

Family-Centered Early Intervention Deaf/Hard of Hearing (FCEI-DHH): Support Principles

Amy Szarkowski ^{1,2†}, Mary Pat Moeller ^{3†}, Elaine Gale ⁴, Trudy Smith ⁵, Bianca C. Birdsey ⁶, Sheila T.F. Moodie ⁷, Gwen Carr ⁸, Arlene Stredler-Brown ⁹, Christine Yoshinaga-Itano ¹⁰, FCEI-DHH International Consensus Panel[‡], Daniel Holzinger ^{11,12}

¹The Institute, Children's Center for Communication/Beverly School for the Deaf, Beverly, MA, United States

²Institute for Community Inclusion, University of Massachusetts Boston, Boston, MA, United States

³Center for Childhood Deafness, Language & Learning, Boys Town National Research Hospital, Omaha, NE, United States

⁴School of Education, Deaf and Hard-of-Hearing Program, Hunter College, City University of New York, New York, NY, United States

⁵NextSense Institute, Sydney, NSW, Australia

⁶Global Coalition of Parents of Children who are Deaf or Hard of Hearing (GPODHH), Durban, South Africa

⁷Health Sciences, School of Communication Sciences & Disorders, Western University, London, ON, Canada

⁸Early Hearing Detection and Intervention and Family Centered Practice, London, United Kingdom

⁹Colorado Early Hearing Detection and Intervention Program, Colorado Department of Human Services, Denver, CO, United States

¹⁰Institute for Cognitive Sciences, University of Colorado Boulder, Boulder, CO, United States

¹¹Institute of Neurology of Senses and Language, Hospital of St. John of God, Linz, Austria

¹²Research Institute for Developmental Medicine, Johannes Kepler University, Linz, Austria

Corresponding author: The Institute, Children's Center for Communication/Beverly School for the Deaf, 6 Echo Ave., Beverly, MA, 01915, United States.

Email: amyszarkowski@cccbsd.org and Institute for Community Inclusion, University of Massachusetts Boston, 100 Morrissey Blvd., Boston, MA, 02125, United States. Email: amy.szarkowski@umb.edu

[†]Indicates co-primary authorship

[‡]See [Supplementary Material](#)

Abstract

This article is the sixth in a series of eight articles that comprise a special issue on Family-Centered Early Intervention (FCEI) for children who are deaf or hard of hearing (DHH) and their families, or FCEI-DHH. The *Support Principles* article is the second of three articles that describe the 10 Principles of FCEI-DHH, preceded by the *Foundation Principles*, and followed by the *Structure Principles*, all in this special issue. The *Support Principles* are composed of four Principles (Principles 3, 4, 5, and 6) that highlight (a) the importance of a variety of supports for families raising children who are DHH; (b) the need to attend to and ensure the well-being of all children who are DHH; (c) the necessity of building the language and communication abilities of children who are DHH and their family members; and (d) the importance of considering the family's strengths, needs, and values in decision-making.

Family-centered early intervention (FCEI) is inclusive and applicable to all children who are deaf or hard of hearing (DHH) and their families referred to as FCEI-DHH. The 10 FCEI-DHH Principles are conceptualized and discussed in terms of the *Foundation Principles*, the *Support Principles*, and the *Structure Principles*, all in this special issue. This article includes the *Support Principles* (Principles 3, 4, 5, and 6) which highlight family support, child well-being, language and communication considerations, and family-centered decision-making.

Principle 3 Family support: Basic needs, strengths/ challenges, and connections

FCEI-DHH acknowledges that families' basic needs must be a priority. FCEI-DHH appreciates the importance of recognizing family strengths, including the love, joy, care, worries, and concerns family members have for the child who is DHH. Supports should be provided for all families with children who are DHH in response to family-identified needs, assets, challenges, and strengths. The amount and type of supports

need to be individualized for each family, yet all families should be provided supports to help them to optimize outcomes for the child and the family. Family support also includes formal and informal connections that provide guidance, assistance, and encouragement to families.

Basic needs

Safety and stability are imperative for all children; this includes being free from abuse, neglect, domestic violence, homelessness, or dangerous living conditions. EI Providers, regardless of culture or country, should prioritize child safety. In some cultures, EI Providers may be mandated reporters who inform legal authorities if there is concern for a child's safety. In some situations that are unsafe, FCEI supports cannot be provided, as EI Providers require sufficiently safe conditions to work. EI Providers, programs/services, and systems may need to work together to determine how to ensure that FCEI-DHH supports are provided without delay, while also addressing safety needs.

Health-related basic needs include food security and health care, as well as family physical and mental health. The assurance that basic needs are met is necessary, as social determinants of

Received: December 29, 2022. Revised: July 7, 2023. Accepted: August 31, 2023

© The Author(s) 2024. Published by Oxford University Press. All rights reserved. For permissions, please email: journals.permissions@oup.com

health have greater influences on health outcomes and disparities than does medical care (United Nations [UN] Commission on Human Rights—Right to Adequate Food, 2020). The social determinants of health include the social, economic, and physical factors influencing families. Basic needs are not met, for example, when families are living in poverty, experiencing food and housing insecurity, or being exposed to violence or domestic abuse. Insufficient access to nutrition, as one example, can impact the child's overall development, including making language learning more challenging (Prado & Dewey, 2014). Some families may need to prioritize attending to their basic needs over, or alongside, engaging with FCEI-DHH. When the basic needs of the family are met, there is a greater likelihood that early intervention will be successful in promoting overall family well-being (National Center on Parent, Family, and Community Engagement [NCPFCE], 2018).

Basic needs also include communication environments that provide children who are DHH access to language “nourishment” to promote robust development. A primary goal of FCEI-DHH is to give children access to language that is consistent, complete, responsive, and nurturing. Sufficient access can help children avoid delays in language, cognitive, and social-emotional development (Head Zauche et al., 2017; Rautakoski et al., 2021). Insufficient language access is sometimes referred to in the literature as language deprivation (Hall et al., 2017; also see Principle 5 on Early and Consistent Access below).

EI Providers can support families who lack access to material resources by providing information and connecting them to resources and supports. By partnering with other professionals (e.g., social workers, resource specialists), EI Providers can identify other appropriate supports. FCEI-DHH services can continue while families are seeking the basic supports they need. EI Providers' roles and responsibilities do not include attempts to personally meet the basic needs of families (e.g., safety, health, and financial needs).

Family strengths/challenges

All families have strengths, challenges, or vulnerabilities that need to be considered and honored. EI Providers recognize that various family members have different strengths and needs, and that families' strengths and needs change over time. Recommendations intended to guide and support families should be grounded in empirical evidence in the literature to the degree possible, drawing from existing knowledge about promoting positive outcomes (NCPFCE, 2018; Sukkar et al., 2017). Yet, it is important to be aware that culturally relevant practices applied in FCEI-DHH may not have garnered the attention of researchers, who may be unaware of them or undervalue them. Because of this situation, some acceptable approaches informed by those with nuanced cultural/community knowledge are not yet classified as “evidence-informed” (Dill & Shera, 2015; Rubin & Bellamy, 2022, see Szarkowski & Moeller et al., 2024, *Cultural & Global Implications*, this issue).

It is essential to support families as they adjust to the confirmation that their child is DHH (Eleweke et al., 2008). Numerous factors impact families' responses to the identification of their child as DHH; there is no “one right way” to respond. For some families, the child's identification as DHH may be surprising, confusing, or distressing. Systemic biases or attitudes (e.g., whether “being DHH” is perceived negatively by professionals involved in the child's identification) can influence the emotional responses of families (Harris et al., 2021). EI Providers should be mindful that the ways they share information and engage with families

can influence how families perceive their own experiences with their child and can influence the family–EI Provider relationship, either in positive or negative ways. Most families with children who are DHH are themselves hearing and do not have direct experience with being DHH, which can impact the adjustment process (Mitchell & Karchmer, 2004). Families may be faced with new and unexpected demands and may find it difficult to prioritize the competing demands for time, energy, and resources to address the child's needs and those of other family members. In some situations, EI Providers may become aware that caregivers are experiencing mental health challenges and can help connect families to supports to address these concerns.

Family adjustment can be influenced by the quantity and quality of the support they receive which includes the relationships they form with other families, with professionals, and with children and adults who are DHH (Kyzar et al., 2020). Over time, many families with children who are DHH report high family quality of life and satisfaction (Jackson et al., 2010), including families with children who are deafblind (Kyzar et al., 2020). Similar profiles of high family quality of life are likely found in families with children who are DHH and have other co-occurring conditions or disabilities as well, as inferred from more general literature on disability (e.g., Beighton & Wills, 2017), although the evidence on this to date is sparse.

Family members and those trained as family leaders, DHH leaders, and other professionals increasingly recognize the value of shifting from a “problem-focused” approach to a “living in the present” approach to supporting families of children who are DHH. “Living in the present” includes enjoyment and appreciation of the caregiver–child bond (Anggrainy et al., 2020; Sunderland et al., 2009; Szarkowski & Lindow-Davies, 2022). For example, EI Providers can encourage family members to be mindful of and attentive to their interactions with their child and recognize the unique attributes of their child (Amaud, 2022). Research suggests that joy can be intentionally cultivated (Johnson, 2020); many cultures across the globe embrace religious/spiritual and philosophical traditions that focus on increasing joy, contentment, and mindfulness (Casioppo, 2020).

Attachment, defined as an emotional bond between caregivers and infants, fosters resilience and well-being in families with young children who are DHH (Thomson et al., 2011). Self-efficacy, or one's confidence in their own abilities, also promotes family well-being (Hintermair & Sarimski, 2019). Family involvement with their child who is DHH is multifaceted and extends beyond sessions with EI Providers (e.g., ensuring that their child can access services and supports, advocacy for their own child and others, dedication to the child's communicative needs; Erbas et al., 2018). Family engagement with their child and involvement in FCEI-DHH further promotes family well-being (Hintermair & Sarimski, 2019).

The following factors improve child outcomes and should be prioritized in supports offered to families (a) family well-being, (b) positive family–child relationships, (c) families as lifelong partners in promoting their child's learning, (d) family engagement in transitions, and (e) family connections to peers and community (NCPFCE, 2018). Support provided through EI can result in positive family outcomes, including increased knowledge, confidence in meeting the child's needs, improved quality of the caregiver–child interactions, and can enhance caregiver–child attachment (Jeong et al., 2021). Interventions targeted toward primary caregivers had greater effects on child outcomes and parenting practices in low- and middle-income countries than in high-income countries; this suggests a need for their proliferation globally (Jeong et al., 2021).

Connections

Families raise children in contexts that are informed by their cultures, contexts, and communities. Families with children who are DHH can benefit from partnerships with EI Providers (see [Moeller et al., 2024, Foundation Principles](#), this issue). In addition to the EI Providers, family-to-family supports ([Henderson et al., 2016](#)) and DHH adult-to-family supports ([Gale et al., 2021](#); [Hamilton & Clark, 2020](#)) are essential and valuable (see [Moeller & Szarkowski, et al., 2024, Guiding Values](#), this issue).

Family-to-family support can positively influence families' well-being, increase family members' knowledge about the circumstances that they share with other families (e.g., raising children who are DHH, experiencing similar life events, having similar cultural backgrounds), and can contribute to feelings of empowerment ([Henderson et al., 2014, 2016](#)). Family-to-family support can reduce the sense of "being alone" in dealing with circumstances that can be challenging, and can foster resilience ([Friedman Narr & Kemmery, 2015](#); [Moodie, 2018](#)). DHH adult-to-family support can help families gain valuable insights about the lived experiences of individuals who are DHH and garner an understanding of what it means to be DHH in particular cultures and across different contexts ([Cawthon et al., 2016](#); [Rogers & Young, 2011](#)).

Families can benefit substantially and in multiple ways from opportunities to interact with a diverse variety of individuals who are DHH ([Hintermair, 2008](#); [Jackson, 2011](#)). DHH adult-to-family connections may happen in different forms. For example, DHH adults may meet individually with families face-to-face or virtually, or DHH adults and families may attend family or community gatherings. DHH adult-to-family connections can also occur at various points over the course of the child's life and can offer different benefits to families as their needs change (see [Moeller & Szarkowski, et al., 2024, Guiding Values](#), this issue for evidence and discussion related to family-to-family support and DHH adult-to-family support).

Families also find informal support through neighbors, friends, religious/spiritual groups, and community organizations ([Bailey et al., 2007](#)). Informal social supports influence child learning opportunities, positive parenting practices, and child well-being ([Dunst, 2022](#)). Families with established support (both formal and informal) report optimism and enhanced well-being ([Poon & Zaidman-Zait, 2014](#); [Vanegas & Abdelrahim, 2016](#)).

Recommendations for Principle 3

[Table 1](#) provides recommendations for Principle 3 which describe Family Support. It includes recommendations for EI Provider actions, family activities and outcomes, and program/service and system processes. The recommendations address the basic needs of families and children, the importance of responding to family-identified strengths and challenges in provision of supports, and the development of connections with others with similar lived experiences, cultural backgrounds, or values.

Recommendations for EI Providers and families are intentionally placed side-by-side to represent the collaborative nature of the activities. The expectation is that EI Providers are responding to family-identified concerns and needs, not directing the content or activities. This collaborative process reflects the intent of effective family–EI Provider relationships ([Dunst & Espe-Sherwindt, 2016](#); [Moeller & Mixan, 2016](#)). In no way are the recommended activities and outcomes intended as a "test" of family abilities. Rather, they indicate activities and outcomes the family may experience from the responsiveness of the EI Provider and/or

through their own discoveries. When families are unsure what to ask or what is needed, the EI Provider should be sensitive to the uncertainty and collaborate with the family in exploring those areas. Each numbered item (inclusive of left and right columns) needs to be considered a part of a "set" that represents a collaborative process.

Principle 4 Child well-being: Infant/child development, positive social–emotional functioning, child welfare, and safeguarding

FCEI-DHH prioritizes child well-being and promotes a whole child approach to nurturing young children who are DHH and optimizing their outcomes within the context of their families. In alignment with the United Nations Convention on the Rights of the Child (UNCRC) [[United Nations Human Rights–Office of the High Commissioner: Convention on the Rights of the Child, 1989](#)], FCEI-DHH attends to children's safety, security, and ability to thrive. Professionals in FCEI-DHH are encouraged to embrace the philosophy that children who are DHH are allowed to grow, interact, play, learn, and flourish with dignity. Supports offered through FCEI-DHH aim to enhance the child's ability to engage actively with the family and in the community.

Principle 4 emphasizes overall child development. Historically, early intervention for children who are DHH has focused extensively on language development. Certainly, language and communication are important (Note: Principle 5, below, provides specific details about promoting language and communication abilities). Yet, FCEI-DHH recognizes that attending to the overall development of children who are DHH is essential.

Infant/child development

FCEI-DHH can provide supports for nurturing the growth and development of the whole child across developmental domains including social–emotional, physical, motor, cognitive, sensory, and linguistic skills (see [Moeller & Szarkowski, et al., 2024, Guiding Values](#), this issue, for detailed information about incorporating developmental frameworks). Families' visions for raising their child informs the selection of goals. Each family has unique strengths, desires, challenges, and goals, and each child has individualized needs. The presence of a disability or disabilities can alter a child's developmental trajectory. Understanding the impact of a particular disability on development among children who are DHH is crucial in addressing their unique needs. EI Providers and families should partner to establish expectations that recognize possibilities for the child when barriers are minimized. Unique child and family characteristics guide the direction of FCEI-DHH ([Guralnick, 2020](#)).

Play is an important aspect of children's development. Engagement in play activities and playful exchanges with adults, including family members, DHH adults, and others involved in caring for the child, enhances adult–child bonds. Play can involve various family members ([St. George et al., 2021](#)), although the extent to which play is child centered or adult directed is influenced by culture and child-rearing beliefs ([Kärtner & von Suchodoletz, 2021](#)). In some cultural contexts, adults are not perceived as partners in the child's play, though they may interact in ways that are "playful" and enjoyable. As children grow, play with peers, including other children who are DHH or have disabilities, can influence a child's development, identity formation, and social-interactional abilities.

Table 1. Recommendations for supporting families including addressing basic needs of the family and child, identifying and addressing strengths and challenges, and making relevant and supportive connections (Principle 3).**Principle 3 Family support: Basic needs, strengths/challenges, and connections**

EI Providers actions in response to family-identified needs and concerns	Family activities & outcomes that may be experienced when EI Providers are responsive to family needs and concerns
<ol style="list-style-type: none"> 1. Learn from families about any unmet basic needs and work together to address them so families can more fully engage with FCEI-DHH supports 2. Support families in exploring their available resources and accessing those resources to ensure that basic needs are met 3. Work alongside various family members to identify family strengths and needs 4. Discuss with family members their typical interactions with the child that bring them satisfaction and joy 5. Discuss, in response to families' input or questions, the factors that influence family support 6. Gain knowledge about the impact of social determinants of health on families 7. Build skills in recognizing one's own limitations and strengths as an EI Provider related to family well-being, safety, and understanding family basic needs 8. Gain knowledge and ability to collaborate with other professionals or organizations that can assist families in addressing basic needs that are outside the scope of FCEI-DHH 9. Support families in strengthening their efforts to partner and work effectively with multiple professionals to address any family-identified needs 10. Gain knowledge about the value of mindsets and activities that focus on being present and enjoying family interactions; discuss with families the positives associated with their child who is DHH; connect families to resources aimed at fostering their joy 11. Share information in response to family questions and needs about family-to-family support opportunities and their benefits, including organizations for families with children who are DHH, families from similar cultural backgrounds, or families with other shared experiences; assist families in connecting with family-to-family supports 12. Share information in response to family questions and needs about opportunities for DHH adult-to-family support, identify resources for making DHH adult-to-family connections, and assist families in making connections to a variety of DHH adults or DHH adult-to-family supports 13. Assist families in identifying non-DHH-specific formal and informal support resources (e.g., community organizations, play groups, friends, extended family, religious/spiritual organizations, tribal council), in response to family-identified needs, to aid them in addressing or building their specific social, cultural, religious/spiritual, or other support systems 	<ol style="list-style-type: none"> 1. Identify any areas of unmet basic needs and share them with EI Providers to help reduce barriers to being involved with FCEI-DHH 2. Identify which available resources may support the family in meeting basic needs 3. Share information with EI Providers and other professionals about family strengths and needs 4. Share among family members and with EI Providers typical interactions that bring the family satisfaction and joy 5. Give input to EI Providers about factors that influence family support and ask questions as needed 6. Engage with EI Providers to address concerns related to social determinants of health 7. Reflect on and identify family limitations and strengths related to well-being, safety, and basic needs 8. Consider opportunities offered by EI Providers to engage with resources/agencies that can assist the family in addressing basic needs 9. Share with professionals any family needs related to building confidence, knowledge, and skills to engage effectively with multiple professionals 10. Consider the value of mindsets and activities that focus on being present and enjoying family interactions; discuss with EI Providers the positives associated with their child who is DHH; engage with resources that promote joy in family-child interactions 11. Ask EI Providers about opportunities for family-to-family support and their benefits, including organizations for families with children who are DHH, groups for families from similar backgrounds, and/or groups for families with other shared experiences 12. Consider engaging in opportunities for DHH adult-to-family support and DHH community supports; consider meeting with DHH adults with a variety of lived experiences 13. Identify, in collaboration with the EI Provider, non-DHH-specific formal and informal supports that can benefit the family (e.g., community organizations, play groups, friends, extended family, religious/spiritual organizations, tribal council) and engage with them

Program/service and system processes

1. Develop or maintain evidence-informed models of service delivery that incorporate and value family support mechanisms
2. Develop, implement, and maintain plans/protocols to address families' basic needs and reduce barriers to engaging in FCEI-DHH
3. Provide ongoing guidance to EI Providers on (a) working with families to identify family strengths and needs for supports, (b) addressing families' basic needs, (c) identifying appropriate potential connections for families, (d) identifying own limitations in addressing family needs, and (e) developing cultural competence and humility along with behaviors that are responsive to the family

(Continued)

Table 1. Continued.

Principle 3 Family support: Basic needs, strengths/challenges, and connections

4. Train EI Providers in active, supportive listening and other supportive communication techniques
5. Provide guidance to EI Providers about offering a variety of supports to families adjusting to having a child identified as DHH, including resources to assist families having difficulty with the adjustment and resources to foster family’s enjoyment in interacting with and accepting their child who is DHH
6. Provide opportunities for EI Providers to gain knowledge about the benefits of and opportunities for connecting families of children who are DHH with a variety of other families for family-to-family support
7. Provide opportunities for EI Providers to gain knowledge about the benefits of and opportunities for connecting with a variety of DHH adults with diverse backgrounds for DHH adult-to-family support
8. Develop and implement formalized family-to-family and DHH adult-to-family support networks, including families with diverse perspectives and experiences as well as individuals who are DHH with diverse perspectives and experiences
9. Develop mechanisms for remotely connecting families to supports including FCEI-DHH supports, family-to-family supports, and DHH adult-to-family supports, to increase engagement (e.g., deliver FCEI-DHH supports via telepractice; make it possible for EI Provider-family connections to take place via cellphone or video—as appropriate for the context and the families)
10. Develop or maintain professional relationships with relevant organizations that can assist families in addressing basic needs or challenges with social determinants of health
11. Incorporate family members, parents, and DHH leadership into the strategic development of FCEI-DHH to bolster family support
12. Institute mechanisms to track and hold programs/services and systems accountable for providing appropriate family support (see Szarkowski et al., 2024, *Structure Principles*, this issue, in particular Principle 10)

Family activities and outcomes listed in the right-hand column are not intended as a “test” of family skills, but rather a description of the abilities and outcomes that may result when EI Providers are effectively supporting families through FCEI-DHH. Even if actions or processes in the Table are aspirational, progress toward their implementation and/or adaptation is encouraged to meet the needs of families of children who are DHH and the aims of FCEI-DHH. In any of the family activities or outcomes that involve engaging in services, it is essential to respect that families have the right to participate in ways that are most comfortable for them and to accept or decline what is offered.

Positive social-emotional functioning

Nearly all children benefit from being loved, being shown affection, and being touched (Carozza & Leong, 2021; Miguel et al., 2019; Morris et al., 2021; Tanaka et al., 2021). Caregiver touch and affection toward most young children calms their nervous system and establishes the foundation for cognitive and social-emotional development. Several behaviors have been found to contribute to establishing emotional connectedness between young children and their families and to developing understanding of the social world including (a) infant-caregiver synchrony, meaning the extent to which family members are “attuned” to the child’s needs and actions; (b) shared joint attention which is when family members/caregivers and the child look at the same objects of interest at the same time; and (c) turn-taking, referring to interactive play that includes back-and-forth exchanges between a caregiver and a child using objects or actions (Chen et al., 2020; Mood & Szarkowski et al., 2020). Early access to social exchanges and interactions with caregivers is important for children who are DHH (Kelly et al., 2020; Paul et al., 2020).

The quality and extent of parent-child interaction has a variety of implications for the development of children who are DHH (Curtin et al., 2021). Early interactions lay the foundation for infants’ and toddlers’ understanding and their relationships with family members; these in turn have significant implications for their later development across domains (see Moeller & Szarkowski, et al., 2024, *Guiding Values*, this issue). Family-child interaction targeted intervention sessions may be useful when families request formal guidance. Formal guidance was found to have a positive impact on the interactions of children who are DHH with their parents who are DHH (Day et al., 2018). Responsivity to a child who is DHH influences the development of the child’s social-emotional competencies (Hintermair et al., 2017). Antia and Kreimeyer (2015) found that families play an important role in teaching children who are DHH to understand and regulate emotions. EI Providers can offer guidance to families about how to make their emotional cues accessible to the child.

It is important to note that emotional signals or cues may be influenced by the family culture (See Szarkowski & Moeller et al., 2024, *Cultural & Global Implications*, this issue).

Child welfare

In Principle 3, families’ basic needs were addressed; here, in Principle 4, the welfare of the developing child is highlighted. The United Nations Children’s Fund (UNICEF) states that, “Development is the result of the interaction between the environment and the child” (2017; p. 14). Aligning with the sentiment of UNICEF, consideration of the child’s overall well-being is central to FCEI-DHH. The *Nurturing Care Framework* (World Health Organization [WHO] et al., 2018) is a widely adopted international guidance document that identifies effective strategies that can be implemented to optimize development of infants and toddlers. The *Nurturing Care Framework* emphasizes child welfare and opportunities for early learning and responsive caregiving. A child’s development can be detrimentally affected by inadequate access to nutrition, inconsistent or absent caregiving, threats to safety, inability to explore the environment and/or insufficient health care (WHO, 2012, 2020). Family members’ mental health, ability to bond with the child, and provision of sufficient communication interactions are important influences on the child’s mental health. In some instances, these areas may need to be addressed by professionals in the field of infant mental health (Cuijilts et al., 2019). Although EI Providers may not have the training or resources to work directly with families on mental health or other child welfare issues, they do need to be aware of these concerns. EI Providers can provide information about appropriate professionals who may be able to assist families and supports offered by other organizations or agencies.

Safeguarding

Children with disabilities are at increased risk of abuse and children who are DHH are up to four times more vulnerable

to abuse than children with typical hearing (Taylor et al., 2015; UNICEF, 2013, 2017; WHO, 2012). Although risk factors for child maltreatment differ across the globe, some factors that are believed to place children who are DHH at greater risk include (a) child language delays and other communication barriers, (b) reduced expectations of children who are DHH, (c) isolation, and (d) lack of appropriate services in place to protect children (Wilson et al., 2018). Children who are DHH who have delays in language may find it difficult to convey feelings of being unsafe or to reveal negative events that have occurred (Arulogun et al., 2012). Furthermore, reduced expectations of children who are DHH can result in attributing children's behaviors that are abuse or trauma related to being "typical" for children who are DHH (Schwenke, 2019). Children who are DHH and experience isolation may not have caring, trusted adults in whom they can confide and when they do experience abuse, there might not be accessible supports in place to help. To ensure child safety, care must be taken to safeguard children who are in unsafe environments (see Hands & Voices, 2020, for a toolkit on promoting child safety).

Recommendations for Principle 4

Table 2 includes guidance in the areas of infant/child development, positive social-emotional functioning, child welfare, and the importance of safeguarding in FCEI-DHH. As noted in the description of FCEI-DHH Table 1, both EI Provider actions and family activities and outcomes are side-by-side; this is intended to convey the spirit of collaboration for all actions.

Principle 5 Language and communication: Early and consistent access, approaches and opportunities, and language-rich environments

FCEI-DHH encourages and supports families in their ability to promote children's language and communication development in authentic ways during natural, daily interactions. FCEI-DHH recognizes the importance of language development for all children who are DHH. Families of children who are DHH use a variety of approaches (signed, spoken, or some combination) to provide accessible language and communication. Monitoring and flexibility in use of various languages and communication approaches is needed to ensure that input is accessible to the child.

Early and consistent access

Starting very early in life, all children need exposure and access to authentic language that is rich in quality and quantity and includes family-child conversational interactions. For children who are DHH, families provide language access using signed or spoken language(s), or a combination of signed and spoken language(s). Early, consistent, and sufficient (adequate in quality and quantity) access to language influences learning, social-emotional development, and cognition (Ambrose et al., 2015; Center on the Developing Child at Harvard University, n.d.; Cheng et al., 2019; Davidson et al., 2014; Eisenberg, 2020; Golinkoff et al., 2019; Goodwin et al., 2022; Hall, 2020; Hall et al., 2018; Hirsh-Pasek et al., 2015; Holzinger et al., 2020; Moeller & Tomblin, 2015; Tomblin et al., 2015). Language is vital not only for communication, but also because language shapes cognition, or how individuals think (Levine et al., 2020). Language also shapes social experiences and understanding of the world through social communication, or pragmatics (Szarkowski et al., 2020). When access

to language (whether signed or spoken) is limited, the child's linguistic, cognitive, and social-emotional development will likely be impacted (Head Zauche et al., 2017; Rautakoski et al., 2021).

The phenomenon of insufficient early language access is sometimes referred to in the literature as "language deprivation" (Hall et al., 2017). In the current special issue, the authors have elected to refer to this concept as "insufficient early language access" in order to represent the developmental context of newborns and infants (Szarkowski, 2018; see Hall, 2020 for considerations about language input, exposure, and access). The term, "insufficient early language access" is preferred because "language deprivation" as currently defined is based on research with adults and describes the negative impact of being deprived of exposure to meaningful language (Gulati, 2018; Hall et al., 2017). Regardless of the terminology used, it is critical to acknowledge that all children *require* exposure to language that is accessible to them from infancy. A steady "diet" of accessible language exposure is needed to prevent the consequences of insufficient language exposure on linguistic, cognitive, and social-emotional development (Cunningham et al., 2023; Rautakoski et al., 2021; Zauche et al., 2016). In working with families, EI Providers can emphasize the vital need for infants to have sufficient language access which is a proactive way to frame the concept in FCEI-DHH (Szarkowski, 2018). FCEI-DHH is predicated on this essential goal of beginning with families as early as possible to allow children the opportunity to receive sufficient language access that promotes positive developmental outcomes (see Moeller et al., 2024, *Foundation Principles*, this issue for evidence of impact of EI on children who are DHH).

It is essential that children who are DHH have full and consistent access to communication partners who engage with them. In an effort to ensure children receive robust and accessible language exposure from early ages, EI Providers work with families as they monitor children's language development to ensure that communication opportunities provide strong "language nourishment" for their children. If developmental monitoring reveals that the child is receiving insufficient language access, it is incumbent on the EI Provider to engage families in discussion about and consideration of alternative communication approaches that may address the developmental needs of the child (see Szarkowski et al., 2024, *Structure Principles*, this issue, for information about developmental assessment). In such situations, the "common ground" for families and EI Providers is to observe the success of the child communicating and engaging with others. Children who are DHH, barring other language-related disabilities, are fully capable of meeting language milestones, which is why monitoring is critical (Pontecorvo et al., 2023; Tomblin et al., 2015; Yoshinaga-Itano et al., 2017, 2021).

Approaches and opportunities

Throughout the 10 FCEI-DHH Principles, *approach* refers to a specific mode of communication and *opportunity* is a range of communicative interactions. *Language* refers to symbolic systems, be they spoken, signed, or written, that follow structured rules to convey meaning. Finally, *communication* is the socially appropriate use of language and includes natural gestures, facial expressions, etc. (Hoff, 2013). Language and communication are possible with or without *speech*, that is, the motor act of producing spoken words. Social communication, or pragmatics, begins to develop prior to the development of formal language abilities. For example, infants show a range of communicative intentions through "preverbal" or "non-verbal" signals such as gestures and facial expressions to indicate intent, to ask questions, or to acknowledge their communication partners (Toe et al., 2020). Importantly,

Table 2. Recommendations for supporting the well-being of the child, including holistic approaches to child development, encouraging positive social-emotional functioning, and supporting child welfare and safety (Principle 4).

Principle 4 Child well-being: Infant/child development, positive social-emotional functioning, child welfare, and safeguarding	
EI Providers actions in response to family-identified needs and concerns	Family activities & outcomes that may be experienced when EI Providers are responsive to family needs and concerns
<ol style="list-style-type: none"> 1. Support families in setting expectations for their child; provide information about child development and adjustments/accommodations that might be needed to nurture development, depending on the individual needs of the child who is DHH; support the family in helping their child to reach full potential 2. Offer assistance to families as they develop knowledge, skills, and abilities to identify existing and emerging child behaviors and skills 3. Offer guidance and use modeling to support families in incorporating knowledge about child development and encouraging positive social-emotional functioning (including play), that considers the language/culture/context of the family 4. Request information from the family about their goals for promoting the child's development and offer support to help them achieve those goals 5. Offer support to families in addressing potential developmental concerns or challenges; acquire skill in identifying supports to address all domains of a child's development 6. Gain knowledge about mental health in children and signs of stress, anxiety, or depression among adults; provide information to the family about resources to bolster emotional functioning, as appropriate 7. Increase awareness of (a) signs and symptoms of abuse, neglect, and exploitation; (b) pathways for reporting suspected and/or known abuse; and (c) strategies for actively supporting the safety of all children who are DHH 8. Respond to family questions by providing information about other specialists (inside and outside of FCEI-DHH); assist families in understanding the relevance of other professionals to foster child development and child well-being; collaborate with other specialists to promote child well-being as needed 9. Provide information in response to family questions about structured opportunities for the child who is DHH to engage with other children who are DHH (e.g., play groups, learning opportunities, community activities) and interact with a variety of DHH adults to promote positive social-emotional functioning 10. Provide information in response to family questions about opportunities for family-to-family support related to encouraging children's positive social-emotional functioning 	<ol style="list-style-type: none"> 1. Establish expectations appropriate for their individual child, informed by their child's developmental trajectory; support their child over time to reach the child's full potential 2. Provide information to EI Providers about their child's existing and emerging behaviors and skills to inform intervention plans 3. Nurture their child's development and social-emotional functioning throughout daily routines and interactions, including play 4. Provide information to EI Providers about the family's goals for optimizing their child's development and gain knowledge about how to achieve those goals 5. Ask questions of EI Providers to increase understanding of how the proposed supports can address the various domains of child development 6. Increase strategies as needed to manage stress, anxiety, or depression that may be experienced in the family; engage resources to support mental health, as needed 7. Increase awareness of (a) signs and symptoms of abuse, neglect, and exploitation; (b) pathways for reporting suspected and/or known abuse; and (c) strategies for supporting the safety of all children who are DHH 8. Ask questions about specialists, both inside and outside of FCEI-DHH, who can support their child's development and well-being; follow through with recommendations, as appropriate 9. Ask questions and gain knowledge about available opportunities for, and benefits of, having their child who is DHH interact with other children who are DHH and interact with a variety of DHH adults to support their child's positive social-emotional functioning 10. Ask questions and gain knowledge about available opportunities for and benefits of family-to-family support related to encouraging children's positive social-emotional functioning
Program/service and system processes	
<ol style="list-style-type: none"> 1. Apply frameworks for delivery of FCEI-DHH supports that place the whole child and the family at the center 2. Hire/Contract EI Providers with strong understanding of child development and child well-being; provide training for EI Providers to develop or maintain strong understanding of child development and child well-being 3. Provide ongoing training for EI Providers about promoting all domains of child development 4. Create and apply safeguarding guidelines and clear reporting procedures for FCEI-DHH EI Providers and others involved in providing direct supports to the family 5. Create and evaluate protocols for identifying and connecting children who are DHH and families who may require support from professionals outside of FCEI-DHH 6. Provide information and promote access for children who are DHH to connect with community-based adults who are DHH, who can serve as adults models of what it may be like to be DHH to promote child self-acceptance and well-being 7. Network with agencies and resources outside FCEI-DHH that support families and children who are experiencing abuse, neglect, or other traumas 	

In any of the following family activities or outcomes that involve engaging in services, it is essential to respect that families have the right to participate in ways that are most comfortable for them and to accept or decline what is offered. Family activities and outcomes listed in the right-hand column are not intended as a "test" of family skills, but rather a description of the abilities and outcomes that may result when EI Providers are effectively supporting families through FCEI-DHH. Even if actions or processes in the Table are aspirational, progress toward their implementation and/or adaptation is encouraged to meet the needs of families of children who are DHH and the aims of FCEI-DHH.

implementation of FCEI to support the emerging language and communication skills of infants and toddlers who are DHH need not wait until a child is expressively communicating. Much can be done to support the early development of pragmatic skills and build relationships and understandings between family members and the child even before language begins to emerge (Mood & Szarkowski et al., 2020).

A variety of communication approaches are used with children who are DHH including approaches that capitalize on (a) the visual mode such as signed languages, (b) the auditory mode using spoken languages, (c) combined modes such as cued speech or cued language¹, and/or (d) augmentative supports such as communication boards or devices. Families may opt to incorporate bimodal bilingualism, which uses one sign language and one written language, with or without the spoken form or other forms of bi- or multilingualism, incorporating more than one signed or spoken language (Grosjean, 2010; see Szarkowski & Moeller et al., 2024, *Cultural & Global Implications*, this issue). Families often combine approaches and make changes to their approaches over time to address the changing needs of the child (Scarinci et al., 2018).

Multiple factors influence the decisions families make about the communication approach(es) used with their child who is DHH (Decker et al., 2012). Decisions may include input based on family values and priorities, cultural influences, resources and supports available, alongside child, intervention, and professional factors (e.g., availability of trained EI Providers, skills in guiding informed decisions). Effective EI Providers share accurate, comprehensive, balanced, and objective information about all communication approaches. The EI Provider's role is to support families as decision-makers and to respect the decision-making authority of the family. (Note: Decision-making is addressed in Principle 6, this article; see also Szarkowski & Moeller et al., 2024, *Cultural & Global Implications*, this issue, for discussion of cultural influences on decision-making.)

In the FCEI-DHH context, information shared with families about communication approaches should be accurate, comprehensive, and balanced (Decker et al., 2012; Decker & Vallotton, 2016). The provision of *accurate* information means that the information provided to families is correct in all ways and not altered by the biases of EI Provider(s) or others' individual viewpoints. *Comprehensive* information is inclusive of all opportunities for children and families, whether or not those opportunities are available in one's locale. *Balanced* refers to the sharing of information about the risks, benefits, uncertainties, and requirements of the different communication approaches (Kecman, 2019; Young et al., 2006). EI Providers guide families in learning what is required to implement various communication approaches in ways that ensure the child has exposure and access to language and communicative interactions.

Structural inequities related to communication approaches exist across the globe. Inequities result in families having unequal access to a range of language and communication approaches. Despite the need for families to know about all the communication opportunities, the availability of resources in specific regions influence the decisions families make. For example, access to assistive hearing technologies and the expertise necessary to maximize their use varies widely across the world (Kingsbury et al., 2022). In addition, sign languages are frequently not recognized with equal status as spoken languages, despite being linguistically equivalent to spoken languages and effectively used as the primary language for many people throughout the world (De Meulder et al., 2019; Perlmutter, 2001)². Biases and socially constructed views of disability also impact

families' ability and desire to access a variety of supports (Harvey & Kara, 2017). EI Providers, as well as programs and the systems in which they work are encouraged to recognize inequities that exist and assist families to access supports they desire for their child to the degree possible.

Language-rich environments

Language-rich environments are characterized by (a) consistent and sustained access to language(s) in naturally occurring contexts; (b) use of descriptive language; (c) natural repetition of language; (d) recognition of and response to the child's communicative signals (i.e., following the child's lead); (e) authentic opportunities to use the language(s) in and outside the home; (f) communication partners who are responsive to the child; (g) visible access to the signed or spoken language(s) used by the child (Allen, 2015; Hardin et al., 2014; Singleton & Newport, 2004); (h) exchanges that maintain and extend the child's attention; and (i) opportunities to communicate socially in a variety of ways. Social communication includes use of language and non-verbal signals, such as gestures and facial expressions for communicative purposes such as requesting, describing, asking/answering questions, sharing stories about past events, and participating in polite social routines, such as apologizing or saying "please" (American Speech-Language and Hearing Association [ASHA], 2022). In general, families are supported by EI Providers in using strategies during daily routines that are known to promote language development in young children (Bavin et al., 2021; Berke, 2013; Cruz et al., 2013; Decker & Vallotton, 2016; Desjardin & Eisenberg, 2007; Gale & Schick, 2009). Play can also be both a mechanism to support language and a means by which to foster language-rich environments (Brown & Watson, 2017). Infants begin to develop play in the first year of life, through turn-taking and responding to caregivers, while toddlers often engage in pretend play (e.g., using objects to represent other things such as a block "becomes a car"). For example, when family members provide language (signed or spoken) during play, they are simultaneously creating a rich language environment, and enriching the child's play as well as language skills.

Regardless of the approach, language development can be enhanced by family-child interactions that demonstrate caregiver sensitivity to the child and the child's needs. Sensitive interactions support and encourage the child, focus on the child's interest, and follow the child's lead (Raab et al., 2013). Joint engagement in play and playful interactions support the process of bonding and attachment and promote learning in a joyful context³ (Runcan et al., 2012). High-quality family-child interaction (including interactions with siblings) that promote language include (a) waiting for or gaining the child's attention, (b) sharing and maintaining a mutual focus with the child, (c) providing responses that are attuned to the child's interests and needs, and (d) interpreting a child's communicative intent by responding and then expanding on what the child communicated (Curtin et al., 2021).

Families and EI Providers should collaborate to find culturally acceptable ways to encourage accessibility to language input (Ganek et al., 2018; Maluleke et al., 2021; Paradis et al., 2021) as some characteristics of language-rich environments may not align with the culture. One example is when clothing limits children's visual access to their caregiver's facial expressions or eye contact. Another example is that in some cultures, adults do not speak directly to children. Through trusting, engaging partnerships with EI Providers, families can increase their knowledge about creating language-rich environments that are accessible

to their child who is DHH while respecting cultural norms (see Szarkowski & Moeller et al., 2024, *Cultural and Global Implications*, this issue).

Visual language(s) and communication

For families communicating through sign language, or bilingually in signed and spoken language(s), it is important for family members to gain fluency in sign language. EI Providers can assure families that sign language fluency can be attained over time with appropriate instruction intended for families of children who are DHH (Snoddon, 2015) and exposure to fluently signing adults who are DHH (Hamilton & Clark, 2020). Full fluency is not necessary early on to effectively communicate with young children (Caselli et al., 2021; Pontecorvo et al., 2023; Singleton & Newport, 2004). EI Providers can support and encourage interested families to begin learning how to use sign language and stress the importance of family-child communication over perfect language.

Family members who are using sign language can create consistent access to language for their child who is DHH by (a) positioning themselves for optimal visual communication; (b) optimizing lighting; (c) reducing “visual noise” or distractions in the environment; (d) promoting conversational turn-taking; (e) using their face, hands, and body to engage their child’s visual communication and joint attention; (f) using signs and gestures in their child’s visual field (e.g., not behind their child’s back); and (g) utilizing a child-directed sign register wherein signs are produced in a larger, clearer, slower, and more repetitive manner than when communicating with adults (Gale & Schick, 2009; Pizer et al., 2011; Roos et al., 2016). The visual and tactile strategies used naturally by families who are DHH with their children who are DHH may serve as a model for families learning sign communication (Brooks et al., 2020; Spencer & Harris, 2006). Families should know that they can opt for both signed and spoken language approaches and not have concern for hindering spoken language if appropriate supports are in place to foster both approaches (Pontecorvo et al., 2023).

Auditory access and spoken communication

Creating language-rich environments for children learning spoken language(s) relies on the best exposure to spoken language possible. This includes the early provision of hearing aids, bone-anchored devices, or cochlear implants and consistent use of the devices (Tomblin et al., 2015; Walker, Holte, et al., 2015; Walker, McCreery, et al., 2015; Wiseman et al., 2021). Among other considerations, the type of hearing device(s) used is informed by a child’s hearing levels. Well-fit devices are essential for children whose families wish to promote spoken language with their children (McCreery et al., 2013; McCreery & Walker, 2017). It is recognized that access to hearing technologies varies around the world. Where technologies are available and families opt to use them, FCEI-DHH helps to ensure families learn to optimize the child’s auditory access and ability to benefit from auditory information (Binos et al., 2021; Estabrooks et al., 2020). It is also important for families to receive support in managing hearing devices (Muñoz et al., 2021) and ensuring the infant/child consistently uses the device(s) (Gagnon et al., 2021; Tomblin et al., 2015; Visram et al., 2021; Walker, McCreery, et al., 2015; Wiseman et al., 2021).

To maximize a child’s ability to hear and listen using hearing assistive technologies, it is important to create environments that minimize the effects of background noise and the distance between communication partners (Goldsworthy & Markle, 2019; Neuman et al., 2012). Young children often live and listen in noisy conditions in their home environments (Benítez-Barrera et al., 2020). These environments are not optimal and can make it

more challenging to learn to listen. FCEI-DHH can help families recognize optimal listening environments and learn to adjust the environment to promote access to spoken communication. Families may utilize technologies that can provide feedback on their interactions with the child to help foster their language and communication engagement (e.g., video-assisted feedback, use of tools that capture child-caregiver interactions such as LENA, etc.: Lam-Cassettari et al., 2015).

Visual and/or spoken language

EI Providers should support families to create optimal environments for their child’s language access, language learning, and social communication. Regardless of communication and language approaches, opportunities, or strategies employed by the family, children who are DHH may experience isolation from family plans, conversations, and other exchanges (Hall et al., 2018; Meek, 2020). Inconsistent access to family conversations may result in reduced opportunities for incidental learning, described as gaining information through passive exposure to language. Children benefit from having multiple communication partners including siblings and extended family members, rather than a single communication partner who is responsible for communication with the child. The provision of full communication access is a family affair—all communication partners need to be involved in providing language-rich and communication-accessible environments. For example, touching to gain a child’s attention or to emphasize certain messages can support children who are DHH in attending to communication (Abu-Zhaya et al., 2019). Optimizing visual communication requires optimal visual access. For this reason, all babies and young children who are DHH should have their vision screened and have follow-up testing if it is recommended. If testing results reveal vision-related needs, the child should receive appropriate interventions and adaptations to support visual access.

Recommendations for Principle 5

Table 3 includes recommendations about language and communication access and development in children who are DHH. Emphasis is placed on early and consistent language access, communication approaches and opportunities for encouraging language access, and the importance of providing language-rich environments. As noted in previous tables, the placement of the EI Provider actions with family activities and outcomes is intended to convey collaboration and reciprocity in the relationship.

Principle 6 Family decisions: Decision-makers, culture and context, information, and adaptability

FCEI-DHH provides support, information, and experiences that strengthen families’ abilities as skilled, confident, and competent decision-makers for themselves and their children. EI Providers should respect the family and their culture and respond to the needs of the family and child during decision-making processes.

Decision-makers

Families need to know they can be informed decision-makers and can receive support in the process of making informed choices (Young, Hunt, et al., 2005; Young, Jones, et al., 2005; Young et al., 2006). This process is meant to be a “give-and-take” with the family, where the family’s inquiries and needs drive the process. Families have the right and authority to make

Table 3. Recommendations for language and communication development, including supporting early and consistent access, providing a range of communication approaches and opportunities, and providing language-rich environments for the child (Principle 5).**Principle 5 Language and communication: Early and consistent access, approaches and opportunities, and language-rich environments****EI Providers actions in response to family-identified needs and concerns**

1. Offer guidance to families in promoting their child's language development through pleasurable, playful, and meaningful, communicative family-child interactions
2. Provide information and support families in recognizing and responding to the child's earliest communicative attempts (e.g., gestures, eye gaze, body movements, signs or sign approximations, vocalizations, smiles, cries, early words)
3. Share information in response to family needs about language acquisition and factors that contribute to the creation of language-rich environments
4. Offer guidance in response to family-identified needs regarding ways to provide language-rich environments that are accessible and consistent; support families to engage the child in communicative interactions across daily caregiving tasks and typical routines, making use of what is available in the family environment
5. Offer guidance to families about the importance of vision screening, further evaluation, and interventions for vision if needed
6. Guide families to engage their child's visual attention for communication and to establish and maintain natural turn-taking interactions throughout the day; for children with auditory access, guide families in engaging auditory attention and encouraging auditory skill development for communication
7. Limit bias and provide balanced, comprehensive, and accurate information about communication approaches; avoid framing signed and spoken languages as mutually exclusive; recognize the central role of families in making informed decisions (see Principle 6, this paper, for more details)
8. Offer guidance about the responsibilities of the family associated with various communication approaches
9. Partner with the family to use information from ongoing monitoring of language development milestones (see Szarkowski et al., 2024, *Structure Principles*, this issue) to ensure that communication approaches are promoting the child and family's ability to achieve desired outcomes
10. Gain skills in collaborating with families to adjust communication approaches when needed; include other communication opportunities and/or tools to mitigate prolonged language delays if adequate gains are not being made
11. Gain technical knowledge and skills to support families in managing all devices that promote children's language and communicative interactions, (including hearing aids, bone-anchored devices, cochlear implants or other implantable devices, visual technologies, and alternative and augmentative communication devices, consistent with the child's needs)
12. Provide families access to opportunities to engage with a range of adults who are DHH (including those who communicate through spoken language, sign language, cued speech/cued language, or who utilize a variety of approaches) who can teach families about language opportunities and communication approaches, and who can share their lived experiences with communication and technologies

Family activities & outcomes that may be experienced when EI Providers are responsive to family needs and concerns

1. Actively promote their child's language development through authentic, playful, and routine daily communicative interactions
2. Respond to their child's communicative attempts (e.g., gestures, eye gaze, body movements, signs or sign approximations, vocalizations, smiles, cries, early words) from the earliest stages
3. Seek guidance about language acquisition and factors that contribute to establishing language-rich environments as needed
4. Provide accessible, consistent, and sustained language-rich environments that engage their child in communicative interactions with multiple family members/communication partners across daily parenting tasks and typical routines
5. Seek vision screening and further vision evaluation and interventions if needed for their child
6. Increase awareness of and implement ways to engage their child's visual attention for communication, as well as to establish and maintain natural turn-taking interactions throughout the day; for children with auditory access, increase awareness of and implement ways to encourage their child's auditory skill development for communication
7. Increase awareness about language and communication approaches that are available for their child and about the importance of creating language-rich environments during the early, sensitive periods of development; understand family rights to make decisions and to be informed decision-makers (see Principle 6); seek information about communication approaches and opportunities that is accurate, comprehensive, and balanced
8. Gain knowledge and skills to effectively implement the selected communication approaches
9. Partner with EI Providers to use information from ongoing monitoring of language development milestones to ensure that selected communication approaches (chosen by the family, supported by EI Providers, and other members of the Collaborative Team) are achieving the desired developmental outcomes
10. Collaborate with EI Providers to adjust communication approaches when needed; re-engage periodically in discussions about communication opportunities
11. Gain technical knowledge and skills in managing and maintaining consistent use of their child's hearing aids, bone-anchored devices, or cochlear implants or other implantable devices, vision technologies, and other assistive devices and technologies that support communication
12. Consider opportunities to engage with a variety of adults who are DHH and are trained to work with families, understand child development, and can provide valuable insights into building and expanding communication and language abilities and using various communication approaches and technologies

(Continued)

Table 3. Continued.

Principle 5 Language and communication: Early and consistent access, approaches and opportunities, and language-rich environments	
13. Provide access to a variety of other families with children who are DHH so families can benefit from exposure to the successes and challenges others experienced in promoting their child’s language and communication	13. Consider opportunities to engage with a variety of other families of children who are DHH to gain insights from their successes and challenges with promoting language and communication development
14. Support families to focus on the value of quality family–child interactions (that are not exclusively focused on language development) and the understanding that just being together in joyful ways provides benefits to the family and their child	14. Collaborate with the EI Provider in increasing knowledge about the value of family–child interactions—including play—for their child’s overall development
15. Gain knowledge about working with families, child development, and working with young children (for all members of FCEI teams, including DHH and family leaders and professionals that collaborate with the team)	

Program/service and system processes

1. Create and apply policies and implement strategies that effectively endorse a complete range of communication approaches; provide informational materials for families about communication approaches and opportunities in a variety of formats for families (e.g., visual handouts, plain language handouts, handouts translated to language(s) used by the family)
2. Create and apply policies and implement strategies that require ongoing monitoring of language development
3. Create and apply policies and implement strategies that endorse EI Providers’ focus on parent–child interactions that encourage family–child bonding, attachment, and child communicative and language development
4. Implement program guidelines that lead to EI Providers’ focus on family responsiveness to their child and development of a family communication environment that is rich in language exposure and communicative interactions
5. Endorse the need for EI Providers to support families in recognizing the value of high-quality parent–child interactions
6. Ensure that EI Providers have the technical skills needed to support children and families in their use of technologies (hearing aids, bone-anchored devices, cochlear implants and other implantable devices, visual technologies) to promote access to language and communication
7. Create supports that offer flexibility in communication approaches and encourage changes in communication approaches as needed to mitigate prolonged child language delays
8. Create mechanisms to identify gaps in provision of information about communication approaches; offer guidance to EI Providers in supporting families to develop skills in utilizing communication approaches; reduce barriers to family access by providing a range of communication approaches within programs/services and systems
9. Hire/contract with professionals who have supportive attitudes and expertise in a range of communication approaches and promote the value of all approaches and opportunities
10. Hire/contract with EI Providers, coordinators, leaders, and supervisors with fluency or expertise in more than one spoken/signed language, whenever possible, and/or provide professional development for EI Providers to achieve fluency or expertise in a variety of communication approaches
11. Provide training for EI Providers to address bias including recognizing their own biases, increasing understanding of the implications of bias in provision of supports, and developing strategies to minimize their biases and the impact of those biases in their work with families (e.g., [Carter et al., 2020](#))
12. Provide ongoing training that enables EI Providers to implement evidence-based FCEI-DHH in a manner that is as free from bias as possible (see [Szarkowski et al., 2024, Structure Principles](#), this issue, particularly Principle 7, for more information; also see [Endnote 4](#), current paper)
13. Provide opportunities for key leaders (DHH and hearing professionals, researchers, parents, parent leaders, and DHH community members) to identify ongoing system-wide needs related to language and communication access
14. Establish collaboration across programs and systems to increase families’ access to FCEI-DHH supports
15. Hire/contract with native sign language users to train EI Providers and work with families to increase sign proficiency as desired

Family activities and outcomes listed in the right-hand column are not intended as a “test” of family skills, but rather a description of the abilities and outcomes that may result when EI Providers are effectively supporting families through FCEI-DHH. Even if actions in the Table are aspirational, progress toward their implementation and/or adaptation is encouraged to meet the needs of families of children who are DHH and the aims of FCEI-DHH. In any of the family outcomes or behaviors that involve engaging in services, it is essential to respect that families have the right to participate in ways that are most comfortable for them and to accept or decline what is offered.

informed decisions regardless of their gender, education level, or other factors. To support families to be informed decision-makers, EI Providers are expected to respect families and provide them with comprehensive, accurate, and impartial information ([Coulter & Collins, 2011](#); [Harris et al., 2021](#); [Stewart et al., 2021](#); [Young et al., 2006](#)). Recognizing the value of family members as decision-makers and creating opportunities for families and professionals to connect in safe, transparent, and respectful ways are essential and complementary to any decision-making process ([Madrigal & Kelly, 2018](#)).

Culture and context

The cultural background of the family, of the EI Provider, and of the majority culture(s) in which the family and EI Provider reside can influence the conceptualization of FCEI-DHH, the supports that are available, the supports that are deemed appropriate, and the ways that supports may be utilized. All of these factors influence decision-making. Who makes decisions and how decision are made varies across cultures ([Derrington et al., 2018](#); see [Szarkowski & Moeller et al., 2024; Cultural & Global Perspectives](#), this issue, for more in-depth discussion of

the role of culture and decision-making). It is essential for EI Providers to acknowledge the ways in which culture and related definitions of “family” influence the decision-making process (see Moeller & Szarkowski, et al., 2024, *Guiding Values*, this issue, for descriptions of family and being family-centered). EI Providers should also consider the ways that their own culture(s) influence their attitudes toward responsibilities associated with making decisions.

Information

Decision-making complexity

Decisions families make for their children who are DHH are typically complex. Families often lack knowledge about “being DHH,” or about the opportunities available for their children, which means navigating unfamiliar information and systems (Porter et al., 2018). Families of children who are DHH make many decisions for their child that are specific to communication and language such as which communication approach(es) and which hearing devices to use, all of which are complex (Porter et al., 2018). There are also everyday decisions to be made as families adjust to the child’s needs and strive to implement new strategies while balancing the needs of the whole family. Families often value guidance in this process, and policy statements from specific organizations endorse supporting families in making informed decisions (Joint Committee on Infant Hearing [JCIH], 2019; Moeller et al., 2013).

Providing information

When sharing information, EI Providers should consider the unique aspects of each family and how various families integrate information in different ways (Hawley & Morris, 2017). Providing written information at an appropriate literacy level for families or providing alternative formats, such as non-print materials, is advised. Nonetheless, families have a right to comprehensive information, including information about resources that may be beyond what is locally available. Information should be provided to families in their home language wherever possible. In FCEI-DHH, providing information, reflecting on experiences, and engaging in reciprocal, open dialogue with families can enhance families’ understanding and increase their trust in professionals. Simply giving information does not ensure understanding nor does it necessarily lead to informed decision-making (Porter et al., 2018). It is recognized that access to communication approaches and opportunities, as well as technologies that can support children who are DHH, varies widely across the world.

Balanced information and professional bias

It is essential that families, and designated decision-makers, receive balanced information that acknowledges the value of various language and communication approaches and opportunities (Young et al., 2006). Balanced information is presented in a way that places equal weight on positive and negative aspects of all shared information and avoids placing value judgments on various approaches (Abhyankar et al., 2013). While it is challenging for many professionals to provide balanced information and to provide it objectively, doing so is important because the information provided and the way in which it is communicated can influence family decision-making.

In some cases, EI Provider *bias* or lack of balance influences what information is offered to families and/or how the information is presented. Parents have reported receiving biased, unclear, or conflicting advice from various professionals, which can make

the process of decision-making stressful (Crowe et al., 2014; Harris et al., 2021; Porter et al., 2018, 2021). It is necessary to provide ongoing training to EI Providers illustrating balanced ways of presenting information that is as free from bias as possible. Although the need to share *unbiased* information with families is an often-stated value, the term “unbiased” is avoided in the current special issue in recognition that all humans have some degree of inherent bias (Eberhardt, 2020; Porter et al., 2018). Even among well-meaning and well-intended professionals, cognitive bias is common and often unconscious (Croskerry, 2013; Henriquez, 2012; Ozdemir & Finkelstein, 2018; Porter et al., 2018). The goal for EI Providers in FCEI-DHH is to minimize the effects of their own biases on information sharing and family decision-making. However, recognizing one’s own biases is challenging and may require training and implementation of strategies beyond advising EI Providers to be aware of their biases (Campbell et al., 2017; see Ludolph & Schulz, 2018 for debiasing strategies).

Lack of balance in information sharing happens when the EI Provider favors one program/service or communication approach over others or offers only one type of program/service (Kite, 2020; Secora & Smith, 2021). Examples of biased guidance include a stated preference for spoken language-only opportunities so that the child will “fit in” the majority hearing culture, or a stated preference for sign language as the only or best approach to prevent language delays (Crowe et al., 2014; Harvey & Kara, 2017). A preference for a single approach for all children who are DHH also does not fit with the diversity of family and child needs that require differentiated approaches (Leigh & Marschark, 2016). Solutions to the issue of providing comprehensive, accurate, and balanced information are not straightforward.⁴ Harris and colleagues (2021) describe challenges in implementing informed decision-making in the context of differing perspectives about communication approaches and languages best for children who are DHH and political positioning that occurs among professionals (Harris et al., 2021). FCEI-DHH advocates for greater transparency with families and encourages EI Providers to acknowledge the political biases in the field in early discussions with families. In addition, it is important to avoid withholding information or making judgments about a family’s readiness for information. If an EI Provider acts as a “gatekeeper” of information, this withholding of information might unintentionally compromise the family’s investment in the decisions they make.

Additional supports for decision-making

In FCEI-DHH, family understanding is supported through opportunities to engage in reciprocal dialogue with EI Providers and with others, including engaging with DHH adults and other families of children who are DHH (DesGeorges, 2003; Eleweke et al., 2008; Fitzpatrick et al., 2008; Henderson et al., 2014, 2016; Jackson, 2011; Jackson et al., 2010; Poon & Zaidman-Zait, 2014). Supporting decision-making is essential because families’ engagement in promoting early communication is a determining factor in the outcomes of a child who is DHH (Ambrose et al., 2015; Bavin et al., 2021; Cruz et al., 2013; DesJardin & Eisenberg, 2007; Holzinger et al., 2020; Nittrouer et al., 2020; Pénicaud et al., 2013; Quittner et al., 2013; Szagun & Stumper, 2012). Thus, the decisions families make for their children are inestimably important.

Decision-making and time

Families will vary in how quickly they desire access to information. Honoring families in FCEI involves encouraging them to take the time necessary to understand their options and reducing

Table 4. Recommendations for supporting family decision-making authority, including the need to consider the complexity of decisions, the impact of culture, providing information in ways that leads to informed decisions, and the need for flexible, adaptive processes (Principle 6).

Principle 6 Family decisions: Decision-makers, culture and context, information, and adaptable decisions

EI Provider actions in response to family-identified needs and concerns

1. Discuss with families how the decision-making process is situated within larger cultural, social, political, and educational structures; discuss with families the value of considering individual strengths, resources, needs, and experiences in decision-making
2. Gain information and insights from families about their contextual barriers to family decision-making (e.g., family members who want to be involved in decisions having differing understanding of the processes or different levels of comfort with the topics; family members may have different perspectives on what is the “right choice” at a particular time); seek to minimize contextual barriers that are changeable
3. Share information and reinforce for families that flexibility and adaptability are essential in the ongoing and fluid decision-making process as their child develops and grows
4. Provide accurate, objective, impartial, and nonjudgmental information, as free from bias as possible, regarding opportunities for intervention to address family- and child-specific needs and communication approaches that could potentially support the family, including those that may not be available within their program or area
5. Provide information and experiences that build understanding and clarity regarding (a) communication approaches, supports, and technologies; (b) decisions to be made; (c) values; (d) certainty, risks, and advantages of available approaches; (e) supports available; and (f) family needs to support informed decision-making
6. Inquire about family members’ important values, cultural and other beliefs, preferences, expectations, strengths, and support systems in relation to decision-making
7. Develop abilities to guide decision-making discussions with families
8. Share information and experiences from a variety of sources that are evidence-informed and comprehensive; use creativity and flexibility in providing information to support the varied ways families receive and process information, including addressing their health literacy needs
9. Provide information to families in accessible formats to support decision-making so that the benefits, risks, uncertainties, and requirements of each of the potential approaches are clear and understood prior to decision-making
10. Provide families with the space, time, and support to examine, re-examine, and explore various approaches and opportunities for their child without pressure to make rapid decisions
11. Provide families with opportunities to meet with other families of children who are DHH who have diverse experiences to support decision-making
12. Provide families with opportunities to engage with adults and older children who are DHH with diverse lived experiences to support informed decision-making
13. Actively create regular opportunities for families to review their decisions and determine whether changes in supports or approaches are needed

Family activities & outcomes that may be experienced when EI Providers are responsive to family needs and concerns

1. Engage in collaboration with EI Providers in decision-making processes; increase awareness of the cultural, social, and educational structures that may involve their child who is DHH
2. Share information with EI Providers about factors related to the family’s context (e.g., family members who want to be involved in decisions having differing understanding of the processes or variable levels of comfort with the topics; family members may have different perspectives on what is the “right choice” at a particular time) that may be affecting family decision-making
3. Build recognition that decision-making is an ongoing process requiring flexibility and adaptability, which is essential in the decision-making process as their child develops and grows
4. Ask questions and gather information about the spectrum of intervention opportunities and communication approaches to support family- and child-specific needs; consider the context of their child and family in evaluation of potential opportunities and approaches
5. Review and evaluate information provided about (a) communication approaches and technologies; (b) decisions to be made; (c) values; (d) certainty, risks, and advantages of available approaches; (e) supports available; and (f) family needs to support informed decision-making
6. Offer information about family values, cultural and other beliefs, preferences, expectations, strengths, and support systems to inform the decision-making process
7. Share information with EI Providers about the family’s goals and ways of achieving those goals given their child’s unique strengths, potential vulnerabilities, and changing needs/abilities
8. Review information from a variety of sources that are evidence-informed and comprehensive to facilitate decision-making; provide input about the family’s preferred ways of receiving and processing information; share with EI Providers various family members’ preferences for receiving information (e.g., visual formats, information provided in smaller “chunks,” opportunities to review information provided by EI Providers before discussing, etc.)
9. Explore the benefits, risks, uncertainties, and the responsibilities for the family associated with each of the various approaches; share how each of these factors is important to the family as part of decision-making
10. Take time to examine, re-examine, and explore various approaches and opportunities relevant to and appropriate for their child and family
11. Engage with other families of children who are DHH, respecting that every experience can be different, yet exposure to a variety of others with similar experiences can be beneficial and helpful in the decision-making process
12. Engage in opportunities to meet with adults and older children who are DHH with diverse lived experiences to support informed decision-making
13. Partner with EI Providers to regularly review decisions and determine whether the family wishes to alter them

Program/service and system processes

1. Provide training for EI Providers on best practices for supporting decision-making processes for families
2. Provide guidance to EI Providers regarding the use of flexible and accessible approaches to information provision to support the varied ways families receive and process information

(Continued)

Table 4. Continued.

Principle 6 Family decisions: Decision-makers, culture and context, information, and adaptable decisions

3. Provide guidance to EI Providers about how to ensure that information provided to families is meaningful and accessible (considering the variable literacy needs of families) to promote informed decision-making
4. Create guidelines and monitor to ensure that families know their rights, and that family decision-making authority is supported
5. Ensure that decision-making processes are occurring in collaboration with families, EI Providers, and other collaborating professionals
6. Create guidelines that promote adaptive approaches to decision-making; create systems that allow for adjustments to family's decisions to accommodate changes within the family and in response to the child's growth, preferences, learning needs, and changing contexts
7. Provide families with opportunities to engage with other families of children who are DHH and family leaders who have diverse experiences to support informed decision-making
8. Provide families with opportunities to engage with DHH adults with diverse lived experiences to support informed decision-making
9. Whenever possible, provide access to EI Providers who are a "cultural and language match" to the family; when this is not possible, provide access to the expertise of cultural brokers, where appropriate, or others to support information access and family decision-making
10. Where appropriate to the cultural context, provide information to EI Providers and families about their legal rights in FCEI-DHH
11. Establish mechanisms for resolving conflicts over decisions
12. Develop plans to minimize contextual and/or cultural barriers to informed decision-making

Family activities and outcomes listed in the right-hand column are not intended as a "test" of family skills, but rather a description of the abilities and outcomes that may result when EI Providers are effectively supporting families through FCEI-DHH. Even if actions in the Table are aspirational, progress toward their implementation and/or adaptation is encouraged to meet the needs of families of children who are DHH and the aims of FCEI-DHH. In any of the following family outcomes or behaviors that involve engaging in services, it is essential to respect that families have the right to participate in ways that are most comfortable for them and to accept or decline what is offered.

pressure that families may experience to make quick decisions. At the same time, EI Providers should help families understand the benefits of early stimulation to promote children's development. Time is often an insufficient resource for families. EI Providers can demonstrate respect for time constraints by helping families incorporate stimulating activities, positive and effective interactions, and intervention suggestions into daily routines. EI Providers are responsive when they consider the multiple ways in which time and timing can impact families and the FCEI-DHH process.

Decision-making models

Several decision-making models that support Informed Decision-Making are described in the literature. Three examples of family decision-making models are *Informed Choice*, *Shared Decision-Making*, and *Collaborative Consideration of Choices*. It is worth noting that these models emerged in high-resourced contexts where numerous opportunities for families may exist. In some parts of the world, families lack choices or access to a continuum of supports, which limits the application of these family decision-making models. Yet, understanding of decision-making models and application of strategies that provide structure to making decisions can benefit EI Providers and families alike.

Informed Choice models recognize the ability of families to make knowledgeable decisions that reflect and incorporate their own strengths, resources, needs, culture, values, and viewpoints (Young et al., 2006). *Informed Choice* is supported by the values described in the sections above (e.g., having full access to comprehensive, objective, balanced, relevant, and evidence-informed information about the full ranges of options, including benefits and risks, related to decisions).

Shared Decision-Making (SDM) involves families, EI Providers and potentially other professionals using the best available evidence in conjunction with family preferences and choices in making decisions. Family support and use of decision aids or question prompts can facilitate SDM (Hoffman et al., 2014; Kon & Morrison, 2018; Légaré et al., 2011). The SDM model follows a series of steps; this allows families to make decisions through their interactions with EI Providers and other professionals knowledgeable about DHH, and, perhaps, medical professionals (Opel, 2018; Porter et al., 2018).

Collaborative Consideration of Decisions includes three components. First is the introduction of reasonable options which is referred to as "choices talk." The second component is discussing together the relative benefits and risks of the options, as well as exploring what is unknown about the options; this is referred to as "options talk." The third component is supporting families in moving toward decisions; this is known as "decisions talk" (Elwyn et al., 2012).

Adaptability of decisions

Decision-making is an iterative process. This process should be flexible, adaptive, and responsive to the changing needs of the child and family. Early engagement in decision-making equips families for the continuous cycle of decision-making in their experience of raising their child, including opportunities to (1) adjust the supports they are receiving and interventions they are utilizing based on the evolving needs of their child and family, (2) examine and explore various communication and language approaches and opportunities to help them achieve identified goals, and (3) review their decisions, evaluate child and family progress, and change their minds. This iterative process includes ongoing review and modification of decisions as needed about the supports families receive and request, the professionals they are working with, and the hearing and other assistive technologies fitted for the child.

Evidence of the child's progress toward intervention goals is a key indicator to guide informed choices and decision-making. By monitoring a child's progress, it becomes apparent if the choice(s) made are working for the child and family (see Szarkowski et al., 2024, *Structure Principles*, this issue, for descriptions of developmental assessment and ways to monitor child progress). Families are supported to interpret their child's actions and behaviors and monitor developmental progress; these observations provide feedback about the success of the interventions being tried and acknowledgement that the chosen approaches are effective.

Recommendations for Principle 6

Table 4 includes recommendations for Principle 6, which addresses family decision-making as it relates to the needs of their child who is DHH. Recommendations encourage consideration of *who* makes decisions and *how* decisions are made. As noted in the description

Table 5. FCEI-DHH resources that are relevant to implementation of the Support Principles.

Support resources	Description of resource and internet link
American Society for Deaf Children	North American resource committed to supporting families with children who are DHH and advocate for full language and communication access through sign language. ASDC provides access to American Sign Language (ASL) classes, stories, conferences, and events Link: deafchildren.org
Aussie Deaf Kids	Australian resource providing information and advice to families and professionals about informed decision-making practices Link: https://www.aussiedeafkids.org.au/making-informed-choices.html
Baby Hearing Website	North American online resource hosted by Boys Town National Research Hospital providing information for families with children who are deaf or hard of hearing on a wide range of topics, including newborn hearing screening, hearing devices, language and learning (signed and/or spoken), parenting and support, and decision-making Link: https://www.babyhearing.org/parenting
Global Coalition of Parents of Children who are Deaf or Hard of Hearing (GPODHH)	Global Coalition of Parents of Children who are Deaf or Hard of Hearing is an international collaboration of parent groups (GPODHH). This resource provides advice and information for families, including suggestions for establishing family-to-family support networks Link: https://www.gpodhh.org/ and https://www.gpodhh.org/starting-a-parent-support-group
Hands and Voices	North American guide that includes recommendations for developing DHH adult-to-family support programs as well as involving DHH mentors and role models in EI programs Link: https://handsandvoices.org/fl3/topics/dhh-involvement.html Link: https://www.handsandvoices.org/comcon/articles/mentorsRolemodels.htm
Hearing First	North American resource that provides advice and information for parents who are choosing a listening and spoken language approach for communication. It provides information about Listening and Spoken Language, hearing assessment and devices, and strategies for parents to use at home with their children Link: https://www.hearingfirst.org/lsl
Hesperian Health Guide: Helping Children Who Are Deaf	This downloadable e-book is designed to support children and families in locations where EI Providers and services may not be available. It provides useful strategies and advice for parents about hearing, choosing language modalities, and developing language skills at home Link: https://en.hesperian.org/hhg/Helping_Children_Who_Are_Deaf
<i>Journal of Early Hearing Detection and Intervention (JEHDI)</i>	The JEHDI is a semi-annual scholarly peer-reviewed online publication dedicated to advancing Early Hearing Detection and Intervention by publishing articles that describe current research, evidence-based practice, and standards of care Link: https://digitalcommons.usu.edu/jehdi/
Listen to Life Website	Romanian resource providing advice and guidance to families about hearing, hearing devices, and support for their child Link: https://ascultaviata.ro/
SKI HI Website	North American organization focused on providing support for children with sensory disabilities including children who are deaf or hard of hearing. This resource provides information on deaf mentor programs and training Link: http://deaf-mentor.skihi.org/
The Science of Learning Center on Visual Language and Visual Learning (VL2)	Visual Language and Visual Learning (VL2) is the Science of Learning Center at Gallaudet University in Washington, DC in the United States. The Center supports research on visual processes, visual language, and social experience on cognition, language, reading, and literacy. The site offers research briefs summarizing practical guides for educators and families, assessment tools, literacy activities, information for families, American Sign Language story books, and more Link: vl2.gallaudet.edu
Family Associations for DHH children in Europe	<ul style="list-style-type: none"> Europe—www.fepeda.eu Austria—www.elternundfreunde.at Bosnia and Herzegovina—https://m.facebook.com/eho.sarajevo/ Bulgaria—www.ardusbg.com Czech Republic—http://www.infocentrum-sluch.cz/cs-CZ/uvod.html Finland—www.klvi.fi France—https://anpeda-federation.fr/ Germany—www.gehoerlosekinder.de Lithuania—www.pagava.lt Romania—www.ascultaviata.ro Spain—www.fiapas.es Sweden—https://www.dhb.se/ Switzerland <ul style="list-style-type: none"> www.svehk.ch—German www.aspeda.ch—French www.asgba.ch—Italian

for other tables, the placement of the EI Provider actions next to family activities and outcomes is intended to convey collaboration and reciprocity in the relationship-based process.

Family-centered early intervention resources: Support Principles

The resources in Table 5 are examples of helpful websites and other online materials that support the application of the FCEI-DHH Principles. The resources include a range of options that reflect the myriad demographics and global perspectives of the FCEI-DHH international community. The resources are intended to be used as a starting point and may be adapted or used alongside materials currently available. Readers are encouraged to identify the resources that best fit their local context.

Endnotes

1. The mission of the International Academy Supporting Adaptations of Cued Speech (<https://www.academieinternationale.org/>) is to, "...make every language visual." Cued speech is the common term used to describe the visual signals that support understanding of phonetic information (i.e., the sounds that comprise words). Cued language is a term preferred by some DHH individuals who use cueing to access information. Cued language provides them access to a spoken language when they have a foundation in that language; it does not promote speech. While "Cued Speech" continues to be the more widely utilized term at this time, in response to preference of those who utilize this visual support, the term "cued language" is also used in this context.
2. For further information, see the United Nations Convention on the Rights of Persons with Disabilities at <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/article-2-definitions.html> and the World Federation of the Deaf position statement on Sign Language Rights at <https://wfdeaf.org/our-work/human-rights-of-the-deaf/>. Sign languages are legally mandated in some countries.
3. For further information about Fostering Joy, a joint collaboration among families of children who are DHH, adults who are DHH, and professionals who support children who are DHH and their families, please see: <https://handsandvoices.org/resources/fostering-joy.htm> and <https://cccbsd.org/programs/institute/fostering-joy-professionals/>.
4. Some FCEI-DHH programs/services have developed resources and policies for equitable sharing of information about communication approaches. EI Providers, programs/services, and programs can utilize tools to address the components of decision-making (e.g., van der Zee et al., 2022: *Connected in Communication*—see <https://www.nsdsk.nl/poster/fcei-natuurlijk-communiceren> for more information and contacts). *Connected in Communication* is available in 13 languages in app format.

Acknowledgments

The authors are grateful to Bahar Rafinejad-Farahani for her generous contribution of time and expertise in managing and formatting references. We appreciate the insight and direction from Dr. Marilyn Sass-Lehrer, the special issue editor. Her capable direction and wisdom enhanced the work. We also are thankful for the helpful guidance from the anonymous reviewers whose input strengthened this article. In addition, we are grateful to our

colleagues who supported us in gathering resources for FCEI-DHH implementation.

Funding

The authors have no funding to report.

Supplementary data

Supplementary material is available at *Journal of Deaf Studies and Deaf Education*.

Conflicts of interest

The authors have no conflicts of interest to report.

Data availability

The data obtained for the work contained in this special issue were gathered through an international eDelphi process. A description of the methodology used is available in the Methods paper (Moodie et al., 2024, *Methods*, this issue). No data are available.

References

- Abhyankar, P., Volk, R. J., Blumenthal-Barby, J., Bravo, P., Buchholz, A., Ozanne, E., Vidal, D. C., Col, N., & Stalmeier, P. (2013). Balancing the presentation of information and options in patient decision aids: An updated review. *BMC Medical Informatics and Decision-making*, **13** Suppl 2(Suppl 2), S6. <https://doi.org/10.1186/1472-6947-13-S2-S6>.
- Abu-Zhaya, R., Kondaurava, M. V., Houston, D., & Seidl, A. (2019). Vocal and tactile input to children who are deaf or hard of hearing. *Journal of Speech, Language, and Hearing Research*, **62**(7), 2372–2385. <https://doi.org/10.1044/2019.jslhr-1-18-0185>.
- Allen, T. E. (2015). ASL skills, fingerspelling ability, home communication context and early alphabetic knowledge of preschool-aged deaf children. *Sign Language Studies*, **15**(3), 233–265. <https://doi.org/10.1353/sls.2015.0006>.
- Ambrose, S. E., Walker, E. A., Unflat-Berry, L. M., Oleson, J. J., & Moeller, M. P. (2015). Quantity and quality of caregivers' linguistic input to 18-month and 3-year-old children who are hard of hearing. *Ear and Hearing*, **36** Suppl 1(1), 48S–59S. <https://doi.org/10.1097/aud.000000000000209>.
- American Speech-Hearing Association (ASHA) (2022). *Language in brief*. <https://www.asha.org/Practice-Portal/Clinical-Topics/Spoken-Language-Disorders/Language-In-Brief/>.
- Anggrainy, D., Fitriana, E., Iskandarsyah, A., Siregar, J., & Abdu, W. J. (2020). Subjective wellbeing on parents of children with post-lingual deafness disability: Qualitative study in West Java, Indonesia. *Revista Argentina De Clínica Psicológica*, **29**(4), 506–514. <https://doi.org/10.24205/03276716.2020.857>.
- Antia, S. D., & Kreimeyer, K. H. (2015). *Social competence of deaf and hard-of-hearing children*. Oxford University Press.
- Arnaud, N. S. (2022). *Parenting with peace and presence: Ten powerful practices to help you manage the challenges and cherish the joys of parenting*. Friesen Press.
- Arulogun, O. S., Titiloye, M. A., Oyewole, E. O., Nwaorgu, O. G., & Afolabi, N. B. (2012). Experience of violence among deaf girls in Ibadan metropolis, Nigeria. *International Journal of Collaborative Research on Internal Medicine & Public Health*, **4**(8), 1488–1496. <https://www.iomcworld.org/abstract/experience-of-violence-among-deaf-girls-in-ibadanmetropolis-nigeria-18745.html>.

- Bailey Jr, D. B., Nelson, L., Hebbeler, K., & Spiker, D. (2007). Modeling the impact of formal and informal supports for young children with disabilities and their families. *Pediatrics*, **120**(4), e992–e1001. <https://doi.org/10.1542/peds.2006-2775>.
- Bavin, E. L., Sarant, J., Prendergast, L., Busby, P., Leigh, G., & Peterson, C. (2021). Positive parenting behaviors: Impact on the early vocabulary of infants/toddlers with cochlear implants. *Journal of Speech, Language, and Hearing Research*, **64**(4), 1210–1221. https://doi.org/10.1044/2020_jslhr-20-00401.
- Beighton, C., & Wills, J. (2017). Are parents identifying positive aspects to parenting their child with an intellectual disability or are they just coping? A qualitative exploration. *Journal of Intellectual Disabilities*, **21**(4), 325–345. <https://doi.org/10.1177/1744629516656073>.
- Benítez-Barrera, C. R., Grantham, D. W., & Hornsby, B. W. (2020). The challenge of listening at home: Speech and noise levels in homes of young children with hearing loss. *Ear and Hearing*, **41**(6), 1575–1585. <https://doi.org/10.1097/aud.0000000000000896>.
- Berke, M. (2013). Reading books with young deaf children: Strategies for mediating between American sign language and English. *Journal of Deaf Studies and Deaf Education*, **18**(3), 299–311. <https://doi.org/10.1093/deafed/ent001>.
- Binos, P., Nirgianaki, E., & Psillas, G. (2021). How effective is auditory-verbal therapy (AVT) for building language development of children with cochlear implants? A systematic review. *Life*, **11**(3), 239. <https://doi.org/10.3390/life11030239>.
- Brooks, R., Singleton, J. L., & Meltzoff, A. N. (2020). Enhanced gaze-following behavior in deaf infants of deaf parents. *Developmental Science*, **23**(2), e12900. <https://doi.org/10.1111/desc.12900>.
- Brown, P. M., & Watson, L. M. (2017). Language, play and early literacy for deaf children: The role of parent input. *Deafness & Education International*, **19**(3–4), 108–114. <https://doi.org/10.1080/14643154.2018.1435444>.
- Campbell, S. G., Croskerry, P., & Petrie, D. A. (2017). Cognitive bias in health leaders. *Healthcare Management Forum*, **30**(5), 257–261. <https://www.doi.org/10.1177/0840470417716949>.
- Carozza, S., & Leong, V. (2021). The role of affectionate caregiver touch in early neurodevelopment and parent–infant interactional synchrony. *Frontiers in Neuroscience*, **14**. <https://doi.org/10.3389/fnins.2020.613378>.
- Carter, E. R., Onyeador, I. N., & Lewis, N. A. Jr. (2020). Developing and delivering effective anti-bias training: Challenges & recommendations. *Behavioral Science & Policy*, **6**(1), 57–70. <https://doi.org/10.1353/bsp.2020.0005>.
- Caselli, N., Pyers, J., & Lieberman, A. M. (2021). Deaf children of hearing parents have age-level vocabulary growth when exposed to American sign language by 6 months of age. *The Journal of Pediatrics*, **232**, 229–236. <https://doi.org/10.1016/j.jpeds.2021.01.029>.
- Casioppo, D. (2020). The cultivation of joy: Practices from the Buddhist tradition, positive psychology, and yogic philosophy. *The Journal of Positive Psychology*, **15**(1), 67–73. <https://doi.org/ezp-prod1.hul.harvard.edu/10.1080/17439760.2019.1685577>.
- Cawthon, S., Johnson, P., Garberoglio, C., & Schoffstall, S. (2016). Role models as facilitators of social capital for deaf individuals: A research synthesis. *American Annals of the Deaf*, **161**(2), 115–127. <https://doi.org/10.1353/aad.2016.0021>.
- Center on the Developing Child at Harvard University. (n.d.). How-to: 5 steps for brain-building serve and return. <https://developingchild.harvard.edu/resources/how-to-5-steps-for-brain-building-serve-and-return/>.
- Chen, C. H., Castellanos, I., Yu, C., & Houston, D. M. (2020). What leads to coordinated attention in parent–toddler interactions? Children’s hearing status matters. *Developmental Science*, **23**(3), e12919. <https://doi.org/10.1111/desc.12919>.
- Cheng, Q., Roth, A., Halgren, E., & Mayberry, R. I. (2019). Effects of early language deprivation on brain connectivity: Language pathways in deaf native and late first-language learners of American sign language. *Frontiers in Human Neuroscience*, **13**, 320. <https://doi.org/10.3389/fnhum.2019.00320>.
- Coulter, A., & Collins, A. (2011). Making shared decision-making a reality: No decision about me, without me. In *The King’s Fund*. https://www.kingsfund.org.uk/sites/default/files/Making-shared-decision-making-a-reality-paper-Angela-Coulter-Alf-Collins-July-2011_0.pdf.
- Croskerry, P. (2013). From mindless to mindful practice—Cognitive bias and clinical decision making. *New England Journal of Medicine*, **368**(26), 2445–2448. <https://doi.org/10.1056/NEJMp1303712>.
- Crowe, K., Fordham, L., Mcleod, S., & Ching, T. Y. (2014). ‘Part of our world’: Influences on caregiver decisions about communication choices for children with hearing loss. *Deafness & Education International*, **16**(2), 61–85. <https://doi.org/10.1179/1557069X13Y.00000000026>.
- Cruz, I., Quittner, A. L., Marker, C., Desjardin, J. L., & CDAI Investigative Team (2013). Identification of effective strategies to promote language in deaf children with cochlear implants. *Child Development*, **84**(2), 543–559. <https://doi.org/10.1111/j.1467-8624.2012.01863.x>.
- Cuijltis, I., Van De Wetering, A. P., Endendijk, J. J., Van Baar, A. L., Potharst, E. S., & Pop, V. J. M. (2019). Risk and protective factors for pre- and postnatal bonding. *Infant Mental Health Journal*, **40**(6), 768–785. <https://doi.org/10.1002/imhj.21811>.
- Cunningham, J. E., Chow, J. C., Meeker, K. A., Taylor, A., Hemmeter, M. L., & Kaiser, A. P. (2023). A conceptual model for a blended intervention approach to support early language and social-emotional development in toddler classrooms. *Infants & Young Children*, **36**(1), 53–73. <https://doi.org/10.1097/IYC.0000000000000232>.
- Curtin, M., Dirks, E., Cruice, M., Herman, R., Newman, L., Rodgers, L., & Morgan, G. (2021). Assessing parent behaviours in parent–child interactions with deaf and hard of hearing infants aged 0–3 years: A systematic review. *Journal of Clinical Medicine*, **10**(15), 3345. <https://doi.org/10.3390/jcm10153345>.
- Davidson, K., Lillo-Martin, D., & Chen Pichler, D. (2014). Spoken English language development among native signing children with cochlear implants. *Journal of Deaf Studies and Deaf Education*, **19**(2), 238–250. <https://doi.org/10.1093/deafed/ent045>.
- Day, L. A., Costa, E. A., Previ, D., & Caverly, C. (2018). Adapting parent–child interaction therapy for deaf families that communicate via American sign language: A formal adaptation approach. *Cognitive and Behavioral Practice*, **25**(1), 7–21. <https://doi.org/10.1016/j.cbpra.2017.01.008>.
- De Meulder, M., Krausneker, V., Turner, G., & Conama, J. B. (2019). Sign language communities. In G. Hogan-Brun & B. O’Rourke (Eds.), *The Palgrave handbook of minority languages and communities* (pp. 207–232). Palgrave Macmillan.
- Decker, K. B., & Vallotton, C. D. (2016). Early intervention for children with hearing loss: Information parents receive about supporting children’s language. *Journal of Early Intervention*, **38**(3), 151–169. <https://doi.org/10.1177/1053815116653448>.
- Decker, K. B., Vallotton, C. D., & Johnson, H. A. (2012). Parents’ communication decision for children with hearing loss: Sources of information and influence. *American Annals of the Deaf*, **157**(4), 326–339. <https://doi.org/10.1353/aad.2012.1631>.
- Derrington, S. F., Paquette, E., & Johnson, K. A. (2018). Cross-cultural interactions and shared decision-making. *Pediatrics*,

- 142(Supplement 3), S187–S192. <https://doi.org/10.1542/peds.2018-0516>.
- DesGeorges, J. (2003). Family perceptions of early hearing, detection, and intervention systems: Listening to and learning from families. *Mental Retardation and Developmental Disabilities Research Reviews*, *9*(2), 89–93. <https://doi.org/10.1002/mrdd.10064>.
- DesJardin, J. L., & Eisenberg, L. S. (2007). Maternal contributions: Supporting language development in young children with cochlear implants. *Ear and Hearing*, *28*(4), 456–469. <https://doi.org/10.1097/aud.0b013e31806dc1ab>.
- Dill, K. A., & Shera, W. (2015). Empowering human services organizations to embrace evidence-informed practice: International best practices. *Human Service Organizations: Management, Leadership & Governance*, *39*(4), 323–338. <https://doi.org/10.1080/23303131.2015.1050141>.
- Dunst, C. J. (2022). Child studies through the lens of applied family social systems theory. *Childhood Studies*, *1*, 37–64. <https://doi.org/10.21814/childstudies.4126>.
- Dunst, C. J., & Espe-Sherwindt, M. (2016). Family-centered practices in early childhood intervention. In B. Reichow, B. A. Boyd, E. E. Barton & S. L. Odom (Eds.), *Handbook of early childhood special education* (pp. 37–55). Springer International.
- Eberhardt, J. L. (2020). *Biased: Uncovering the hidden prejudice that shapes what we see, think, and do*. Penguin Books.
- Eisenberg, N. (2020). Findings, issues, and new directions for research on emotion socialization. *Developmental Psychology*, *56*(3), 664–670. <https://doi.org/10.1037/dev0000906>.
- Eleweke, C. J., Gilbert, S., Bays, D., & Austin, E. (2008). Information about support services for families of young children with hearing loss: A review of some useful outcomes and challenges. *Deafness & Education International*, *10*(4), 190–212. <https://doi.org/10.1002/dei.247>.
- Elwyn, G., Frosch, D., Thomson, R., Joseph-Williams, N., Lloyd, A., Kinnersley, P., Cording, E., Tomson, D., Dodd, C., Rollnick, S., Edwards, A., & Barry, M. (2012). Shared decision making: A model for clinical practice. *Journal of General Internal Medicine*, *27*(10), 1361–1367. <https://doi.org/10.1007/s11606-012-2077-6>.
- Erbasi, E., Scarinci, N., Hickson, L., & Ching, T. Y. (2018). Parental involvement in the care and intervention of children with hearing loss. *International Journal of Audiology*, *57*(sup2), S15–S26. <https://doi.org/10.1080/14992027.2016.1220679>.
- Estabrooks, W., Morrison, H. M., & MacIver-Lux, K. (Eds.) (2020). *Auditory-verbal therapy: Science, research, and practice*. Plural Publishing.
- Fitzpatrick, E., Angus, D., Durieux-Smith, A., Graham, I. D., & Coyle, D. (2008). Parents' needs following identification of childhood hearing loss. *American Journal of Audiology*, *17*, 38–49. [https://doi.org/10.1044/1059-0889\(2008/005\)](https://doi.org/10.1044/1059-0889(2008/005)).
- Friedman Narr, R., & Kemmery, M. (2015). The nature of parent support provided by parent mentors for families with deaf/hard-of-hearing children: Voices from the start. *Journal of Deaf Studies and Deaf Education*, *20*(1), 67–74. <https://doi.org/10.1093/deafed/enu029>.
- Gagnon, E. B., Eskridge, H., Brown, K. D., & Park, L. R. (2021). The impact of cumulative cochlear implant wear time on spoken language outcomes at age 3 years. *Journal of Speech, Language, and Hearing Research*, *64*(4), 1369–1375. https://doi.org/10.1044/2020_JSLHR-20-00567.
- Gale, E., Berke, M., Benedict, B., Olson, S., Putz, K., & Yoshinaga-Itano, C. (2021). Deaf adults in early intervention programs. *Deafness & Education International*, *23*(1), 3–24. <https://doi.org/10.1080/14643154.2019.1664795>.
- Gale, E., & Schick, B. (2009). Symbol-infused joint attention and language use in mothers with deaf and hearing toddlers. *American Annals of the Deaf*, *153*(5), 484–503. <https://doi.org/10.1353/aad.0.0066>.
- Ganek, H., Smyth, R., Nixon, S., & Eriks-Brophy, A. (2018). Using the language ENvironment analysis (LENA) system to investigate cultural differences in conversational turn count. *Journal of Speech, Language, and Hearing Research*, *61*(9), 2246–2258. https://doi.org/10.1044/2018_JSLHR-L-17-0370.
- Goldsworthy, R. L., & Markle, K. L. (2019). Pediatric hearing loss and speech recognition in quiet and in different types of background noise. *Journal of Speech, Language, and Hearing Research*, *62*(3), 758–767. https://doi.org/10.1044/2018_jslhr-h-17-0389.
- Golinkoff, R. M., Hoff, E., Rowe, M. L., Tamis-LeMonda, C. S., & Hirsh-Pasek, K. (2019). Language matters: Denying the existence of the 30-million-word gap has serious consequences. *Child Development*, *90*(3), 985–992. <https://doi.org/10.1111/cdev.13128>.
- Goodwin, C., Carrigan, E., Walker, K., & Coppola, M. (2022). Language not auditory experience is related to parent-reported executive functioning in preschool-aged deaf and hard-of-hearing children. *Child Development*, *93*(1), 209–224. <https://doi.org/10.1111/cdev.13677>.
- Grosjean, F. (2010). Bilingualism, biculturalism, and deafness. *International Journal of Bilingual Education and Bilingualism*, *13*(2), 133–145. <https://doi.org/10.1080/13670050903474051>.
- Gulati, S. (2018). Language deprivation syndrome. In N. S. Glickman & W. C. Hall (Eds.), *Language deprivation and deaf mental health* (pp. 24–53). Routledge.
- Guralnick, M. J. (2020). Applying the developmental systems approach to inclusive community-based early intervention programs: Process and practice. *Infants and Young Children*, *33*(3), 173–183. <https://doi.org/10.1097/IYC.0000000000000167>.
- Hall, M. L. (2020). The input matters: Assessing cumulative language access in deaf and hard of hearing individuals and populations. *Frontiers in Psychology*, *11*, 1407. <https://doi.org/10.3389/fpsyg.2020.01407>.
- Hall, M. L., Eigsti, I. M., Bortfeld, H., & Lillo-Martin, D. (2018). Executive function in deaf children: Auditory access and language access. *Journal of Speech, Language, and Hearing Research*, *61*(8), 1970–1988. https://doi.org/10.1044/2018_jslhr-l-17-0281.
- Hall, W. C., Levin, L. L., & Anderson, M. L. (2017). Language deprivation syndrome: A possible neurodevelopmental disorder with sociocultural origins. *Social Psychiatry and Psychiatric Epidemiology*, *52*(6), 761–776. <https://doi.org/10.1007/s00127-017-1351-7>.
- Hall, W. C., Smith, S. R., Sutter, E. J., DeWindt, L. A., & Dye, T. D. V. (2018). Considering parental hearing status as a social determinant of deaf population health: Insights from experiences of the “dinner table syndrome”. *PLoS One*, *13*(9), e0202169. <https://doi.org/10.1371/journal.pone.0202169>.
- Hamilton, B., & Clark, M. D. M. (2020). The deaf mentor program: Benefits to families. *Psychology*, *11*(5), 713–736. <https://doi.org/10.4236/psych.2020.115049>.
- Hands & Voices (2020). *Observe, Understand, Respond: O.U.R. Children Safety Project*. <https://www.handsandvoices.org/pdf/OUR-Toolkit.pdf>.
- Hardin, B. J., Boone Blanchard, S., Kemmery, M. S., Appenzeller, M., & Parker, S. D. (2014). Family-centered practices and American sign language (ASL): Challenges and recommendations. *Exceptional Children*, *81*(1), 107–123. <https://doi.org/10.1177/0014402914532229>.
- Harris, C., Hemer, S. R., & Chur-Hansen, A. (2021). Informed choice and unbiased support: Parents' experiences of decision-making

- in paediatric deafness. *SSM-Qualitative Research in Health*, **1**, 100022. <https://doi.org/10.1016/j.ssmqr.2021.100022>.
- Harvey, C., & Kara, N. (2017). The social construction of 'deafness': Explored through the experiences of black South African mothers raising a deaf child. *South Africa Journal of Psychology*, **47**(1), 72–83. <https://doi.org/10.1177/0081246316648517>.
- Hawley, S. T., & Morris, A. M. (2017). Cultural challenges to engaging patients in shared decision making. *Patient Education and Counseling*, **100**(1), 18–24. <https://doi.org/10.1016/j.pec.2016.07.008>.
- Head Zauche, L., Darcy Mahoney, A. E., Thul, T. A., Zauche, M. S., Weldon, A. B., & Stapel-Wax, J. L. (2017). The power of language nutrition for children's brain development, health, and future academic achievement. *Journal of Pediatric Health Care*, **31**(4), 493–503. <https://doi.org/10.1016/j.pedhc.2017.01.007>.
- Henderson, R., Johnson, A., & Moodie, S. (2014). Parent-to-parent support for parents with children who are deaf or hard of hearing: A conceptual framework. *American Journal of Audiology*, **23**, 437–448. https://doi.org/10.1044/2014_AJA-14-0029.
- Henderson, R., Johnson, A., & Moodie, S. (2016). Revised conceptual framework of parent-to-parent support for parents of children who are deaf or hard of hearing: A modified Delphi study. *American Journal of Audiology*, **25**(2), 110–126. https://doi.org/10.1044/2016_AJA-15-0059.
- Henriquez, A. R. (2012). Bias control in shared decision making: Still too many loose ends. *BMJ: British Medical Journal*, **345**, e8291. <https://doi.org/10.1136/bmj.e8291>.
- Hintermair, M. (2008). Self-esteem and satisfaction with life of deaf and hard-of-hearing people – A resource-oriented approach to identity work. *Journal of Deaf Studies and Deaf Education*, **13**(2), 278–300. <https://doi.org/10.1093/deafed/enm054>.
- Hintermair, M., & Sarimski, K. (2019). Fathers of deaf and hard-of-hearing infants and toddlers—Experiences, needs, and challenges. *Journal of Deaf Studies and Deaf Education*, **24**(2), 84–94. <https://doi.org/10.1093/deafed/eny040>.
- Hintermair, M., Sarimski, K., & Lang, M. (2017). Preliminary evidence assessing social-emotional competences in deaf and hard of hearing infants and toddlers using a new parent questionnaire. *Journal of Deaf Studies and Deaf Education*, **22**(2), 143–154. <https://doi.org/10.1093/deafed/enw070>.
- Hirsh-Pasek, K., Adamson, L. B., Bakeman, R., Owen, M. T., Golinkoff, R. M., Pace, A., Yust, P. K. S., & Suma, K. (2015). The contribution of early communication quality to low-income children's language success. *Psychological Science*, **26**(7), 1071–1083. <https://doi.org/10.1177/0956797615581493>.
- Hoff, E. (2013). *Language development* (5th Ed.). Cengage Learning.
- Hoffman, T., Légaré, F., Simmons, M. B., McNamara, K. P., McCaffery, K., Trevena, L. J., Hudson, B., Glaszlou, P. P., & Del Mar, C. B. (2014). Shared decision making: What do clinicians need to know and why should they bother? *The Medical Journal of Australia*, **201**(1), 35–39. <https://doi.org/10.5694/mja14.00002>.
- Holzinger, D., Dall, M., Sanduvete-Chaves, S., Saldaña, D., Chacón-Moscato, S., & Fellingner, J. (2020). The impact of family environment on language development of children with cochlear implants: A systematic review and meta-analysis. *Ear & Hearing*, **41**(5), 1077–1091. <https://doi.org/10.1097/aud.0000000000000852>.
- Jackson, C. (2011). Family supports and resources for parents of children who are deaf or hard of hearing. *American Annals of the Deaf*, **156**(Fall), 343–362. <https://doi.org/10.1353/aad.2011.0038>.
- Jackson, C. W., Wegner, J. R., & Turnbull, A. P. (2010). Family quality of life following early identification of deafness. *Language, Speech, and Hearing Services in Schools*, **41**(2), 194–205. [https://doi.org/10.1044/0161-1461\(2009/07-0093\)](https://doi.org/10.1044/0161-1461(2009/07-0093)).
- Jeong, J., Franchett, E. E., de Oliveira, C. V. R., Rehmani, K., & Yousafzai, A. K. (2021). Parenting interventions to promote early child development in the first three years of life: A global systematic review and meta-analysis. *PLoS Medicine*, **18**(5), e1003602. <https://doi.org/10.1371/journal.pmed.1003602>.
- Johnson, M. K. (2020). Joy: A review of the literature and suggestions for future directions. *The Journal of Positive Psychology*, **15**(1), 5–24. <https://doi.org/10.1080/17439760.2019.1685581>.
- Joint Committee on Infant Hearing (2019). Year 2019 position statement: Principles and guidelines for early hearing detection and intervention programs. *Journal of Early Hearing Detection and Intervention*, **4**(2), 1–44. <https://doi.org/10.15142/fptk-b748>.
- Kärtner, J., & von Suchodoletz, A. (2021). The role of preacademic activities and adult-centeredness in mother-child play in educated urban middle-class families from three cultures. *Infant Behavior and Development*, **64**, 101600. <https://doi.org/10.1016/j.infbeh.2021.101600>.
- Kecman, E. (2019). Old challenges, changing contexts: Reviewing and reflecting on information provision for parents of children who are deaf or hard-of-hearing. *Deafness & Education International*, **21**(1), 3–24. <https://doi.org/10.1080/14643154.2018.1506072>.
- Kelly, C., Morgan, G., Bannard, C., & Matthews, D. (2020). Early pragmatics in deaf and hard of hearing infants. *Pediatrics*, **146**(Supplement_3), S262–S269. <https://doi.org/10.1542/peds.2020-0242E>.
- Kingsbury, S., Khvalabov, N., Stirn, J., Held, C., Fleckenstein, S. M., Hendrickson, K., & Walker, E. A. (2022). Barriers to equity in pediatric hearing health care: A review of the evidence. *Perspectives of the ASHA Special Interest Groups*, **7**(4), 1060–1071. https://doi.org/10.1044/2021_persp-21-00188.
- Kite, B. J. (2020). How the medical professionals impact ASL and English families' language planning policy. *Psychology in the Schools*, **57**(3), 402–417. <https://doi.org/10.1002/pits.22324>.
- Kon, A. A., & Morrison, W. (2018). Shared decision-making in pediatric practice: A broad view. *Pediatrics*, **142**(Supplement 3), S129–S132. <https://doi.org/10.1542/peds.2018-0516b>.
- Kyzer, K., Brady, S., Summers, J. A., & Turnbull, A. (2020). Family quality of life and partnership for families of students with deaf-blindness. *Remedial and Special Education*, **41**(1), 50–62. <https://doi.org/10.1177/0741932518781946>.
- Lam-Cassettari, C., Wadnerkar-Kamble, M. B., & James, D. M. (2015). Enhancing parent-child communication and parental self-esteem with a video-feedback intervention: Outcomes with prelingual deaf and hard-of-hearing children. *Journal of Deaf Studies and Deaf Education*, **20**(3), 266–274. <https://doi.org/10.1093/deafed/env008>.
- Légaré, F., Stacey, D., Gagnon, S., Dunn, S., Pluye, P., Frosch, D., Kryworuchko, J., Elwyn, G., Gagnon, M. P., & Graham, I. D. (2011). Validating a conceptual model for an inter-professional approach to shared decision making: A mixed methods study. *Journal of Evaluation in Clinical Practice*, **17**(4), 554–564. <https://doi.org/10.1111/j.1365-2753.2010.01515.x>.
- Leigh, G., & Marschark, M. E. (2016). Recognizing diversity in deaf education: From Paris to Athens with a diversion to Milan. In M. Marschark, V. Lampropoulou & E. Skordilis (Eds.), *Diversity in deaf education* (pp. 1–20). Oxford University Press.
- Levine, D., Avelar, D., Golinkoff, R. M., Hirsh-Pasek, K., & Houston, D. M. (2020). Foundations of language development in deaf and hard-of-hearing infants. In M. Marschark & H. Knoors (Eds.), *The Oxford handbook of deaf studies in learning and cognition* (pp. 21–32). Oxford University Press.
- Ludolph, R., & Schulz, P. J. (2018). Debiasing health-related judgments and decision making: A systematic review. *Medical*

- Decision Making, **38**(1), 3–13. <https://doi.org/10.1177/0272989X17716672>.
- Madrigal, V. N., & Kelly, K. P. (2018). Supporting family decision-making for a child who is seriously ill: Creating synchrony and connection. *Pediatrics*, **142**(Supplement 3), S170–S177. <https://doi.org/10.1542/peds.2018-0516h>.
- Maluleke, N. P., Chiwutsi, R., & Khoza-Shangase, K. (2021). Family-centred early hearing detection and intervention. In K. Khoza-Shangase & A. Kanji (Eds.), *Early detection and intervention in audiology* (pp. 196–218). Wits University Press.
- McCreery, R. W., Bentler, R. A., & Roush, P. A. (2013). The characteristics of hearing aid fittings in infants and young children. *Ear and Hearing*, **34**(6), 701–710. <https://doi.org/10.1097/AUD.0b013e31828f1033>.
- McCreery, R. W., & Walker, E. A. (2017). *Pediatric amplification: Enhancing auditory access*. Plural Publishing.
- Meek, D. R. (2020). Dinner table syndrome: A phenomenological study of deaf individuals' experiences with inaccessible communication. *The Qualitative Report*, **25**(6), 1676A–1694A. <https://doi.org/10.46743/2160-3715/2020.4203>.
- Miguel, H. O., Gonçalves, Ó. F., Cruz, S., & Sampaio, A. (2019). Infant brain response to affective and discriminative touch: A longitudinal study using fNIRS. *Social Neuroscience*, **14**(5), 571–582. <https://doi.org/10.1080/17470919.2018.1536000>.
- Mitchell, R. E., & Karchmer, M. (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. <https://doi.org/10.1353/sls.2004.0005>.
- 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. <https://doi.org/10.1093/deafed/ent034>.
- Moeller, M. P., Gale, E., Szarkowski, A., Smith, T., Birdsey, B. C., Moodie, S. T. F., Carr, G., Stredler-Brown, A., Yoshinaga-Itano, C., FCEI-DHH International Consensus Panel, & Holzinger, D. (2024). Family-centered early intervention deaf/hard of hearing (FCEI-DHH): Foundation Principles. *Journal of Deaf Studies and Deaf Education*, **29**(SI), SI53–SI63. <https://doi.org/10.1093/deafed/enad037>.
- Moeller, M. P., & Mixan, K. (2016). Family-centered early intervention: Principles, practices, and supporting research. In M. P. Moeller, D. J. Ertmer & C. Stoel-Gammon (Eds.), *Language and literacy in children who are deaf or hard of hearing* (pp. 107–148). Paul H. Brookes Publishing.
- Moeller, M. P.[†], & Szarkowski, A.[†], Gale, E., Smith, T., Birdsey, B. C., Moodie, S. T. F., Carr, G., Stredler-Brown, A., Yoshinaga-Itano, C., FCEI-DHH International Consensus Panel, & Holzinger, D. (2024). Family-centered early intervention deaf/hard of hearing (FCEI-DHH): Guiding Values. *Journal of Deaf Studies and Deaf Education*, **29**(SI), SI8–SI26. [†]Co-primary authorship. <https://doi.org/10.1093/deafed/enad038>.
- Moeller, M. P., & Tomblin, J. B. (2015). An introduction to the outcomes of children with hearing loss study. *Ear and Hearing*, **36**, 4S–13S. <https://doi.org/10.1097/aud.0000000000000210>.
- Mood, D.[†], & Szarkowski, A.[†], Brice, P. J., & Wiley, S. (2020). Relational factors in pragmatic skill development: Deaf and hard of hearing infants and toddlers. *Pediatrics*, **146**(Supplement 3), S246–S261. [†]Co-primary authorship. <https://doi.org/10.1542/peds.2020-0242D>.
- Moodie, S. T. F., Moeller, M. P., Szarkowski, A., Gale, E., Smith, T., Birdsey, B. C., Carr, G., Stredler-Brown, A., Yoshinaga-Itano, C., & Holzinger, D. (2024). Family-centered early intervention deaf/hard of hearing (FCEI-DHH): Methods. *Journal of Deaf Studies and Deaf Education*, **29**(SI), SI40–SI52. <https://doi.org/10.1093/deafed/enad034>.
- Moodie, S. T. (2018). Family-centered early intervention: Supporting a call to action. *ENT & Audiology News*, **27**(5). <https://www.entandaudiologynews.com/features/audiology-features/post/family-centred-early-intervention-supporting-a-call-to-action>.
- Morris, A. R., Turner, A., Gilbertson, C. H., Corner, G., Mendez, A. J., & Saxbe, D. E. (2021). Physical touch during father-infant interactions is associated with paternal oxytocin levels. *Infant Behavior and Development*, **64**, 101613. <https://doi.org/10.1016/j.infbeh.2021.101613>.
- Muñoz, K., San Miguel, G. G., Barrett, T. S., Kasin, C., Baughman, K., Reynolds, B., Ritter, C., Larsen, M., Whicker, J. J., & Twohig, M. P. (2021). eHealth parent education for hearing aid management: A pilot randomized controlled trial. *International Journal of Audiology*, **60**(sup1), S42–S48. <https://doi.org/10.1080/14992027.2021.1886354>.
- National Center on Parent, Family, and Community Engagement (2018). *Parent, family, and community engagement framework for early childhood systems*. Early Childhood Training and Technical Assistance System. https://childcareta.acf.hhs.gov/sites/default/files/public/pfcee-framework_for_ec_systems_final_508.pdf.
- Neuman, A. C., Wroblewski, M., Hajicek, J., & Rubinstein, A. (2012). Measuring speech recognition in children with cochlear implants in a virtual classroom. *Journal of Speech, Language, and Hearing Research*, **55**(2), 532–540. [https://doi.org/10.1044/1092-4388\(2011/11-0058\)](https://doi.org/10.1044/1092-4388(2011/11-0058)).
- Nittrouer, S., Lowenstein, J. H., & Antonelli, J. (2020). Parental language input to children with hearing loss: Does it matter in the end? *Journal of Speech, Language, and Hearing Research*, **63**(1), 234–258. https://doi.org/10.1044/2019_JSLHR-19-00123.
- Opel, D. J. (2018). A 4-step framework for shared decision-making in pediatrics. *Pediatrics*, **142**(Supplement 3), S149–S156. <https://doi.org/10.1542/peds.2018-0516e>.
- Ozdemir, S., & Finkelstein, E. A. (2018). Cognitive bias: The downside of shared decision making. *JCO Clinical Cancer Informatics*, **2**, 1–10. <https://doi.org/10.1200/cci.18.00011>.
- Paradis, J., Genesee, F., & Crago, M. (2021). The language-culture connection. In J. Paradis, F. Genesee & M. B. Crago (Eds.), *Dual language development and disorders: A handbook on bilingualism and second language learning* (3rd Ed., pp. 25–55). Paul H. Brookes Publishing.
- Paul, R., Paatsch, L., Caselli, N., Garberoglio, C. L., Goldin-Meadow, S., & Lederberg, A. (2020). Current research in pragmatic language use among deaf and hard of hearing children. *Pediatrics*, **146**(Supplement 3), S237–S245. <https://doi.org/10.1542/peds.2020-0242C>.
- Pénicaud, S., Klein, D., Zatorre, R. J., Chen, J. K., Witcher, P., Hyde, K., & Mayberry, R. I. (2013). Structural brain changes linked to delayed first language acquisition in congenitally deaf individuals. *NeuroImage*, **66**, 42–49. <https://doi.org/10.1016/j.neuroimage.2012.09.076>.
- Perlmutter, D. (2001). *Resolution: Sign languages*. Linguistic Society of America. <https://www.linguisticsociety.org/resource/resolution-sign-languages>.
- Pizer, G., Meier, R. P., & Shaw Points, K. (2011). Child-directed signing as a linguistic register. In R. P. Meier, R. Channon, H. Van der Hulst & H. (Eds.), *Formational units in sign languages* (pp. 65–86). Ishara Press/Mouton de Gruyter.
- Pontecorvo, E., Higgins, M., Mora, J., Lieberman, A. M., Pyers, J., & Caselli, N. K. (2023). Learning a sign language does not hinder acquisition of a spoken language. *Journal of Speech, Language, and Hearing Research*, **66**(4), 1291–1308. https://doi.org/10.1044/2022_JSLHR-22-00505.

- Poon, B. T., & Zaidman-Zait, A. (2014). Social support for parents of deaf children: Moving toward contextualized understanding. *Journal of Deaf Studies and Deaf Education*, **19**(2), 176–188. <https://doi.org/10.1093/deafed/ent041>.
- Porter, A., Creed, P., Hood, M., & Ching, T. Y. (2018). Parental decision-making and deaf children: A systematic literature review. *Journal of Deaf Studies and Deaf Education*, **23**(4), 295–306. <https://doi.org/10.1093/deafed/eny019>.
- Porter, A., Sheeran, N., Hood, M., & Creed, P. (2021). Decision-making following identification of an infant's unilateral hearing loss: Parent and professional perspectives. *International Journal of Pediatric Otorhinolaryngology*, **148**, 110822. <https://doi.org/10.1016/j.ijporl.2021.110822>.
- Prado, E. L., & Dewey, K. G. (2014). Nutrition and brain development in early life. *Nutrition Reviews*, **72**(4), 267–284. <https://doi.org/10.1111/nure.12102>.
- Quittner, A. L., Cruz, I., Barker, D. H., Tobey, E., Eisenberg, L. S., Niparko, J. K., & Childhood Development after Cochlear Implantation Investigative Team (2013). Effects of maternal sensitivity and cognitive and linguistic stimulation on cochlear implant users' language development over four years. *The Journal of Pediatrics*, **162**(2), 343–8.e3. <https://doi.org/10.1016/j.jpeds.2012.08.003>.
- Raab, M., Dunst, C. J., Johnson, M., & Hamby, D. W. (2013). Influences of a responsive interactional style on young children's language acquisition. *Everyday Child Language Learning Reports*, **4**, 1–23. http://www.puckett.org/CECLI/ECLLReport_5_Interests.pdf.
- Rautakoski, P., af Ursin, P., Carter, A. S., Kaljonen, A., Nylund, A., & Pihlaja, P. (2021). Communication skills predict social-emotional competencies. *Journal of Communication Disorders*, **93**, 106138. <https://doi.org/10.1016/j.jcomdis.2021.106138>.
- Rogers, K. D., & Young, A. M. (2011). Being a deaf role model: Deaf people's experiences of working with families and deaf young people. *Deafness & Education International*, **13**(1), 2–16. <https://doi.org/10.1179/1557069x10y.0000000004>.
- Roos, C., Cramér-Wolrath, E., & Falkman, K. W. (2016). Intersubjective interaction between deaf parents/deaf infants during the infant's first 18 months. *Journal of Deaf Studies and Deaf Education*, **21**(1), 11–22. <https://doi.org/10.1093/deafed/env034>.
- Rubin, A., & Bellamy, J. (2022). *Practitioner's guide to using research for evidence-informed practice*. John Wiley & Sons.
- Runcan, P. L., Petrascovschi, S., & Borca, C. (2012). The importance of play in the parent-child interaction. *Procedia-Social and Behavioral Sciences*, **46**, 795–799. <https://doi.org/10.1016/j.sbspro.2012.05.201>.
- Scarinci, N., Gehrke, M., Ching, T. Y., Marnane, V., & Button, L. (2018). Factors influencing caregiver decision making to change the communication method of their child with hearing loss. *Deafness & Education International*, **20**(3–4), 123–153. <https://doi.org/10.1080/14643154.2018.1511239>.
- Schwenke, T. (2019). Childhood trauma: Considering diagnostic and culturally sensitive treatment approaches for deaf clients. *JADARA*, **45**(1), 158–173.
- Secora, K., & Smith, D. (2021). The benefit of the “and” for considerations of language modality for deaf and hard-of-hearing children. *Perspectives of the ASHA Special Interest Groups*, **6**(2), 397–401. https://doi.org/10.1044/2021_persp-20-00267.
- Singleton, J. L., & Newport, E. L. (2004). When learners surpass their models: The acquisition of American sign language from inconsistent input. *Cognitive Psychology*, **49**(4), 370–407. <https://doi.org/10.1016/j.cogpsych.2004.05.001>.
- Snoddon, K. (2015). Using the common European framework of reference for languages to teach sign language to parents of deaf children. *Canadian Modern Language Review*, **71**(3), 270–287. <https://doi.org/10.3138/cmlr.2602>.
- Spencer, P. E., & Harris, M. (2006). Patterns and effects of language input to deaf infants and toddlers from deaf and hearing mothers. In B. Schick, M. Marschark & P. E. Spencer (Eds.), *Advances in the sign language development of deaf children* (pp. 71–101). Oxford University Press.
- St. George, J. M., Campbell, L. E., Hadlow, T., & Freeman, E. E. (2021). Quality and quantity: A study of father-toddler rough-and-tumble play. *Journal of Child and Family Studies*, **30**(5), 1275–1289. <https://doi.org/10.1007/s10826-021-01927-1>.
- Stewart, V., Slattery, M., & McKee, J. (2021). Deaf and hard of hearing early intervention: Perceptions of family-centered practice. *Journal of Early Intervention*, **43**(3), 221–234. <https://doi.org/10.1177/1053815120962547>.
- Sukkar, H., Dunst, C. J., & Kirkby, J. (Eds.) (2017). *Early childhood intervention: Working with families of young children with special needs*. Routledge.
- Sunderland, N., Catalano, T., & Kendall, E. (2009). Missing discourses: Concepts of joy and happiness in disability. *Disability & Society*, **24**(6), 703–714. <https://doi.org/10.1080/09687590903160175>.
- Szagan, G., & Stumper, B. (2012). Age or experience? The influence of age at implantation and social and linguistic environment on language development in children with cochlear implants. *Journal of Speech, Language, and Hearing Research*, **55**, 1640–1654. [https://doi.org/10.1044/1092-4388\(2012/11-0119](https://doi.org/10.1044/1092-4388(2012/11-0119).
- Szarkowski, A. (2018). Language development in children with cochlear implants: Possibilities and challenges. In N. S. Glickman & W. C. Hall (Eds.), *Language deprivation and deaf mental health* (pp. 235–262). Routledge.
- Szarkowski, A., Gale, E., Moeller, M. P., Smith, T., Birdsey, B. C., Moodie, S. T. F., Carr, G., Stredler-Brown, A., Yoshinaga-Itano, C., FCEI-DHH International Consensus Panel, & Holzinger, D. (2024). Family-centered early intervention deaf/hard of hearing (FCEI-DHH): Structure Principles. *Journal of Deaf Studies and Deaf Education*, **29**(SI), SI27–SI39. <https://doi.org/10.1093/deafed/enad036>.
- Szarkowski, A., & Lindow-Davies, C. (2022). Defiant joy: The parent-professional collaboration behind the fostering joy movement. *Odyssey Magazine*, **22**, 46–50. <https://clerccenter.gallaudet.edu/national-resources/documents/clerc/odyssey/odyssey-2021-2022/ODYSSEY-2021-2022-pg-46-50-Szarkowski-feature.pdf>.
- Szarkowski, A.[†], & Moeller, M. P.[†], Gale, E., Smith, T., Birdsey, B. C., Moodie, S. T. F., Carr, G., Stredler-Brown, A., Yoshinaga-Itano, C., FCEI-DHH International Consensus Panel, & Holzinger, D. (2024). Family-centered early intervention deaf/hard of hearing (FCEI-DHH): Cultural & Global Implications. *Journal of Deaf Studies and Deaf Education*, **29**(SI), SI86–SI104. [†]Co-primary authorship. <https://doi.org/10.1093/deafed/enad040>.
- Szarkowski, A., Young, A., Matthews, D., & Meinzen-Derr, J. (2020). Pragmatics development in deaf and hard of hearing children: A call to action. *Pediatrics*, **146**(Supplement 3), S310–S315. <https://doi.org/10.1542/peds.2020-0242L>.
- Tanaka, Y., Kanakogi, Y., & Myowa, M. (2021). Social touch in mother-infant interaction affects infants' subsequent social engagement and object exploration. *Humanities and Social Sciences Communications*, **8**, 1–11. <https://doi.org/10.1057/s41599-020-00642-4>.
- Taylor, J., Stalker, K., & Stewart, A. (2015). Disabled children and the child protection system: A cause for concern. *Child Abuse Review*, **25**(1), 60–73. <https://doi.org/10.1002/car.2386>.
- Thomson, N. R., Kennedy, E. A., & Kuebli, J. E. (2011). Attachment formation between deaf infants and their primary caregivers: Is being deaf a risk factor for insecure attachment? In D. H. Zand & K. J. Pierce (Eds.), *Resilience in deaf children* (pp. 27–64). Springer.
- Toe, D., Mood, D., Most, T., Walker, E., & Tucci, S. (2020). The assessment of pragmatic skills in young deaf and hard of hearing

- children. *Pediatrics*, **146**(Supplement_3), S284–S291. <https://doi.org/10.1542/peds.2020-0242H>.
- Tomblin, J. B., Harrison, M., Ambrose, S. E., Walker, E. A., Oleson, J. J., & Moeller, M. P. (2015). Language outcomes in young children with mild to severe hearing loss. *Ear and Hearing*, **36**, 76S–91S. <https://doi.org/10.1097/aud.0000000000000219>.
- United Nations Children's Fund. (2013). *The state of the world's children 2013: Children with disabilities*. https://violenceagainstchildren.un.org/sites/violenceagainstchildren.un.org/files/documents/other_documents/sowc_2013-main_report_en.pdf.
- United Nations Children's Fund. (2017). *UNICEF's programme guidance for early childhood development*. New York. <https://www.unicef.org/media/107616/file/UNICEF-Programme-%20Guidance-for-Early-Childhood-Development-2017.pdf>.
- United Nations Commission on Human Rights (2020). *The right to adequate food: Fact sheet 34*. <https://www.ohchr.org/sites/default/files/Documents/Publications/FactSheet34en.pdf>.
- United Nations Human Rights–Office of the High Commissioner: Convention on the Rights of the Child (1989). <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child>.
- van der Zee, R., Dirks, E., van Dijk, M., Hijmans, Y. (2022) *Connected in communication: A toolkit and mobile app for parents of young DHH children*. FCEI International, Bad Ischl, Austria. <https://www.nsdsk.nl/file/download/default/2D1E83BB4A8C327034E98B98B0CE0154/Natuurlijk%20Communiceren.pdf>.
- Vanegas, S. B., & Abdelrahim, R. (2016). Characterizing the systems of support for families of children with disabilities: A review of the literature. *Journal of Family Social Work*, **19**(4), 286–327. <https://doi.org/10.1080/10522158.2016.1218399>.
- Visram, A., Roughley, A., Hudson, C., Purdy, S., & Munro, K. (2021). Longitudinal changes in hearing aid use and hearing aid management challenges in infants. *Ear and Hearing*, **42**(4), 961–972. <https://doi.org/10.1097/AUD.0000000000000986>.
- Walker, E. A., Holte, L., McCreery, R. W., Spratford, M., Page, T., & Moeller, M. P. (2015). The influence of hearing aid use on outcomes of children with mild hearing loss. *Journal of Speech, Language, and Hearing Research*, **58**(5), 1611–1625. https://doi.org/10.1044/2015_JSLHR-H-15-0043.
- Walker, E. A., McCreery, R. W., Spratford, M., Oleson, J. J., Van Buren, J., Bentler, R., Roush, P., & Moeller, M. P. (2015). Trends and predictors of longitudinal hearing aid use for children who are hard of hearing. *Ear and Hearing*, **36**(0 1), 38S–47S. <https://doi.org/10.1097/AUD.0000000000000208>.
- Wilson, S., Attrill, M., Critchley, T., Clements, D., Hornsby, J., Mullen, C., Miller, D., Redfern, P., Richardson, T., Stow, L., & Young, A. (2018). Safeguarding deaf children: A multi-agency focus on actions for change. *Practice*, **30**(3), 163–186. <https://doi.org/10.1080/09503153.2018.1450498>.
- Wiseman, K. B., Warner-Czyz, A. D., Kwon, S., Fiorentino, K., & Sweeney, M. (2021). Relationships between daily device use and early communication outcomes in young children with cochlear implants. *Ear and Hearing*, **42**(4), 1042–1053. <https://doi.org/10.1097/AUD.0000000000000999>.
- World Health Organization (2012). *Early childhood development and disability: A discussion paper*. <https://www.unicef.org/media/126501/file/ECD-and-Disability-WHO-2012.pdf>.
- World Health Organization. (2020). *Improving early childhood development: WHO guideline*. <https://www.who.int/publications/i/item/97892400020986>.
- World Health Organization, United Nations Children's Fund, & World Bank Group (2018). *Nurturing care for early childhood development: a framework for helping children survive and thrive to transform health and human potential*. <https://apps.who.int/iris/bitstream/handle/10665/272603/9789241514064-eng.pdf>.
- Yoshinaga-Itano, C., Mason, C. A., Wiggin, M., Grosse, S. D., Gaffney, M., & Gilley, P. M. (2021). Reading proficiency trends following newborn hearing screening implementation. *Pediatrics*, **148**(4). <https://doi.org/10.1542/peds.2020-048702>.
- Yoshinaga-Itano, C., Sedey, A. L., Wiggin, M., & Chung, W. (2017). Early hearing detection and vocabulary of children with hearing loss. *Pediatrics*, **140**(2), e20162964. <https://doi.org/10.1542/peds.2016-2964>.
- Young, A., Carr, G., Hunt, R., McCracken, W., Skipp, A., & Tattersall, H. (2006). Informed choice and deaf children: Underpinning concepts and enduring challenges. *Journal of Deaf Studies and Deaf Education*, **11**(3), 322–336. <https://doi.org/10.1093/deafed/enj041>.
- Young, A., Hunt, R., Carr, G., Hall, A., McCracken, W., Skipp, A., & Tattersall, H. (2005). Informed choice, deaf children and families - underpinning ideas and project development. *Electronic Journal of Research in Educational Psychology*, **3**(7), 253–272.
- Young, A., Jones, D., Starmer, C., & Sutherland, H. (2005). Issues and dilemmas in the production of standard information for parents of young deaf children: Parents' views. *Deafness & Education International*, **7**(2), 63–76. <https://doi.org/10.1179/146431505790560400>.
- Zauche, L. H., Thul, T. A., Mahoney, A. E. D., & Stapel-Wax, J. L. (2016). Influence of language nutrition on children's language and cognitive development: An integrated review. *Early Childhood Research Quarterly*, **36**, 318–333. <https://doi.org/10.1016/j.ecresq.2016.01.015>.

Appendix A

FCEI-DHH International Consensus Panel/Co-production Team

Michele Berke
Doris Binder
Gwen Carr
Natasha Cloete
Jodee Crace
Kathryn Crowe
Frank Dauer
Janet DesGeorges
Evelien Dirks
Johannes Fellingner
Bridget Ferguson
Anita Grover
Johannes Hofer
Sonja Myhre Holten
Daniel Holzinger
Karen Hopkins
Nina Jakhelln Laugen
Diane Lillo-Martin
Lucas Magongwa
Amber Martin

Jolanta McCall
Melissa McCarthy
Teresa McDonnell
Guita Movallali
Daiva Müllegger-Treciokaite
Stephanie B. Olson
Bolajoko O. Olusanya
Paula Pittman
Ann Porter
Jane Russell
Snigdha Sarkar
Leeanne Seaver
Claudine Storbeck
Arlene Stredler-Brown
Nanette Thompson
Sabine Windisch
Christine Yoshinaga-Itano
Alys Young
Xuan Zheng