes delays in developmental milestones in infants, particularly those that indicate risk for communicative or swallowing difficulties such as limited responsiveness to sounds and voices; infrequent vocalization and babbling; difficulty imitating during interactions with caregivers; difficulty establishing eye contact and joint attention in play; and apparent lack of comprehension of basic vocabulary in later stages of infancy. In the second year of life, children who demonstrate delays in verbal language may be specifically at-risk of speech and language delays and disorders. The SLP is the member of the EI team who is qualified to determine possible etiologies for delays in the onset of speech and language that may have medical, environmental, a combination of risks, or unknown origins. Screening outcomes that indicate the need for further SLP evaluation, assessment and/or intervention may result from informal observation or the administration of formal screening tools. The IDEA distinguishes between evaluation and assessment in EI services with *evaluation* referring to the initial and ongoing determination of eligibility and *assessment* referring to progress monitoring and determination of appropriate intervention in the

form of the Individualized Family Service Plan (IFSP) developed by the EI team and family members (USDOE, 2011).

ASHA (2008) identified the role of the SLP in evaluation and assessment. *"The roles of SLPs in evaluation and assessment typically are to measure and describe communication and related behaviors, including feeding and swallowing, to share observations on other developmental domains, and to help in the decision-making process related to diagnosis, eligibility determination, and planning next steps for the child and family."* Due to the extensive diversity in languages and cultural backgrounds among California's families, the referrals for Early Start services include children with reported delays in the English language. The SLP determines the appropriateness of these referrals by distinguishing between a *language difference* (limited background in English) and *language disorder* (difficulty in both primary language and English). In order to evaluate the child's language abilities in a primary language, the SLP may be bilingual or require the assistance of interpreters in the application of informal and formal tools. For all children and families who are evaluated to determine eligibility and those assessed for further intervention, the SLP employs a combination of methods that include observation, formal measures, clinical judgment, and parent information. The components of screening, evaluation and assessment conducted by the EI team are described in detail by ASHA (2008) and briefly include:

- background and developmental history;
- primary language proficiency (for children who are dual language learners);
- family concerns, resources, and priorities;
- hearing; motor and cognition;
- emotional and social functioning;
- feeding and swallowing;
- oral motor system;
- early sound development;
- function of communication;
- means of communication;
- needs for assistive technology (AT) and augmentative and alternative communication (AAC);
- comprehension,
- word production and word combinations;
- development of grammar;
- play;
- emergent literacy;
- parent-child interaction; and
- environmental stressors that may impact communicative and swallowing development.

The extent of depth in each of the above areas clearly differs across the activities of screening, evaluation and assessment. Results compiled by the SLP are shared with the EI Team and family to determine the need for additional evaluation, assessment and intervention.

Planning, Implementing and Monitoring

ASHA (2008) provided extensive guidelines regarding the role of the SLP in the delivery of EI services in a collaborative team with families and children that include planning (developing goals and selecting appropriate models and approaches), implementing (service delivery), and monitoring (assessing progress). Briefly, two general models of service delivery are found in research, policy and practice that include the *direct clinical model* and *indirect collaborative consultation.* In EI practice, the SLP utilizes a combination of direct and indirect models, based on individual needs of children and families. For example, initial intervention may require a direct model, as the SLP directly interacts with the child to determine effective methods to develop communicative and/or swallowing skills. As EI services are essentially family partnerships, with family input at every point in the process, collaborative consultation by the SLP with family members becomes the ongoing model that enables parents and children to interact successfully and for children to develop effective communication and swallowing. Additionally, the SLP provides collaborative consultation with the EI team to integrate effective communicative strategies with children across service delivery. In turn, the SLP benefits from collaborative consultation with other EI team members to implement strategies for the child's mobility, adaptive skills, behavior, learning, socialization, vision, and other areas addressed by the specializations of the EI team members.

Approaches to intervention implemented by SLPs also range from direct to indirect, similar to the models of intervention described above. Detailed reviews of early communication and language intervention approaches and strategies that are research-based are provided by Paul (2007) and include directive or behavioral intervention, milieu teaching, relationship-focused intervention, pivotal-response intervention, focused stimulation, vertical structuring, script teaching, and shared storybook reading, to name a few. Generally, approaches and strategies range from *behavioral methods*, in which the SLP provides direct modeling and requests the child to respond with a particular type of communication, to *responsive methods* in which the SLP follows the child's lead and responds in a way that encourages slightly more complex communication. For example, in the responsive method, the child may point to a favorite toy as a request and the SLP would respond with the actual word and bring the object closer to the child. Research is inconclusive regarding the effectiveness of one particular method over another; rather there are methods that are more effective for specific needs of children and types of communicative goals. In addition, evidence supports the effectiveness of naturalistic methods that are based in the daily routines and familiar contexts for each child and family. The selection of a particular method is determined by the SLP in order to find the best match for the needs of the child and family responsiveness. This is accomplished by the SLP through interpretation of assessment results, collaboration with the EI team and family, and clinical judgment. Ongoing monitoring of child progress is also conducted by the SLP in consultation with the EI team and

family to determine the effectiveness in particular intervention approaches and the potential for modification.

The following example of EI services in a specialized center/community based program demonstrates a collaborative model of SLP service delivery located in a community program that includes family support and with a combination of directive and responsive intervention approaches to communication development in a group setting.

Example: Speech Language Pathologists working in specialized center/community based Early Intervention Programs

SLPs work in our early intervention program leading language groups while coaching parents on the development of speech and language. Supporting families during these early stages is crucial to helping them understand the importance of providing a language- enriched environment to their child. An example of a group led by an SLP follows:
- *Small group of 3-4 kids with their parents gather around the table or on the floor.*
- *Materials include Old McDonald Felt Farm Animals and Barn.*
- *The SLP and parents sing the song, pausing for children to fill in missing word or sounds.*
- *For children who are not using verbal speech, an alternative means to respond may be provided such gestures or with single message VOCA (Voice Output Communication Device).*
- *Children are encouraged to label the animals and produce the animal sounds with a focus on production of early developing sounds, i.e. bilabials /m/ with moo and /b/ with baa as well as vowels with E-I-E-I-O.*
- *Receptive language is addressed, as children are given single step directions to follow (i.e. get the cow, put cow in barn, give the cow to me).*
- *Identify and label nouns and verbs (actions) by pointing and naming actions of the animals.*
- *Social language is addressed through turn taking and giving animals to peers.*
- *Follow-up to the activity reinforces language use through reading a book about farm animals and having the children point to specific pictures in the book.*
- *Parents are encouraged and provided guidance to follow through with this activity at home by singing the song during playtime or bath time and/or looking at books with farms.*

Consultation with Family, Team and Related Professionals

The collaborative and consultative role of the SLP with family members, the EI team and related professionals is an ongoing process that begins with the first contact or referral for screening, evaluation, assessment or intervention. Much of the role of the SLP in EI services is devoted to communication with other adults who are focused on the welfare of individual children served through Early Start services. Through a process of (a) identification of family

priorities in matching intervention targets to daily routines and (b) embedding communicative strategies or recommended swallowing and feeding practices, the SLP develops effective methods with the child and then models these methods with parents and providers. The SLP provides ongoing follow-up to assist families on how to integrate intervention into their lifestyle through sensitivity and understanding to specific family needs. Further, the SLP demonstrates teamwork with related professionals to utilize effective communication methods with children to meet IFSP goals.

Service Coordination. Service coordination is defined as an active, ongoing process that assists and enables families to access services and ensures their rights and procedural safeguards. In California's Early Start System, the Early Intervention Specialist most often conducts service coordination. However, the SLP may also be an appropriate individual to provide service coordination, particularly in cases where the communicative and swallowing needs may be the most prominent service needs for a child and family.

Transition. Transition planning is a required component of the IFSP. If the SLP is also the Service Coordinator, much of the responsibility to assist families in making the transition from EI services to preschool settings will be placed upon the SLP. As a team member, the SLP has a key role in assisting with planning and preparing the child and family for a change from EI to Preschool services when the child turns 3. Preparation for transition to preschool is recommended to begin at the child's second birthday. Continuity in services, particularly in the area of communication and swallowing, can often be jeopardized in transition between settings and providers. Equipping the family and child with effective communication materials such as a portfolio (either in hard copy or electronically) that includes goals, samples of effective methods to prompt and respond to communicative attempts, safe swallowing, AAC tools, favorite topics and activities, contributes to a more seamless transition.

Advocacy. In addition to their focus on service delivery with families, children, EI team members, related professionals and community agencies, SLP are advocates for the profession and the people they serve. Through participation at the community, regional, state and national level, SLPs contribute to policy development and practice recommendations related to issues such as workload, reimbursement by third-party payers, access to assistive technology, work environment, productivity supports, and professional development. SLPs participate in advocacy for individuals and groups of people affected by the need for EI services, leading to improved awareness and program changes at the local and national levels. Through their participation in state professional associations such as CSHA, ASHA, and collaboration with related professional associations, SLPs contribute to greater awareness by policy makers of the needs of our clients and professional development.

Advancement of Knowledge. Practicing SLPs share the responsibility of advancing knowledge in the field of EI with their peers, related professionals, family members and mentors. Advancement of knowledge in the field of early intervention is not only the responsibility of university-based researchers, but also an integrated effort that requires the voices of families and those who are supporting them to improve the lives of children with special needs. Through

participation in community and state-level committees such as the Interagency Coordinating Councils for EI to improve collaborative practices, families and practitioners influence policy and development of collaborative models of service. Examples of collaborative community approaches to early intervention exist throughout the state and these resulted from individual families and practitioners working together to establish interagency referral, assessment and intervention services. Additionally, connections to move research-based practices into clinical innovation can be enhanced through several means that include integration of research-based findings into practice, such as those highlighted by the National Center for Infants, Toddlers and Families (ZERO to THREE, 2016). Opportunities for partnership with researchers and SLPs can be accessed through community-based grants and university outreach.

In addition, professionals and families learn from each other in continuing education venues. CSHA develops ongoing professional development in response to the needs of members and provides opportunities for SLPs in EI services to tailor training to their needs. ASHA accredited SLP training programs in universities throughout California and the US prepare future professionals and provide outreach to practicing professionals. Preparation of future SLPs to enter professional practice in EI services has advanced in recent years due to revised professional standards and increased understanding of the critical first years of life for young children with disabilities and at-risk conditions and their families.

The roles and responsibilities of the SLP on the EI team are based on collaborative and family-centered practices to determine individual needs for each child and family in the development of the IFSP. The CSHA EI Task Force supports the position that the SLP is central in the provisions of EI services, as the professional qualified in the areas of communicative and swallowing development in infants and toddlers. These areas encompass a comprehensive body of knowledge and skills, requiring the SLP's participation in the entire process of EI services and determination of eligibility. Further, the SLP brings research-based clinical expertise to the EI team and the responsibility for selection of appropriate assessment and intervention approaches to promote communication and swallowing development.

Location of SLP Service Delivery in Early Intervention

Speech-language pathology services in EI are conducted in a variety of settings that include home, childcare centers, center-based, clinic and other community settings. Legislation requires that EI services are located in Natural Environments (NEs) and in California this is most often interpreted as the home setting. However, the interpretation of NEs have been discussed from the perspectives of the law, policy, research, the lead agency (in California, this is the California DDS), and professional organizations resulting in differing interpretations that extend NE to multiple settings as determined to be appropriate by the EI team and family.

In the most recent regulations of Part C of the IDEA (NICHCY, 2014; USDOE, 2011) NE are defined as follows:

"Natural environments (§303.26) are is defined as settings that are natural or typical for a same-aged infant or toddler without a disability, may include the home or community settings, and must be consistent with the provisions of §303.126. Each system must include policies and procedures to ensure, consistent with other provisions in Part C, that early intervention services for infants and toddlers with disabilities are provided—
(a) To the maximum extent appropriate, in natural environments; and
(b) In settings other than the natural environment that are most appropriate, as determined by the parent and the IFSP team, only when early intervention services cannot be achieved satisfactorily in a natural environment."

Since 1986 when federal law added the requirement for early intervention services for infants and toddlers, the concept and implementation EI services in NEs has been a core principle of determining the location of services. It is the goal of all EI practitioners to serve families and their infants and toddlers in NEs, settings where typically developing peers also participate. However, a variety of factors must be considered in determining the initial and successive locations of services, including the family's geographical location, child and family needs and resources, and family preferences and other team members' recommendations (Bruder, 2001). Greater understanding of the complexity of individual children's needs and the interactive role of the environment to shape early learning experiences have also influenced interpretation of appropriate locations for EI services. For example, a child diagnosed with Autistic Spectrum Disorder with significant attention and behavioral needs may best be served initially in a specialized center/community based program or clinic rather than a home, daycare or playground setting. First goals for the child might be joint attention and reciprocal interaction, more effectively elicited in a controlled setting without intervening variables of environmental distractions in the home or community. When the child and parent experience success in developing initial communication goals, intervention settings become more varied to include community settings. A broader interpretation of NEs includes a number of locations for EI services, based on decisions by the team that include individual child needs, family preferences, IFSP goals, and daily routines.

The NEs are not just about *where* services are provided, but also about *how* services are provided. ASHA (2011) guidelines clarify that NEs include a broad array of environments.

"The concept of natural environments means more than just the location of service. It encompasses family-centered care, which involves families and service providers working together. Natural environments and family-centered practices involve helping families learn how to encourage their children's participation in everyday situations and are the focus of members' intervention in Part C. Intervention may therefore involve various levels of intensity and delivery modes. Speech-language pathologists (SLPs) and audiologists need to be mindful that working in natural environments does not simply involve moving clinical services to the home setting. Likewise, should the individualized family service plan (IFSP) team decide that the child's and

family's needs would be best met in a community setting, service providers still need to use a family-centered approach. A family's typical activities, communication partners (e.g., grandparents, siblings, peers), events, and values must be considered in the development of the IFSP and the desired outcomes.

Leach (2012) also advocates for a broad interpretation of NEs, stating:

"Natural Environment Intervention (NEI) is not just about including young children [with typically developing peers],....but also about planning and implementing purposeful interventions within those contexts." The key to determining NEs is individual intervention, specific to the child's needs when determining the best environment to serve a child. To quote Leach, *"Each child's profile should be thoroughly examined when planning early intervention services and support to ensure appropriate individualization to address the unique needs of each child."*

In addition to including multiple settings to define NEs, it may be necessary to initially serve a child and family outside of NEs. According to ASHA guidelines, there may be exceptions to serving children and families in NEs as determined the EI team (ASHA, 2011):

"In the event the team decides the natural environment is not the optimal setting for a child, justification must be included in the documentation of services." It may be necessary for some children to be seen in a clinical setting where the SLP can better identify routines with the parent and systematically focus on communication skills and language development for subsequent intervention in NEs. SLP services in a clinic setting, with a focus on identifying routines based in typical NEs for that particular child may be the most effective for some children, rather than initially going into the home or community. Regardless of setting, NEs are integrated into service delivery through designing intervention based on family routines and preferred communicative contexts that will be addressed in the home including: mealtimes, playtimes, bath times, child care settings, etc. Intervention is then successively located in multiple environments, providing opportunities for the child and family to transfer communicative goals to NEs. As Woods (2008) recommended, EI services provided by SLPs outside of NEs, or "pullout" settings are directed toward incorporating communication skills within NEs. *"SLP's should provide services in natural learning environments that are connected with functional and meaningful outcomes and only provide pullout services when repeated opportunities do not occur in the natural environment or to work on functional skills in more focused environments. Because of the limited impact of pullout services focused on discrete skills, SLP's should ensure that any pullout services are tied to meaningful, functional outcomes and incorporate activities that relate to the natural environment (Woods)."*

Promising research identifies the benefits of service delivery in community-based programs that may include childcare, day care and specialized programs for both children and families. Research reports have shown that children demonstrate positive developmental gains and experience increased opportunities for social interaction and communication with peers (Strain, McGee, & Kohler, 2001). Families benefit from parent-to-parent support and consultation with providers in addition to collaboration among the EI team (McWilliam, 1996).

In keeping with the overall goal of providing services in NEs, the SLP targets models, approaches and settings for EI services through integration of daily routines and caregiver interactions in assessment and intervention with a focus on functional communication in inclusive environments.

Research supports the critical nature of the context of communicative interactions with caregivers in daily routines in natural environments as a means to optimize communication, speech and language development in young children. The CSHA EI Task Force supports the alignment of research and policy to implement EI services in natural environments, as defined in Part C of the IDEA as best practice. To implement best practice, the CSHA EI Task Force identifies the goal of EI services provided by the SLP to integrate communicative development throughout daily routines and natural environments experienced by each child and family. The CSHA EI Task Force further supports the position that the EI team, including family members and the SLP, will determine the appropriate settings for EI services, based on individual needs.

Swallowing and Feeding Services

Professional preparation and the scope of practice for SLPs include the area of swallowing and feeding with children and adults. Given that infants and toddlers with disabilities are at greater risk for swallowing and feeding disorders, the SLP plays a lead role in determining the ability of the child to drink and to eat orally. The role of the SLP related to swallowing and feeding development in infants and toddlers was addressed in a series of ASHA position and technical papers, clearly stating that the SLP brings knowledge and skill of the oral structures and developmental stages of swallowing liquids and eating solid food. Accredited programs are required to follow the curriculum based on ASHA standards, requiring training in all aspects of dysphagia (swallowing). As outlined by ASHA (2002), basic competencies required for SLPs to provide swallowing and feeding services require knowledge and skills in the following areas:

1. Normal and abnormal anatomy and physiology related to swallowing function.
2. Signs and symptoms of dysphagia.
3. Indications for, and procedures involved with, instrumental techniques used to assist in diagnosis and management.
4. Proper procedures and specialized tests such as modified barium swallows or endoscopic assessments for analyzing and integrating clinical and instrumental information into a formal diagnosis of swallowing and feeding disorders with appropriate written documentation.
5. Basic management issues, including how to determine candidacy for intervention, as well as how to implement compensations and habilitative/rehabilitative therapy techniques.
6. How to educate and counsel individuals with swallowing and/or feeding problems and their parents, care providers, or other supporting persons.
7. Importance of quality of life issues as they relate to the individual and the individual's family.

8. Ability to identify and use appropriate functional outcome measures.
9. Understanding of medical issues related to swallowing and feeding disorders.

SLPs who have completed a graduate degree from a CAA/ASHA accredited program in the U.S. have the prerequisite knowledge to identify risks for swallowing and feeding disorders in infants and toddlers and to participate in interventions to address these areas. Swallowing and feeding needs can result from structural, biological and neurological conditions or a combination of these factors (ASHA, 2001). Behavioral needs of infants and toddlers have also been identified as a significant factor that contributes to difficulties in feeding (Whitlatch, 2012). Graduate coursework, practicum and internships prepare SLPs with knowledge of anatomical structures and function of the swallowing and feeding mechanisms in children and adults, including the unique aspects of the developing anatomy in infants and toddlers. In addition, SLPs are prepared to recognize signs and symptoms of feeding and swallowing problems in very young children that include the following:

- arching or stiffening of the body during feeding
- irritability or lack of alertness during feeding
- refusing food or liquid
- failure to accept different textures of food (e.g., only pureed foods or crunchy cereals)
- long feeding times (e.g., more than 30 minutes)
- difficulty chewing
- difficulty breast feeding
- coughing or gagging during meals
- excessive drooling or food/liquid coming out of the mouth or nose
- difficulty coordinating breathing with eating and drinking
- increased stuffiness during meals
- gurgly, hoarse, or breathy voice quality
- frequent spitting up or vomiting
- recurring pneumonia or respiratory infections
- less than normal weight gain or growth

As the team member who is vigilant to signs of potential feeding and swallowing difficulties in infants and toddlers, the SLP is responsible to alert parents and other EI professionals, including physicians, regarding the need to assess and to address potential concerns in this area.

While each CAA/ASHA accredited training program for SLPs is required to provide curriculum in the areas of swallowing and feeding and to ensure that each candidate completes 400 hours of supervised clinical practice prior to graduation, direct experience in pediatric swallowing and feeding may vary. It is the responsibility of every individual professional to abide by the professional code of ethics, Principle II that defines the need for the highest level of professional competence. Those SLPs who have not completed specific training in pediatric swallowing and feeding are required to complete continuing education beyond their graduate

training in order to provide services in these areas with EI teams, families and children (ASHA 2002).

In cases where the individual SLP practitioner does not have specialized skills in pediatric swallowing and feeding, referral to appropriate specialists such as a swallowing and feeding team may be needed for instrumental assessment, intervention, or consultation. The specialized team is further responsible to follow-up with the referring SLP to support implementation of the treatment plan with the child and family. While the referring SLP may not be a specialist in the area of swallowing and feeding, that practitioner is fully qualified to provide education and counseling with families regarding safe progression of liquids and feeding strategies for children with disabilities, as defined in the SLP scope of practice and professional certification.

> *Based on the professional qualifications of the SLP and defined scope of professional practice to conduct pediatric swallowing and feeding services, the CSHA EI Task Force supports the position that SLPs are uniquely qualified to conduct screening, assessment and intervention to support effective feeding and swallowing development in direct service, consultation and collaboration with early intervention teams, children and families. Further, individual SLPs who lack this expertise are bound by professional ethics to seek additional training in pediatric swallowing and feeding or to refer to appropriate specialists.*

Emerging Technologies in Early Intervention Services

In the past decade, advances in digital technology have outpaced research to determine the advantages, disadvantages and guidelines for application with young children. For example applications of touchscreen devices including smartphones, iPhones, iPads, iPods, and tablets are widespread in families with children. Fidler (2014) reported that that Reynolds Journalism Institute media poll found that more than half of U.S. households had tablets and 75% had smartphones. Significantly, households with children were found to be more likely to have mobile media devices, as 70 percent had tablets and 88 percent had smartphones. The application of iPads, in particular, with young children with disabilities has become common practice with the proliferation of interactive APPS designed for multiple purposes that report to support early learning and communication. The results of the applications of emerging technologies are largely unknown, as research is just beginning. Policy regarding the applications of technology and digital media with young children is inconclusive and mixed.

In 1999, the American Academy of Pediatrics developed a statement that recommended limited exposure to television media for children under 2 years of age (AAP, 1999). That same position was reiterated by AAP in 2011 in relation to digital media and considered a cautionary policy regarding the application of touchscreen technology with very young children (APA 2011). Differing points of view are expressed by health and education agencies and leaders regarding the use of digital media with very young children, referred to as *interactive media*. Christakis (2014) countered the AAP 2011 statement, recommending a revision in the position due to the lack of research available on the effects of interactive media with young children and

the potential positive outcomes of emerging technologies. While recognizing the cautions and potentially inappropriate use of technology with young children when applied in a passive method, the National Association for the Education for Young Children (NAEYC) and the Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College (FRC) issued a joint statement to guide providers in the application of interactive media with young children from birth to age 8 years as follows:

*"Technology and interactive media are tools that can promote effective learning and development when they are used **intentionally** by early childhood educators, within the framework of **developmentally appropriate practice**, to support learning goals established for Individual children. The framework of developmentally appropriate practice begins with knowledge about what children of the age and developmental status represented in a particular group are typically like. This knowledge provides a general idea of the activities, routines, interactions, and curriculum that should be effective. Each child in the particular group is then considered both as an individual and within the context of that child's specific family, community, culture, linguistic norms, social group, past experience (including learning and behavior), and current circumstances. (NAEYC & FRC, 2012)"*

The principles expressed in the NAEYC and FRC joint statement embody best practice guidelines for the SLP in EI services in the application of interactive media. As defined by NAEYC, *interactive media refers to digital and analog materials, including software programs, applications (APPs), broadcast and streaming media, some children's television programming, e-books, the Internet, and other forms of content designed to facilitate active and creative use by young children and to encourage social engagement with other children and adults* (NAEYC, 2012). The judicious use of interactive media by the SLP can provide tools that support access to communicative development for infants and toddlers when applied in the context of human interaction and experiential learning. Established best practice guidelines regarding the processes of collaborative assessment with the family and EI team can be applied to determine appropriate technologies that meet the needs of individual children.

In addition to recommendations for applying digital technologies with young children with disabilities to promote communication development, research informs us that early applications of Augmentative and Alternative Communication (AAC) with some young children who experience speech and language delays is essential for language comprehension and expression. Professional preparation standards now require that SLPs gain knowledge and skill to determine children with conditions that may severely limit expressive speech development and lead to complex communication needs. A growing body of research supports the use of range of AAC tools to optimize prelinguistic communication to create understanding of symbols to convey expression with caregivers and peers. As reported by Davidoff (2017), AAC can the critical component to development of language, literacy, and communication and cognitive skills for young children with complex communication needs. Speech-language pathologists are key members of the early intervention team to design appropriate assessment and determination of the appropriate use of low-tech AAC tools, communication APPs and dedicated AAC devices

needed to support prelinguistic communication, emerging and developing language for young children with disabilities.

In a related but different purpose for technology, Telepractice is an emerging mode of service delivery in early intervention. Guidelines for Telepractice conducted by SLPs in EI services are very general. ASHA recognizes Telepractice as an appropriate model of service delivery for audiologists and speech-language pathologists, with the same requirements for certification and ethical professional practice as services delivered in person (ASHA n.d.). In California, Telepractice by SLPs and audiologists is referred to as Telehealth and is recognized as a mode of service delivery that is equivalent to services provided in-person, with the same standard of care requirements.

While there are no specific guidelines with regard to Telepractice implemented by SLPs with infants and toddlers, special consideration regarding EI services are indicated given the research, policy and best practice guidelines. EI services by SLPs are collaborative and team-based with families at the center of decision-making. Initially, aspects of Telepractice that require additional evaluation and attention include the degree of collaborative practice across distances, family connections with local resources, availability of the SLP to meet family needs, and identification of family and child outcomes. As Telepractice is continually developing, consistency with best practice in EI services requires ongoing evaluation.

Given the pivotal role of early intervention to develop communication, speech and language as the foundation for later development, the CSHA EI Task Force supports the application of emerging technologies with young children that include interactive media and Telepractice within the following parameters:

- *Application of technology within current evidence-based guidelines;*
- *Completion of individualized assessment to determine appropriate technology applications;*
- *Application of technology as a tool to achieve communication in the context of human interaction (including the consideration of AAC devices and/or related APPs for communication; and*
- *Follow-up evaluation to determine the effectiveness of technology applications.*

Conclusion

In 1986, the enactment of legislation to require early intervention services for infants and toddlers with disabilities and at-risk conditions from birth up until age 3 years of age ushered in a new paradigm of services and supports for families and very young children which has been compared to the *Copernican Revolution* (Turnbull & Summers, 1987). The shift in focus from *family members revolving around services* to *families and children being the center of services* had far-reaching effects in developing new models of service delivery and influenced professional practice to develop partnerships with families. As the field of speech-language pathology evolved with increased participation in EI services, research regarding positive

19

outcomes of early intervention informed practice. Greater understanding of the beginnings of language development in the very first stage of life and the vulnerability of infants and toddlers with compromised developmental outcomes due to disabilities and risk conditions led to improved and earlier identification methods. Over the past three decades, research and policy continued to reveal the positive effects of early intervention on the neurological development of children born with disabilities and conditions that include health and environmental risks and the related improvements in parent-child interaction.

Through professional training, the SLP is fully prepared to join the EI team in the provision of services with families and their infants and toddlers in the California Early Start system. The SLP is the professional who is qualified to conduct screening, assessment and intervention in all aspects of communication and swallowing. Following a comprehensive review of policy, research and best practice, recommendations were made by the CSHA Early Intervention Task Force in the following areas of SLP services in EI including: (a) professional preparation of SLPs to provide EI services; (b) SLP scope of practice in EI; (d) SLP services regarding Natural Environments; (e) SLP roles in EI swallowing and feeding services; and (f) SLP roles in emerging technologies in EI. These recommendations are intended to inform practice by SLPs, related professions and policy regarding EI services throughout the state. As continued research and practice in EI services advance, review and updated position state will be required by the profession.

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