Perspectives on Early Childhood Psychology and Education

Volume 5
Issue 2 *Strategies for Early Childhood Education of Deaf and Hard of Hearing Students*

Article 2

February 2023

Preparing Practitioners to Work With Deaf and Hard of Hearing Infants, Toddlers, and Their Families: Professional Competencies that Result in Positive Outcomes

Marilyn Sass-Lehrer

Jodee Crace

Raschelle Neild

Follow this and additional works at: https://digitalcommons.pace.edu/perspectives

Recommended Citation

Sass-Lehrer, Marilyn; Crace, Jodee; and Neild, Raschelle (2023) "Preparing Practitioners to Work With Deaf and Hard of Hearing Infants, Toddlers, and Their Families: Professional Competencies that Result in Positive Outcomes," *Perspectives on Early Childhood Psychology and Education*: Vol. 5: Iss. 2, Article 2.
DOI: https://doi.org/10.58948/2834-8257.1057
Available at: https://digitalcommons.pace.edu/perspectives/vol5/iss2/2

This Article is brought to you for free and open access by DigitalCommons@Pace. It has been accepted for inclusion in Perspectives on Early Childhood Psychology and Education by an authorized editor of DigitalCommons@Pace. For more information, please contact nmcguire@pace.edu.

Preparing Practitioners to Work With Deaf and Hard of Hearing Infants, Toddlers, and Their Families: Professional Competencies that Result in Positive Outcomes

Marilyn Sass-Lehrer, Jodee Crace, & Raschelle Neild

Abstract

Infants and toddlers who are deaf and hard of hearing (DHH) are unique in their physical and individual abilities and resources. Their diversity extends beyond hearing levels and involves physical, cognitive, social-emotional, and communicative attributes. Families with newly identified children have a wide range of backgrounds and experiences that influence how they respond to learning that their child is DHH and what they need from professionals in the first few days and months after their baby has been identified. While knowledge and skills generic to the field of early childhood special education provide a foundation for working with these children and their families, there are specialized areas of expertise that are beyond the scope of practice of generically prepared practitioners that are critical to the successful outcomes of infants and toddlers who are DHH. This article will address the areas of professional competencies that are meant to result in positive outcomes for young children who are DHH and their families and how this specialized expertise can be acquired.

Keywords: *deaf and hard of hearing, infants and toddlers, professional competencies*

Introduction

Regardless of their economic, social or cultural heritage, families hope for the best possible futures for their children. Families who learn that their children are at risk due to health or developmental challenges need guidance obtaining resources that will ensure their children's potentials are achieved. Families with children who are deaf or hard of hearing (DHH) are especially vulnerable because they are likely to have little or no understanding of the implications of having limited hearing (Mitchell & Karchmer, 2004). The vast majority of these families are surprised to learn that their child's hearing levels are below expectations. For many families, a search for the most appropriate services is challenging. Although there are various factors that contribute to the difficulty of finding appropriate services, one of the barriers is access to professionals who have expertise in working with infants and toddlers who are DHH. Early intervention programs often serve young children who have a range of developmental concerns; however, these professionals often do not have specialized preparation to meet the unique needs of young children who are DHH and their families.

A family's journey begins with learning what it means to be DHH and understanding that their child's future opportunities are unlimited. Hearing differences do not necessarily constrain an individual's potential, and infants and toddlers who are identified early and whose families participate in early intervention/development services are more likely to achieve age-appropriate cognitive, language, and social skills as compared with their peers who do not have similar opportunities (Moeller, 2000; 2007; Yoshinaga-Itano, 2003). Families who are actively engaged in programs that provide comprehensive early development services with specialists who have expertise in working with this population should presume that their child, like their child's hearing siblings and peers, will have a strong foundation in all developmental domains (physical, social-emotional, communication, fine motor, cognition, and self-help) by the time they reach school-age.

Purpose

The goal of early development/intervention for DHH children is to minimize or prevent delays and to promote linguistic and communication competence, literacy development, and psychosocial well-being through high-quality communicative interactions (JCIH, 2019). Essential to achieving this goal are professionals who have the critical knowledge, skills, and dispositions (JCIH, 2013; Sass-Lehrer, Moeller & Stredler-Brown, 2016). Nine areas of professional knowledge and skills were developed through an evidence-based process endorsed by the Joint Committee on Infant Hearing (JCIH) in their position statements of 2013 and 2019. This article will describe the areas of expertise needed by providers who work with young children who are DHH and their families and how competence can be acquired.

Background

Young DHH children enrolled in early intervention programs are extremely heterogeneous. Although states differ in their specific eligibility requirements, a difference in hearing levels outside the typical hearing range is recognized as a potential developmental risk factor that should qualify a child for enrollment in an early intervention program (NCHAM, 2011). Children experience a wide range of hearing levels, from minimal to profoundly deaf. Hearing differences may affect one or both ears, and may be congenital (that is, from birth) or acquired later. Hearing abilities may be permanent or fluctuating. Children may have hearing levels that are relatively stable or initially minimal and become increasingly significant over time. Limited hearing may be the only identified difference that a young child presents, or it may be part of a constellation of physical and developmental delays or conditions. Approximately 40% of young DHH children have a disability that complicates their overall development (Gallaudet Research Institute, 2013). Some children benefit from hearing technologies such as hearing aids or cochlear implants, while others benefit from visual language and visual technologies.

Some benefit from both hearing and visual technologies. Although the common factor may be a hearing difference, the types of services and supports needed vary from child to child and must meet their unique needs.

In addition to these physiological differences, there are also environmental factors that impact children's developmental trajectory. One factor that impacts long-term outcomes is the timeliness of identification and enrollment in high-quality early development services (Kennedy, McCann, Campbell, Kimm & Thorton, 2006). While the goal for newborn hearing screening is to identify infants as soon as possible after birth and no later than three months of age, there are too many infants and toddlers who are not identified until later for a variety of reasons (Holte, et al., 2012; Hunter et al., 2016; Sass-Lehrer, 2004). A significant number of infants whose hearing is within normal limits when they are screened shortly after birth are identified as having a hearing loss by the time they reach school age (NIDCD, 2010; Niskar et al., 1998). The *JCIH Guidelines for Early Intervention Services* (2013) establishes benchmarks for identifying and initiating early intervention services but does not address older children's needs for specialized services. According to the JCIH (2007; 2019), all children should receive hearing screening by one month of age; have an audiological evaluation confirming that a child is DHH by three months of age; and begin receiving early development services no later than six months of age. EHDI programs that are already meeting the one-, three-, or six-month benchmarks are challenged to lower the ages at which children are identified and provided services (JCIH, 2019). Early childhood and school-age programs should be aware of the possibility there are DHH children in their programs who have not been identified through newborn hearing screening and who have not received appropriate services.

Researchers are continuing to amass new evidence that stresses the importance of the earliest months of life for optimal brain development. The home environment provides the stage on which the magical unfolding of development occurs. Early intervention focuses

on the family and home environment because the quality of early life experiences impacts child development (Bodner-Johnson, 1986; Dickinson & Tabors, 2001; Hart & Risley, 1995, Meece, 2002). Families are diversely able to provide the physical, emotional, and financial resources that ensure an optimal early development environment. For example, families who experience high stress levels have a more difficult time being emotionally available to their children than families who are not highly stressed (Pipp-Siegel, Sedey & Yoshinaga-Itano, 2002). Parents and primary caregivers who are in tune with their infant's needs and are appropriately responsive are better able to form strong, nurturing relationships that promote healthy social and emotional development than those who are not. Whether stress originates from the struggle to maintain basic needs, such as food, shelter, safety, or healthy domestic relationships, effective early intervention services can make a difference. Discovering that their newborn is deaf affects a family's sense of their parenting abilities differently (see Young et al., 2006). Researchers have affirmed that many families benefit from support from adults who are deaf, other families who have deaf children, and professional guidance (Gale et al., 2019; Hintermair, 2000; 2006; Meadow-Orlans, Mertens & Sass-Lehrer, 2003).

Accessibility of communicative interactions is especially important for children who depend upon vision, more than hearing, for information and emotional comfort. Families in which one or both parents are deaf naturally establish a visual environment and experiences that support their baby's sense of well-being (Marschark & Hauser, 2011). Without this experience, hearing families value guidance from deaf adults and professionals who have expertise to help them understand how to communicate in ways that convey their love and acceptance, visually and through positive physical contact (Pittman, Benedict, Olson & Sass-Lehrer, 2016). Parents, family members, and caregivers require skills to communicate effectively with their DHH children that are distinctly different from the skills needed by families who have children who hear and with whom they are able to communicate effortlessly.

Rationale

Infants who qualify for early intervention are referred to their state's Part C programs. These programs are responsible for assessing the child and family's needs and then referring them to the programs and services that are most appropriate. The challenge in many states is finding professionals, including those who are deaf as well as hearing, who have the knowledge and skills to deliver these services. Professionals providing services to young DHH children have a range of disciplinary expertise. Surveys of early intervention providers for this population reveal that less than half have backgrounds in deaf education (Proctor, Neimeyer, & Compton, 2005; Stredler-Brown & Arehart, 2000). Even those providers who are licensed teachers in the area of deaf education generally lack the expertise to work with infants, toddlers, and their families (Campbell, Chiarello, Wilcox & Milbourne, 2009; Jones & Ewing, 2002; Meadow-Orlans, Mertens, & Sass-Lehrer, 2003; Rice & Lenihan, 2005). Although speech-language pathologists (SLPs) may have a strong foundation in communication development, they rarely have adequate coursework or experiences that cover the unique challenges of DHH children and, like most educators, are not prepared to work with a very young population of children. Early childhood special educators typically receive training to provide family-centered care, but rarely have sufficient experiences or knowledge of the most appropriate strategies for promoting language and communication with DHH children. For example, early childhood special educators typically are not aware of the latest technologies best suited for individual children, do not possess visual communication skills such as American Sign Language (ASL), and are not able to implement auditory and verbal strategies that help young children develop listening and spoken language.

To build positive and trusting relationships with families, it is important for families to believe the professionals working with them have expertise in early childhood development and knowledge of how best to support young children who are DHH. A trusting

relationship between the family and specialists can begin to develop when families and caregivers receive guidance from professionals who are knowledgeable and understand the family's needs. Professionals who have developed trust can then work with families to promote strong, positive emotional bonding with their child, optimizing their child's potential to achieve positive developmental outcomes in all areas (Pipp-Siegel, Seders, & Yoshinaga-Itano, 2002).

Despite the evidence that appropriately prepared professionals are more likely to experience the most effective results with infants, toddlers, and their families, it is difficult to find highly trained professionals, especially those who are deaf, as well as Black, Indigenous, and People of Color. Finding professionals who are prepared to work with DHH infants and toddlers and their families is especially challenging in less populated areas. There is a scarcity of opportunities for preservice training for early intervention providers for DHH children. Most deaf education teacher preparation programs provide coursework and experiences covering a wide age range with little or no focus on infants and toddlers. While nationally accredited teacher preparation programs in deaf education follow the Council for Exceptional Children (CEC) standards, there are no specific standards explicitly related to working with deaf children from birth to three years of age. Preservice teacher preparation programs typically embrace a child-centered philosophy leaving graduates of their programs with limited experience on collaborating with families and other professionals or providing families with the support and guidance they need. As university budgets face increasing challenges to cut costs, deaf education teacher education programs have faced difficult times. A study by Dolman in 2010 cited a nationwide reduction in the number of teacher preparation programs in deaf education. The authors of this article completed a comprehensive review of the teacher preparation deaf education programs listed on the Deafed.net website as of February 2020 to better understand the quality of preparation offered to serve young children birth to three and their families. University

programs were contacted to obtain additional details about their programs. The comprehensive review found 13 deaf-education teacher preparation programs included preparation in early childhood education, while only seven programs included preparation to work with the birth to three-year-old population. The majority of these programs emphasized preparation focused on developing listening and spoken language communication rather than sign language, or a comprehensive approach that includes both listening and spoken language and sign language. Preservice programs are currently not providing sufficient opportunities for preparing early intervention specialists. Ensuring there are enough professionals who have the knowledge, skills, and dispositions needed to work with this population is challenging.

An excellent first step in preparing professionals is to clearly articulate the specialized competencies needed to serve these children and their families. Understanding what knowledge, skills, and dispositions can lead to improved outcomes is critical to achieving the optimal results. All states are required to report evidence of positive outcomes for young children and their families. See Table 1 for and the Early Childhood Technical Assistance Center website: https://ectacenter.org/outcomes.asp for more information.

Table 1
Child and Family Outcomes

Child Outcomes	Family Outcomes
1. Child has positive social-emotional skills (e.g., social relationships)	1. Family knows their rights
2. Child acquires and uses knowledge and skills (e.g., early language/communication)	2. Family effectively communicates their children's needs
3. Child uses appropriate behaviors to meet their needs	3. Family helps their children develop and learn

Outcome measures have raised the stakes for accountability among all children with special needs. The move toward greater accountability in early intervention with young children who are DHH has taken a step forward with the publication of two policy documents that outline the core competencies needed by professionals providing services to infants and toddlers who are DHH and their families (JCIH, 2013; Moeller Carr, Seaver, Stredler-Brown, & Holzinger, 2013). These documents underscore the fact that DHH children and their families who receive services from highly experienced professionals who understand their unique abilities and needs are more likely to maximize the possibilities that these children will achieve outcomes that match their potential (JCHI, 2013; Moeller et al., 2013).

Knowledge and Skills Needed

The JCIH published a supplement to the 2007 statement in 2013 describing comprehensive guidelines for early hearing detection and intervention (EHDI) programs. The guidelines identify 12 goals for establishing effective programs and services for young DHH children and their families (JCIH, 2013). One goal focuses exclusively on the quality of professionals and identifies nine competency areas and associated knowledge and skills that describe skilled and knowledgeable providers. These core competencies were developed through a process that included a survey of 17 professional organizations that had a strong investment in early intervention and a review of research and existing documents that specifically addressed the areas of expertise needed by professionals working with this population. The process revealed the wide range of disciplinary backgrounds of professionals providing early intervention services and the limited preservice opportunities available to achieve the necessary competence. A team of three researchers reviewed the documents and personnel standards recommended by national organizations such as the Division for Early Childhood and the National Association of the Education of Young Children (NAEYC) and the personnel development guidelines per Part

C of the IDEA (2004). The team identified nine broad competency areas and 116 knowledge and skill statements. (See Sass-Lehrer, 2016 for more information). The JCIH included the Core Knowledge and Skills Document as an Appendix to the JCIH 2013 guidelines.

The nine Knowledge and Skills competency areas identified follow with a description of how these are specific to the achievement of positive outcomes for DHH infants and toddlers. See Table 2 for a listing of the nine competency areas at the end of the article.

Family-Centered Practice: Family-Professional Partnerships, Decision Making, and Family Support. This competency area describes the knowledge and skills that enable professionals to engage and empower families. These skills are needed to help families recognize their child's and family's strengths and advocate for services to achieve the best possible linguistic, social-emotional, and educational outcomes. Families with DHH children need professionals who have the understanding and ability to help guide them through the complex decision-making process involving language, communication, technology, and services. Professionals also need to understand the resources and programs available that can provide appropriate support through the early years. For example, deaf mentor programs provide families with support from DHH adults, and family support programs provide connections with other families who have DHH children.

Socially, Culturally, and Linguistically Responsive Practices Including D/HH Cultures and Communities: Sensitivity and Respect for an Individual Family's Characteristics. Professionals need specialized knowledge and skills to understand each family's unique lifestyle and demonstrate sensitivity and respect for their decisions, priorities, and resources. Professionals who possess competence in this area understand and can convey deaf cultural perspectives. In addition, they understand the value and contributions of the family's culture and community to the child's overall well-being.

Knowledgeable professionals understand how their child's hearing abilities can impact language acquisition and communication development. Professionals understand how to facilitate language

accessibility, and foster the young child's residual hearing, vision, and touch to acquire language through the use of appropriate strategies and technologies. Professionals support families in creating language-rich environments in their homes and facilitating the development of signing and/or listening skills according to the child's needs and interests.

Factors Influencing Infant and Toddler Development. This competency area emphasizes the importance of professional knowledge regarding early child development and the ability to help families monitor their child's overall health and well-being. Professionals who possess competence in this area recognize and understand the characteristics of typical and atypical development in DHH infants and collaborate with other professionals to modify approaches as needed for children who have cognitive, developmental, or other delays.

Screening, Evaluation, and Assessment: Interpretation of Hearing Screening and Audiologic Diagnostic Information, Ongoing Developmental Assessment, and Use of Developmental Assessment Tools to Monitor Progress. Professionals with specialized knowledge and skills understand the newborn hearing screening and audiological assessment process and describe this process in ways that are understandable to families. They understand the implications of different hearing evaluation measures on the child's ability to access language and environmental sounds through hearing and tools that assess the child's access to language visually. They have specialized knowledge and skills to monitor language growth and development acquired through ASL and listening and spoken language. Professionals can use developmental assessments appropriate for young children who are DHH to identify each child's areas of strength and abilities in all areas of development.

Technology: Supporting Development by Using Technology to Access Auditory, Visual, and/or Tactile Information. Professionals understand the benefits and limitations of auditory, visual, and tactile technologies designed specifically to support young DHH children.

Knowledge in this area focuses on supporting families in using various technologies with their children and keeping up to date regarding research and technological developments. Professionals should consult with experts on the use of learning approaches that optimize the use of sensory technologies

Planning and Implementation of Services: Creating a Lesson Plan, Conducting a Home Visit, Developing the IFSP, and Using Appropriate Curriculums, Methods, and Resources. This competency area addresses what providers need to know to ensure children and their families receive appropriate services that maximize learning and development. Professionals can provide appropriate social and emotional support to families and employ strategies such as coaching and mentoring to empower families to provide optimal learning experiences through naturally occurring events and routines. Professionals can provide an effective educational and developmental program for young DHH children that addresses the unique needs of the child and is designed to promote maximum access to language. Professionals also have the knowledge and skills to develop Individualized Family Service Plans (IFSPs) and Individualized Educational Plans (IEPs) that guide families, and other professionals to ensure children have the appropriate services and support as they transition from early intervention to preschool.

Collaboration and Interdisciplinary Models and Practices. This competency area emphasizes the knowledge and skills professionals need to serve as interdisciplinary team members for a DHH child. Professionals understand their unique roles and responsibilities and how the family and all providers can work together and share information across disciplines. Professionals understand how to collaborate effectively to provide a seamless and coordinated array of appropriate services for the child while respecting the family as the most important member of the interdisciplinary team.

Professional and Ethical Behavior: Foundations of EI Practice, Legislation, Policies, and Research. Professionals understand how to implement evidence-based practices that benefit young DHH

children and their families. Professionals understand and appreciate the historical roots of deaf education, the regulations, and the philosophies that inform how best to support the overall development and learning of young DHH children. Service providers value deaf adults and understand how their experiences inform professionals in ways that ensure families have the knowledge and skills that safeguard the well-being and rights of DHH children.

In addition to the Knowledge and Skills Statements, the JCIH (2013) also recognizes the critical need for professionals with specialized knowledge and skills to promote strong language abilities through visual and auditory avenues. Goals 3(a) and 3(b) in this document focus on the professional skills needed to promote the development of ASL and Listening and Spoken Language, respectively. The JCIH guidelines recommend that "Intervention Services to Teach ASL Will Be Provided By Professionals Who Have Native or Fluent Skills and Are Trained to Teach Parents/Families and Young Children." The JCIH guidelines also recommend that "Intervention Services to Develop Listening and Spoken Language Will Be Provided By Professionals Who Have Specialized Skills and Knowledge." The document expands on these critical areas of expertise by providing examples of Fidelity of Intervention Monitoring for both Listening and Spoken Language, and Fidelity of Intervention Monitoring for American Sign Language. These self-checklists provide guidelines helpful to both parents and providers to monitor the child's communication and language development.

Professional Development and Learning for Early Intervention Specialists

Early intervention specialists often begin their work with DHH infants and toddlers with little or no professional training. They may have received degrees in deaf education from one of the university teacher preparation programs in the United States, or perhaps graduated from an early childhood special education teacher preparation program. They may be speech-language pathologists, audiologists,

social workers, or counselors. They may have received training as a deaf mentor or advocate. Regardless of the area of professional education, early intervention providers are very likely to have gaps in one or more of the knowledge and skill areas described above.

The remedy for filling the gaps in pre-professional knowledge and experience is a robust and systematic approach to professional development and learning. Although there are some federal, state, and local initiatives to support professional learning, few are designed for professionals working with very young DHH children and their families. The task of ensuring all professionals working with young children in the birth to three-year-old programs have the skills they need often falls to the state or district early intervention program directors. Understandably, these administrators may have questions such as 1) Who needs professional development? 2) What knowledge, skills, or dispositions are needed? 3) What kind of professional learning is most effective? 4) Who will provide this training? and 5) How will we determine if the training has made a difference in the quality of services provided?

Let us tackle each of these questions. Who needs professional learning and what knowledge, skills, or dispositions are needed? Professionals bear the responsibility of engaging in the process of self-assessment and reflection to consider the knowledge and skills they possess and to determine what specialized knowledge, skills, or dispositions they believe would improve the quality of their practice. Professionals might use the Knowledge and Skills document found in the JCIH Core Knowledge and Skills Document, Appendix to the JCIH 2013 guidelines as described above to rate themselves on each of the following questions: 1) How important is this skill area to my work? 2) How confident am I in this area? 3) To what extent might I benefit from additional learning to improve the quality of my work (See: Sass-Lehrer, Moeller & Stredler-Brown, 2016). Assessing individual needs for specific knowledge and skills results in a unique profile of each professional's learning goals. In addition to a self-assessment, professionals may find it helpful to

discuss their goals with colleagues, supervisors, or others who may provide insights into their learning needs.

What kind of professional learning is the most effective? There are several takeaways from professional development research that form the foundation for developing an effective professional learning plan. First and most important is to ensure that the content is meaningful to the learner. A self-assessment that identifies specific learning goals deemed critical to one's work's quality assures that the focus of the learning is important to the learner. Professional learners might share their learning goals with others to discuss how they will implement what they have learned in their work with children and families.

Learning is most effective when and how the knowledge or skills is acquired matches how the individual learns best. While professionals readily recognize that children have unique learning styles and needs, they may not be equally sensitive to the importance of distinct learning preferences on the part of adults. Professional development opportunities are often available through professional workshops or lectures by experts. Researchers stress that learning through lecturing is generally not the most effective learning approach for many learners. See National Training Laboratories https://www.ntl.org/ and Education Corner https://www.educationcorner.com/the-learning-pyramid.html for further discussion on this topic. Most adults learn best in the same ways that children do, that is, through active learning around interesting topics. An effective individualized learning approach encourages professionals to identify what they want to learn and identify how they learn best.

Professional learning workshops benefit from involving a large number of professionals in a limited amount of time. There are some drawbacks to this approach to professional learning. For example, while the topic identified may be of general interest and need to a large group of individuals, the information shared may not be targeted to individual participants in ways that are most meaningful to them. Additionally, professional workshops tend to be "one offs"

that is, there is rarely a follow-up or opportunity to implement what was learned. Professionals may recall attending a presentation or workshop that was of particular interest and need, but despite good intentions, they failed to follow up or apply what they learned to their work situation.

Through online learning, professional learning opportunities are available via individual courses, webinars, and online degree and certificate programs. One example is the Infants, Toddlers, and Their Families Interdisciplinary Certificate Program offered through Gallaudet University. See: https://www.gallaudet.edu/academic-catalog/graduate-education/departments-and-programs/interdisciplinary-graduate-programs/certificate-in-infants-toddlers-and-families-collaboration-and-leadership

Several professional development activities are provided by professional organizations, statewide learning collaboratives, and universities. In addition to these web-based learning opportunities, there are numerous materials and resources for professionals accessible through the internet. For example, one might explore the resources available at the following websites: Gallaudet University: Visual Language and Visual Learning: https://vl2parentspackage.org, Hands & Voices: https://www.handsandvoices.org, Laurent Clerc National Deaf Education Center: https://www.gallaudet.edu/clerc-center or https://www3.gallaudet.edu/clerc-center/our-resources.html, National Center for Hearing Assessment and Management: https://www.infanthearing.org/, Texas Sensory Support Network https://www.livebinders.com/play/play?id=1874327. See note at the end of this article.

Professional development and learning may include a combination of learning approaches that include face-to-face or online courses that provide in-depth coverage of specific topics, attendance at conferences and workshops, or self-study through independent readings of selected materials and resources. Personal Learning Networks and Communities of Practice are other ways learners can expand their knowledge by creating groups of individuals who have

similar interests and areas of expertise related to topics of interest. These groups typically meet virtually rather than face-to-face and, therefore, have the advantage of involving individuals from other programs, geographic areas, and backgrounds.

Coaching and mentoring are other forms of professional development that can support professional development. An effective mentor-mentee relationship is one of the richest professional learning experiences (Nevins & Sass-Lehrer, 2016). Mentoring allows a professional with less experience to learn from one who has considerably more experience and is willing to share their expertise through a relationship-based learning model. On the other hand, coaching is typically established as a way to support a learner who has requested help, needs encouragement or support in solving problems. Coaching and mentoring can enhance all learning experiences by guiding learners as they engage in transferring their learning to their work with young children and their families.

Professional knowledge is broadly accepted as offering a significant contribution to effective teaching and student learning (Darling-Hammond & Bradford, 2007; Gitmore & Zisk, 2015). Educational mandates and reform efforts are designed to ensure high standards for teaching and learning. Most of these require professional development. To ensure the effectiveness of professional development, whether through workshops, web-based learning opportunities, coaching and mentoring, or assessments, data must be collected to determine the impact of professional development. Several research studies have been conducted to investigate these questions, including research on teacher reflection (McAleer & Bangert, 2011; McCullagh, 2012; Powers, Ku & Mayes, 2011).

Finally, how will we know if the professional learning has positively impacted the services delivered? Learners must first describe their learning goals in ways that are specific, measurable, attainable, relevant, and time-based (SMART Goals, retrieved 1/31/20 from Mind Tools https://www.mindtools.com/pages/article/smart-goals.htm). Goals need to be developed in a manner that clarifies what it is that

the learner wants to accomplish; why the learning is important; who will be involved in the learning process, and who will be involved in the documentation or demonstration of the learning that occurred. The learner needs to consider practical ways in which the learning can be demonstrated. For example, consider a learning outcome that involves effectively sharing comprehensive and accurate information with families regarding services available in the district in which the family lives by the time the child is 6 months of age. This goal's successful achievement may include strategies such as asking families to provide feedback on the information they received. They might ask families to comment on how effective the method of sharing this information was for them. They might ask them whether they believed the information was comprehensive and accurate. They might ask if they received the information promptly. They might also ask families to provide suggestions on how the learner might do a better job of sharing this information. A second approach might include inviting a colleague or mentor to observe and give the learner feedback on the effectiveness, comprehensiveness, and accuracy of the information shared with families. Another approach might be for the learner to develop a resource manual or video tutorials for families that include the names, locations, contact information, and a description of the services available to families with DHH children in the district. There are numerous ways to assess the impact of learning on services received related to the learner's specific learning goals.

Recommendations for Next Steps

Early intervention professionals who work primarily with young children who are DHH and their families often lack the full complement of knowledge, skills, and dispositions likely to produce optimal outcomes. This article outlines professional competencies and a framework for assessing and developing knowledge and skills. Administrators and policy makers can ensure a better qualified cadre of early intervention providers by implementing the following recommended next steps.

1. Federal and state agencies should provide grants to deaf education teacher preparation programs that have an interdisciplinary focus and comprehensive approach to the preparation of early intervention specialists. Programs should ensure that graduates have the knowledge, skills, and dispositions as outlined in the JCIH, 2013 document, *Principles and Guidelines for Preparing Early Intervention Professionals After the Confirmation That a Child is Deaf or Hard of Hearing*. Grants are often awarded to programs with a listening and spoken language emphasis, rather than a comprehensive approach to language acquisition that includes ASL and visual language and learning. More professionals who are skilled users of ASL and able to model and support language acquired visually are needed in early intervention.

2. Programs preparing early intervention specialists should include in-person and remote instruction and focus on both pre-service and in-service training. These preparation programs should work closely with early intervention programs that exemplify the most effective early intervention practices as outlined in the JCIH, 2013 document. Early intervention professionals who demonstrate exemplary practices should be trained as coaches and mentors to enhance the abilities of providers who lack skills in specific areas. Professional coaches and mentors should be compensated and be part of the instructional team that delivers professional development to pre-service and in-service learners.

3. Currently, there are limited numbers of professionals who are themselves DHH working in early intervention. Despite the evidence that professionals who are deaf have a positive impact on both young children and their families (Hintermair, 2000), deaf professionals who are well-prepared are desperately needed. Federal, state, and local districts should provide financial and other incentives to attract DHH individuals to the field of early intervention. Likewise, there is a scarcity of professionals

of color and professionals from communities whose primary language is not English. Families with children who are DHH are extremely diverse, and yet, professionals in early intervention are predominately hearing, white, and English-only speakers. Professional development and other means of support, such as coaching and mentoring, should be provided to professionals who may lack specific areas of knowledge or skills.

4. Many early intervention professionals enter the field with limited experiences with people who are DHH. Therefore, programs preparing early intervention professionals should include a variety of opportunities to participate in educational and community programs with both children and adults who are deaf. National and regional organizations for people who are DHH are helpful resources for getting involved (Pittman, et al., 2016). These experiences are critical to working with families, helping them understand what it means to be deaf, and accessing support from families with deaf children, deaf adults, and other resources. Too often, professionals with limited knowledge of being deaf focus on the challenges of raising deaf children rather than the joy that so many families experience.

5. Conferences, short courses, learning modules, and webinars are valuable resources for sharing evidence-based approaches. However, providers need a guided systematic learning approach that assists them in identifying gaps in their knowledge and skills, assists them as they implement new learning strategies, and provides substantive feedback and guidance to effectively carry out newly acquired skills. Support from federal, state, and local jurisdictions can provide the needed funds and accountability measures to improve the quality of early learning for infants, toddlers, and their families.

Table 2
Knowledge and Skills Competency Areas (JCIH, 2013)

Competency Area
Family-Centered Practice: Family-Professional Partnerships, Decision Making, and Family Support
Socially, Culturally, and Linguistically Responsive Practices Including D/HH Cultures and Communities: Sensitivity and Respect for an Individual Family's Characteristics
Factors Influencing Infant and Toddler Development
Screening, Evaluation, and Assessment: Interpretation of Hearing Screening and Audiologic Diagnostic Information, Ongoing Developmental Assessment, and Use of Developmental Assessment Tools to Monitor Progress
Technology: Supporting Development by Using Technology to Access Auditory, Visual, and/or Tactile Information
Planning and Implementation of Services: Creating a Lesson Plan, Conducting a Home Visit, Developing the IFSP, and Using Appropriate Curriculums, Methods, and Resources
Professional and Ethical Behavior: Foundations of EI Practice, Legislation, Policies, and Research

Summary

Early identification of being deaf is a significant first step to achieving optimal developmental outcomes for all DHH children. The next step is ensuring that families receive comprehensive, evidence-based programs and services delivered by professionals who are well-prepared to guide them along their journey. Ideally, these professionals have the knowledge, skills, and professional attributes to support families and provide them with the competence and confidence they need to provide a home environment that is nurturing

and conducive to acquiring the social-emotional and communication skills that create a strong foundation for learning. Program administrators and professionals serving these children and families who lack the specialized knowledge and skills need to commit themselves to an effective professional learning plan. Regardless of the type of professional learning one chooses, using the Knowledge and Skills from the *Supplement to the JCIH 2007 Position Statement: Principles and Guidelines for Early Intervention After Confirmation that a Child is Deaf or Hard of Hearing* will ensure that the content learned is evidence-based and designed to enhance and maximize the learning potential of young DHH children.

Authors Note

The Live Binder is an online resource developed by the Texas Education Service Center, Region 11, Texas Sensory Support Network. This resource is designed for professionals working in early intervention programs with children who are DHH and their families. The Live Binder provides a process for designing and implementing an individualized professional learning plan based on the JCIH, 2013 Knowledge and Skills document.

References

Bodner-Johnson, B. (1986). The family environment achievement of deaf students: A discriminant analysis. *Exceptional Children*, 52, 443-449.

Campbell, P. H., Chiarello, L., Wilcox, M. J., & Milbourne, S. (2009). Preparing therapists as effective practitioners in early intervention. *Infants & Young Children*, 22(1), 21–31.

Council on Education of the Deaf. Retrieved from: https://councilondeafed.org/

Council for Exceptional Children. Retrieved from: https://www.cec.sped.org/

Darling-Hammond, L., & Bransford, J. (2007). *Preparing teachers for a changing world: What teachers should learn and be able to do*. San Francisco, CA: Jossey-Bass.

Dickinson, D. K., & Tabors, P. O. (2001). *Beginning literacy with language: Young children learning at home and school*. Baltimore, MD: Brookes Publishing.

Dolman, D. (2010). Enrollment trends in deaf education teacher preparation programs, 1973-2009. *American Annals of the Deaf, 155*(3), 353-359.

Gale, E., Berke, M., Benedict, B., Olson, S., Putz, K., & Yoshinaga-Itano, C. (2019). Deaf adults in early intervention programs. *Deafness & Education International*, 1-22.

Gallaudet Research Institute. (2013). Regional and national summary report of data from the *2011-2012 Annual Survey of Deaf and Hard of Hearing Children and Youth*. Washington, DC: Gallaudet University.

Gitomer, D. H., & Zisk, R. C. (2015). Knowing what teachers know. *Review of Research in Education, 39*, 1-53.

Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experiences of young American children*. Baltimore, MD: Brookes, Publishing.

Hintermair, M. (2000). Hearing impairment, social networks, and coping: The need for families with hearing-impaired children to relate to other parents and to hearing impaired adults. *American Annals of the Deaf*, 145, 41-51.

Hintermair, M. (2006). Parental resources, parental stress, and socio-emotional development of deaf and hard-of-hearing children. *Journal of Deaf Studies, 11*(4), 493-513.

Holte, L., Walker, E., Oleson, J., Spratford, M., Moeller, M. P., Tomblin, J. B., & Hua, O. (2012). Factors influencing follow-up to newborn hearing screening for infants who are hard of hearing. *American Journal of Audiology, 21*(2), 163-174.

Hunter, L. L., Meinzen-Derr, J., Wiley, S., Horvanth, C. L., Kothari, R., & Wexelblalt, S. (2016). Influence of the WIC program on follow-up for newborn hearing screening. *Pediatrics, 138*(1), 1-8.

Individuals with Disabilities Education Act. (2004). PL 108-446, 20 USC 1400 note. 118. Stat. 2647. www.ed.gov/policy

Joint Committee on Infant Hearing. (2007). Year 2007 position statement: Principles and guidelines for early hearing detection and intervention programs. *American Academy of Pediatrics*, *120*(4), 898-921.

Joint Committee on Infant Hearing. (2013). Supplement to the JCIH 2007 position statement: Principles and guidelines for intervention after confirmation that a child is deaf or hard of hearing. *American Academy of Pediatrics, 131*, 1324-1349.

Joint Committee on Infant Hearing. (2019). Year 2019 position statement: Principles and guidelines for early hearing detection and intervention programs. *American Academy of Pediatrics*, 4(2), 1-44.

Jones, T. W., & Ewing, K. M. (2002). An analysis of teacher preparation in deaf education: Programs approved by the Council of Education of the Deaf. *American Annals of the Deaf, 147*, (5), 71-78.

Kennedy, C. R., McCann, D. C., Campbell, M. J., Kimm, L., & Thornton, R., (2006). Language ability after early detection of permanent childhood hearing impairment. *New England Journal of Medicine, 354*(20), 2131–141.

Marschark, M. & Hauser, P. C. (2011). *How deaf children learn: What parents and teachers need to know.* New York: Oxford University Press.

McAleer, D. & Bangert, A. (2011). Professional growth through on-line mentoring: A study of mathematics mentor teachers. *Journal of Educational Computing Research, 44*(1), 83-115.

McCullagh, J.F. (2012). How can video supported reflection enhance teachers' professional development? *Cultural Studies of Science Education, 7*(1), 137-152.

Meadow-Orlans, K.P., Mertens, D., & Sass-Lehrer, M. (2003). *Parents and their deaf children: The early years.* Washington, DC: Gallaudet University Press.

Meece, J. I. (2002). *Children and adolescent development for educators* (2nd ed.). New York, NY: McGraw-Hill.

Mitchell, R. E., & Karchmer, M. A. (2004). Chasing the mythical ten percent: Parental hearing status of deaf and hard-of-hearing students in the United States. *Sign Language Studies, 4*(2), 138-163.

Moeller, M. P. (2000). Early intervention and language development in children who are deaf and hard of hearing. *Pediatrics, 106*(3), 1-9.

Moeller, M. P. (2007). Case studies: Children. In R. L. Schow & M. M. Nerbonne (Eds.). *Introduction to audiologic rehabilitation* (5th ed.) (pp. 437-466). Boston, MA: Allyn & Bacon.

Moeller, M. P., Carr, G., Seaver, L., Stredler-Brown, A., & Holzinger, D. (2013). Best practices in family centered early intervention for children who are deaf or hard of hearing an international consensus statement. *Journal of Deaf Studies and Deaf Education, 18*(4), 429-445.

National Center for Hearing Assessment and Management. (2011). A resource guide for early hearing detection and intervention.

National Center for Hearing Assessment and Management. (2011). Part C eligibility considerations: For infants and toddlers who are deaf and hard of hearing. Retrieved from: https://www.infanthearing.org/earlyintervention/docs/part_c_eligibility.pdf

National Institute on Deafness and Other Communication Disorders. (2010). Age at which hearing loss begins. Retrieved from: https://www.nidcd.nih.gov/health/statistics/age-which-hearing-loss-begins

Nevins, M. E., & Sass-Lehrer, M. (2016). Developing and sustaining exemplary practice through learning. In M. Sass-Lehrer (Ed.), *Deaf and hard-of-hearing infants, toddlers, and their families: Interdisciplinary perspectives*. New York: Oxford Press.

Niskar, A. S., Kisszak, S. M., Holmes, A., Esteban, E., Rubin, C., & Brody, D. J. (1998). Prevalence of hearing loss among children 6 to 19 years of age: The third National

Health and Nutrition Examination Survey. *Journal of American Medical Association, 14*, 1071-175,

Pipp-Siegel, S., Seders, A., & Yoshinaga-Itano, C. (2002). Predictors of parental stress in mothers of young children with a hearing loss. *Journal of Deaf Studies and Deaf Education, 7*, 1-17.

Pittman, P., Benedict, B., Olson, S., & Sass-Lehrer, M. (2016). Collaboration with deaf and hard-of-hearing communities. In M. Sass-Lehrer (Ed.), *Deaf and hard-of-hearing infants, toddlers, and their families: Interdisciplinary perspectives*. New York: Oxford Press.

Powers, R., Ku, H., & Mayes, R. (2011). Online teaching professional development in mathematics education. *Society for Information Technology and Teacher Education International Conference*, 651-658.

Proctor, R., Neimeyer, S., & Compton, M. V. (2005). Training needs of early intervention personnel working with infants and toddlers who are deaf or hard of hearing. *Volta Review, 105*(2), 113-128.

Rice, G. B., & Lenihan, S. (2005). Early intervention in auditory/oral deaf education: parent and professional perspectives. *Volta Review, 105*(1), 73-95.

Sass-Lehrer, M. (2004). Early detection of hearing loss: Maintaining a family-centered-perspective. *Seminars in Hearing, 25*(4), 295-307.

Sass-Lehrer, M., Moeller, M. P., & Stredler-Brown, A. (2016). What every early intervention professional should know. In M. Sass-Lehrer (Ed.), *Deaf and hard-of-hearing infants, toddlers, and their families: Interdisciplinary perspectives*. New York: Oxford Press.

Stredler-Brown, A. & Arehart, K. (2000). Universal newborn hearing screening: Impact on early intervention services. In C. Yoshinaga & A. Sedey (Eds.), Language, speech, and social-emotional, development of children who are deaf or hard of hearing: The early years [Monograph]. *Volta Review, 100*(5), 85-117.

White, K. R. (2014). Newborn hearing screening. In J. Katz, I. Medwetky, R. Burkard, & I. Hood, (Eds.) *Handbook of clinical audiology* (7th ed.). Philadelphia, PA: Lippincott, Williams, & Wilkins.

Yoshinaga-Itano, C. (2003). From screening to early identification and intervention: Discovering predictors to successful outcomes for children with significant hearing loss. *Journal of Deaf Studies and Deaf Education, 8*(1), 11-30.

Young, A. M., Carr, G., Hunt, R., McCracken, W., Skipp, A., & Tattersall, H. (2006). Informed choice and deaf children—underpinning concepts and enduring concerns. *Journal of Deaf Studies and Deaf Education, 11*, 322-336.