

**SIG 13****Clinical Focus**

# Pediatric Feeding Disorder in Early Intervention: Expanding Access, Improving Outcomes, and Prioritizing Responsive Feeding

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[https://doi.org/10.1044/2022\\_PERSP-20-00259](https://doi.org/10.1044/2022_PERSP-20-00259)**ABSTRACT**

**Purpose:** Pediatric feeding disorder (PFD), like many childhood medical conditions, is likely to negatively impact a child's growth and development, daily learning opportunities, and family functioning. Parents who have children with a diagnosis of PFD may not yet know the most effective way to feed their children and often experience negative emotions surrounding mealtimes. These families may receive therapy services through early intervention (EI) programs. In many states, there are barriers that limit access to programs and provision of high-quality care for this population. These barriers include the lack of an approved single feeding-related diagnosis that renders a child automatically eligible, lack of approved stand-alone feeding-specific testing tools with which to determine eligibility, lack of educational and clinical experience requirements for providers, and considerable variation in service provision.

**Method:** This clinical focus article reviews the definition of PFD, the multifaceted needs of families and children in EI, support for use of responsive feeding in treatment of PFD, alignment of responsive feeding strategies with EI principles, and barriers limiting access to consistent, high-quality EI services for children with PFD. Several changes to EI programs are proposed to address these barriers.

**Conclusions:** Use of PFD as an automatically qualifying diagnosis for EI programs and use of approved stand-alone feeding-specific assessment tools could establish more consistent and specific eligibility standards for this population, likely expanding early access to support and improving outcomes. EI provider clinical experience and training requirements would likely lead to more consistent and high-quality, evidence-based service provision. Required training should include the use of methods such as routines-based intervention, parent coaching, and anticipatory guidance to support implementation of responsive feeding practices during mealtime routines.

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Early intervention (EI) programs are ideal settings in which to comprehensively support children with pediatric feeding disorder (PFD) and their families; however, several barriers exist, which limit access to programs and consistent provision of high-quality services to this population. Part C of the Individuals with Disabilities Education Act (IDEA, 2004) provides guidelines that states and territories must follow when establishing EI programs; despite these guidelines, there is considerable variability between EI programs and specific practices. For children with feeding challenges, differences between practices exist in regard to eligibility

determination, provider training, and service delivery (Division for Early Childhood, 2014; Feeding Matters, 2020). Establishing specific and consistent procedures and guidelines in each state and territory could enable EI programs to more comprehensively address the diverse needs of children with PFD and their families.

## Background Information

### Responsive Feeding for Infants and Children

Positive early feeding experiences support the developmental process of attachment and bonding between parents and their children (Black & Aboud, 2011; Cormack et al., 2020). Beginning in infancy, feeding skills develop within the context of relationships. While parents are often the ones to have the primary responsibility of feeding their infants or toddlers, many children are cared for by other trusted adults. However, for the purposes of this clinical focus article, the term “parent” will be used to refer to a caregiver who is responsible for feeding a child.

Responsive feeding is recommended by both the American Academy of Pediatrics and World Health Organization (American Academy of Pediatrics, 2017; Pan American Health Organization/WHO, 2003). Responsive feeding is characterized by responsive parental behaviors at mealtimes, including prompt responses to a child’s cues of hunger and satiety, emotionally supportive parental responses to a child’s expressed needs, contingent parental responses to a child’s communication, and provision of experiences that are developmentally appropriate (Black & Aboud, 2011). Responsive feeding prioritizes a child’s increasing competence and strengthening of relationships as parents attune to their child and assess cues expressing hunger, satiety, enjoyment, comfort, or distress at feeding times (Cormack et al., 2020). Responsive parents provide a consistent schedule to support hunger and satiety cycles and support a child’s autonomy at mealtimes, rather than attempting to exert control over a child’s intake. The child’s increased interest and engagement can drive learning of new feeding skills guided by their own preferences and support the child’s ability to attune to internal sensations for self-regulation of intake (Birch & Fisher, 1998; Black & Aboud, 2011).

Feeding development continues to be bidirectional and transactional, evolving throughout childhood within the context of the relationship between parent and child (Walton et al., 2017). The development of functional feeding skills and ability to enjoy eating depends on the ability and characteristics of both parent and child (Satter, 1992). Parents can promote growth in skill development by having family meals, modeling positive mealtime behaviors, and avoiding use of pressure to encourage a child to eat (Daniels, 2019; Finnane et al., 2017; Rowell & McGlothlin, 2015). Within

a variety of cultural contexts, it is possible for parents to offer a child responsive feeding experiences that are positive and developmentally appropriate (Klein, 2019).

### Pediatric Feeding Disorder

*Pediatric feeding disorder* (PFD) is defined as “impaired oral intake that is not age-appropriate, and is associated with medical, nutritional, feeding skill, and/or psychosocial dysfunction” (Goday et al., 2019, p. 124). This diagnostic framework highlights the potential impact of feeding challenges on more than one domain of functioning. PFD is a single diagnostic term that can be used to describe and understand different populations and promote multidisciplinary collaboration. PFD can be used as a stand-alone diagnosis for a child without other medical diagnoses who demonstrates feeding difficulties. PFD has two classifications: acute (shorter than 3 months’ duration) and chronic (occurring for 3 months or longer; Goday et al., 2019). Kovacic et al. (2020) estimated that the annual prevalence of PFD in U.S. children is between one in 23 and one in 37 children under the age of 5 years. The authors reported that the annual prevalence of PFD is between one in three and one in five in children under the age of 5 years with other chronic diseases, many of whom have also have developmental delays (Kovacic et al., 2021).

In the future, consistent use of PFD as a unifying diagnosis will enable researchers and clinicians to more specifically gather data regarding the experiences of and efficacy of treatment approaches used for this population. The literature cited in this clinical focus article includes studies of children with a variety of diagnoses and/or who have been described using terms including picky eaters, extremely picky eaters, and child feeding disorder. Several common themes emerge regarding the impact of feeding challenges on children and families.

### Impact of Feeding Challenges on Children and Families

Feeding challenges have the potential to impact a child’s growth and development negatively. Parents have reported that feeding challenges had a negative impact on their child’s health-related quality of life (Simione et al., 2020). A child with PFD may have lower intake of specific nutrients, which can impact long-term health outcomes (Sharp et al., 2013). Nutritional deficits may contribute to gastrointestinal distress, irritability, poor regulation, and poor growth (Robea et al., 2020). Chronic feeding problems may mean that a child is subjected to repeated invasive medical testing and/or interventions and has repeated negative or even traumatic experiences associated with feeding. Children who have these experiences

may avoid or have limited opportunities or ability to engage in enjoyable food-related activities that support feeding skill acquisition and diet expansion. Mealtimes are often challenging for these children due to presentation of foods that are a mismatch for their skill level, the presence of pressure to eat more or differently, decreased frequency of positive interactions around food, or for a myriad of other reasons.

During mealtimes that feel stressful, children communicate through their behavior and actions. A child's behavior related to feeding challenges may be characterized as challenging and disruptive (Leader et al., 2021). This behavior can and should be considered communication of a child's distress and addressed responsively by caregivers. However, it often contributes to increased overall stress and conflict at mealtimes, potentially limiting opportunities for the child to have positive experiences and learn valuable developmental feeding, communication, and motor skills at the table (Aviram et al., 2015; Greer et al., 2008; Henton, 2018).

The psychosocial impact of feeding challenges on parents is significant and varied. Mealtimes occur repeatedly throughout the day for infants and toddlers, offering little reprieve from the cycle of stress, worry, and frustration that surrounds eating for many children and their families. These routines are often long and difficult, with children needing more support than expected for their age (Simione et al., 2020). Meals may be characterized by increased conflict, increased frequency of parental attempts to control a child's eating, and decreased sharing of pleasure (Aviram et al., 2015; Henton, 2018). Researchers have found that increased levels of conflict occur not only at mealtimes but also during other routines (Lucarelli et al., 2017). Feeding challenges impact families' ability to participate in community activities (Simione et al., 2020). Many parents report feeling isolated, with limited ability to eat away from home, work, travel, and share meals with family and friends (Hewetson & Singh, 2009).

Parents of children with feeding challenges may experience stress, trauma, grief, and/or loss of identity (Simione et al., 2020; Thomlinson, 2002; Wilken, 2012). They reported feeling nervous, anxious, frustrated, terrified, confused, helpless, desperate, and exhausted (Pados & Hill 2019; Thomlinson, 2002; Tregay et al., 2017). Additionally, parents may receive unsolicited advice and even pressure to use a specific approach from well-meaning friends and family members, adding to their distress (Hewetson & Singh, 2009; Klein, 2019; Rowell & McGlothlin, 2015). Parents have reported feeling pressure to have their child eat more and gain weight (Simione et al., 2020; Tregay et al., 2017). For some, negative feelings may limit the opportunity to enjoy feeding times with their children (Franklin & Rodger, 2003; Tregay et al., 2017). Distress surrounding a child's medical history and

feeding development can interfere with a mother's ability to learn and implement strategies that support responsivity and an infant's feeding regulation (Lotterman et al., 2019; Park et al., 2016). Parents of infants with feeding tubes reported experiencing feedings that seem more like medical procedures and less like opportunities to share sensory experiences and emotional connection, two significant aspects of the mealtime experience that naturally occur when young children eat by mouth (Wilken, 2012).

When a child is not growing well, a parent's increased stress level is associated with the use of counterproductive and less responsive feeding practices to "get the food in" (Atzaba-Poria et al., 2010; Aviram et al., 2015; Black & Aboud, 2011; Cerniglia et al., 2014; Franklin & Rodger, 2003; Harris et al., 2018; Hurley et al., 2008). These counterproductive feeding practices are often forceful and have the ability to undermine a child's trust in their parent and a parent's confidence in their ability to feed their child (Gueron-Sela et al., 2011). Parents and children benefit when providers understand the widespread impact feeding challenges have on relationships and mealtimes.

## **EI and PFD**

Part C of the IDEA (2004) established a federal grant program that supports states' and territories' provision of EI services to eligible infants and toddlers and their families. States must demonstrate adherence to minimum required components when implementing EI programs. IDEA (2004) states that an infant or toddler with a disability is defined as one who is experiencing a measurable delay in one or more of five developmental areas, one who has a diagnosed physical or mental condition that has a high probability of resulting in a developmental delay, or a child who is at risk for developmental delay. Each state or territory's lead implementation agency further defines specific evaluation procedures and eligibility standards.

There are many characteristics of EI programs that support improved outcomes for children with PFD and their families. The Division for Early Childhood (DEC) Recommended Practices direct multidisciplinary EI teams to identify and prioritize the concerns of parents from the point of referral and intake, view concerns through the lens of typical development, support skill development within the context of family relationships and routines in their natural environment, and use a strengths-based approach (DEC, 2014).

## **Multidisciplinary Approach**

Given the multifaceted nature of PFD, a team approach is most appropriate for supporting this patient population (Henton, 2018; Goday et al., 2019). In addition to speech-language pathologists (SLPs), EI team members may include occupational therapists, physical

therapists, developmental therapists, mental health professionals, registered dietitians, International Board-Certified Lactation Consultants, and vision and hearing specialists. In many of regions of the United States, occupational therapists, in addition to SLPs, may also be recognized as having primary expertise in PFD.

Many EI programs offer services at no cost or on a sliding scale based on family income and size; caring for a child with PFD is financially burdensome for many families, and for this reason, the EI system may offer increased access to a multidisciplinary team when not available or affordable in a medical setting (Feeding Matters, 2019; Simone et al., 2020). Evaluations and service coordination within EI programs are free. EI programs require ongoing collaboration between families and providers, with regular meetings to review progress and understand a family's changing priorities. When a multidisciplinary team collaborates and develops a treatment plan, communicating consistent recommendations to parents, the impact on parental satisfaction, competence, and confidence as well as on the parent–infant relationship is a positive one (Ideishi et al., 2010; Swift & Scholten, 2010).

### Evaluation/Assessment and Creation of the IFSP

SLPs in EI assess a child's feeding skills based on knowledge of a child's history and expected motor, cognitive, communication, sensory processing, adaptive, and self-help skills. SLPs assessing feeding skills complete a clinical evaluation of oral-motor skills and swallow function, including determining the necessity of referral for instrumental assessment of swallowing and/or additional medical consultations. Clinicians also consider the impact of important factors including the parent–child relationship, parental approach to feeding, other family relationships, the home environment, socioeconomic factors, and cultural practices on feeding development. An EI evaluation may or may not include the use of a feeding-specific assessment tool. This holistic, whole child approach to assessment and intervention contrasts with an impairment-based approach focused on isolated skill deficits. Clinicians can and should educate parents regarding how medical and/or developmental conditions may be impacting a child's feeding development and how disrupted feeding development might be impacting other areas of a child's development and family life.

Once EI eligibility is determined, the Individualized Family Service Plan (IFSP) is written. This plan includes written desired functional outcomes created based on a family's priorities for their child's feeding development and knowledge and consideration of individual family characteristics, rather than solely on a professional's recommendations. In collaboration with parents, the IFSP team documents specific outcome-related strategies to be used during ongoing treatment. Simone et al. (2020)

found that parents who have children with feeding challenges preferred a treatment plan with a holistic approach, incorporating family-centered principles, to improve their child's quality of life. The DEC Recommended Practices (2014) direct providers to work together with families to produce individualized intervention strategies that can easily be embedded into a family's daily mealtime routines. The IFSP also includes treatment frequency and documentation of which providers will provide direct services.

### Natural Environment

EI services are provided in a child's natural environment, including, but not limited to, a family's home, child-care centers, and homes of extended family members. The IDEA defines natural environments as “settings that are natural or typical for a same-aged infant or toddler without a disability” (IDEA, 2014). Beginning in March 2020, in response to the COVID-19 pandemic, EI programs across the United States incorporated expanded use of telehealth, which can be considered an alternative natural setting for EI services (Meadan & Daczewitz, 2015).

Children and their parents often feel more comfortable in familiar surroundings, which potentially leads to sharing additional questions and concerns about feeding patterns that may not be shared in a medical setting and increased parental participation in intervention (Pados & Hill, 2019). EI clinicians gain valuable insight about the child's environment, feeding relationships, unique mealtime routines, the roles of nonparental caregivers, and cultural feeding practices. EI providers can maximize parental engagement in the therapeutic process by providing individualized services within the context of family mealtime routines. Services taking place in the home with the caregiver present have been found to yield positive outcomes, including increased parental involvement, more responsive caregivers, positive chestfeeding outcomes, improved timing of introduction of solid foods, higher quality diet, and improved family dynamics (Black et al., 1995, 2007; Dunst et al., 2014; Paul et al., 2011; Savage et al., 2016; Tregay et al., 2017; Wen et al., 2011).

The information an EI clinician learns about a child's natural environment can be used in coordination of care with professionals who are part of a child's care team outside of the early intervention program. EI providers can share valuable insight with medical specialists who may not fully understand how a family's environment impacts a child's ability to eat and a parent's ability to implement a treatment plan. Furthermore, EI providers who see families regularly over a period of time are in a unique position to help parents interpret potentially conflicting assessment findings and recommendations from other professionals. They can help parents better understand information given, identify the basis of the conflict, and formulate specific



clarifying questions that parents might ask of other involved professionals (Little et al., 2015).

### Cultural Responsivity

SLPs in EI who build relationships with families over time can make a conscious effort to ask questions and make observations in order to understand how a family's beliefs, values, and cultural practices influence parenting and feeding practices. A family's cultural practices and food values direct many of the early feeding experiences a parent has with their child (Bradshaw, 2013). Cultural practices vary regarding breastfeeding, weaning, introduction of first foods, beliefs about disability and illness, and use of directive or responsive practices (Davis-McFarland, 2008; Houston et al., 2011). A family's culture may influence decisions about when and how a child is included in mealtime routines, who feeds the child, and which foods are offered (Jani et al., 2015). Ideally, providers also examine how their own experiences and values influence their ability to make collaborative recommendations based on a family's priorities and practices (Bradshaw, 2013).

### A Strengths-Based Approach

The strengths-based approach used in EI means that practitioners take the time to identify the strengths and skills children and parents demonstrate, with a positive focus on "what's working" at mealtimes (Morris & Klein, 2000). The negative emotions surrounding a child's difficulty eating may come to dominate the way a parent feels about themselves, their child, and mealtimes. A practitioner can help a parent recognize their own and their child's strengths and support reframing understanding of a child or their situation. This type of approach might help a parent move from saying their child is "not eating" to their "child is not yet eating" (Dweck, 2017; Klein, 2019). In many cases, this shift in perspective can help a parent see their child's progress, boost confidence and competence, and restore a sense of hope and engagement in the treatment process (Hewetson & Singh, 2009).

### Barriers to Comprehensive Support for PFD in EI and Suggestions for Improvement

Many EI program administrators, service coordinators, and providers understand the importance of providing support for children with PFD and their families. We recognize the positive impact characteristics of EI programs have had thus far on this population. In the remainder of this clinical focus article, we will describe barriers to access to EI services for children with PFD and their families and present suggestions to improve upon current guidelines and practices. In doing so, we recognize the ongoing advocacy efforts of Feeding Matters

and will refer to the data that the organization has gathered, but not yet published, regarding the practices and guidelines of 35 state EI programs.

### Variation in Eligibility Guidelines

EI support is available to eligible children who have a diagnosis with significant developmental impact, have a measurable delay in one or more areas of development, or are at significant developmental risk. Many EI programs do not currently recognize a single feeding-related diagnosis rendering a child automatically eligible for the program. As a result, children with PFD who would benefit from developmentally focused support may be excluded by administrators and providers who have varying expertise and opinions. In some states, a diagnosis of failure to thrive is considered to be associated with significant developmental risk and is therefore an automatically qualifying condition (Feeding Matters, 2020). In other states, multidisciplinary teams must demonstrate that a child's feeding challenges have had significant developmental impact in order to determine eligibility. This impact may be determined by the use of a testing tool that shows an eligible percentage of delay or by clinicians' informed clinical opinion.

Nationally, there is much work to be done to recognize and understand that PFD is a multifaceted diagnosis with a significant developmental impact. As discussed, poor nutrition and growth negatively impact a child's development and limit a child's ability to participate in activities at home and in the community. Feeding skill deficits specifically disrupt a child's ability to participate in family mealtime routines, a child's access to learning opportunities inherent to those routines, and have a significant impact on the parent-child relationship. The use of the diagnosis of PFD as one that automatically qualifies a child for EI programs could result in improved access to early and comprehensive support for these families, perhaps exponentially increasing the programs' positive developmental impact.

Another barrier to EI eligibility for children with PFD is that there is no universally approved, feeding-specific, stand-alone tool to screen for or assess feeding related concerns and determine eligibility for EI programs. Approving feeding-specific stand-alone assessment tools would clarify evaluation/assessment procedures, assist in gathering the most relevant information, and likely render eligible a greater number of children with PFD. In many states, evaluating providers use a global developmental assessment tool (e.g., The Battelle Developmental Inventory, Third Edition) to identify an eligible level of delay in self-help or adaptive development. Although these tools include feeding-related items, it is often necessary to collect more specific information. Feeding-specific assessment

tools, such as the Oral-Motor/Feeding Rating Scale, The Pre-Feeding Skills Checklist: A Global Approach, and Feeding Matters' Infant and Child Feeding Questionnaire are approved for use in some states to identify delays in or concerns about feeding development (Feeding Matters, 2020; Jelm, 1990; Morris & Klein, 2000; Silverman et al., 2020). However, in most cases, these tools can only be used for eligibility determination in conjunction with other approved testing tools that determine an eligible level of delay, such as global developmental tools or tools used solely to assess communication development (e.g., The Rossetti Infant-Toddler Language Scale; Feeding Matters, 2020; Rossetti, 2006).

Because of the multifaceted nature of PFD, it is likely no single tool will capture the breadth of its developmental impact (Goday et al. 2019). In addition to the tools mentioned above, programs should consider approval of parent report measures with demonstrated reliability and validity such as the Child Oral and Motor Proficiency Scale (ChOMPS), The Neonatal Eating Assessment Tool (NeoEAT)—Bottle-feeding, Neonatal Eating Assessment Tool (NeoEAT)—Breastfeeding, Neonatal Eating Assessment Tool—Mixed Breastfeeding and Bottle-Feeding (NeoEAT—Mixed Feeding), or The Pediatric Eating Assessment Tool (PediEAT) for use in identification of disrupted feeding development and as stand-alone measures to determine program eligibility (Pados, Park, & Thoyre, 2019; Pados, Thoyre, Estrem, et al., 2018a; Pados, Thoyre, & Galer, 2019; Pados, Thoyre, & Park, 2018a, 2018b). These measures would add valuable information during the evaluation process regarding symptoms of feeding challenges, eating patterns, and other related skills. Tools that assess the impact of PFD on individual parents and families, such as the Family Management Measure of Feeding (FAMM Feed) and the Impact of Feeding on the Parent and Family Scales (Family Impact), would allow for further understanding of a family's individual needs (Estrem et al., 2017, 2018).

A third barrier to eligibility determination for children with PFD is that state agencies overseeing EI programs, and even agencies in different regions within a single state, may have differing interpretations of state and national guidelines regarding support in EI for children with feeding challenges, specifically if those children have a complex medical history. This adds to the considerable variation in eligibility determination practices. In the authors' clinical practices, we have encountered cases in which families are excluded from the evaluation process or determined ineligible when administrators and/or service coordinators are of the opinion that feeding challenges should not be addressed in EI. In some areas, this is due to agency administrators attempting to create differentiation between medical and developmental feeding challenges. A child with PFD may be incorrectly labeled

as having only a medically based feeding problem and referred to a medical home for services, thus excluding the child from developmentally focused support in EI. These practices may impact a child's access to EI in many regions in the United States, although specific data regarding the number of children excluded from EI for this reason are not currently available.

PFD should not be considered solely a medical problem. As previously noted, research has shown that in childhood, medical problems, medical diagnoses, and/or procedures frequently produce significant negative developmental consequences in children's lives and specifically on their eating experiences. Children with PFD and their families benefit from access to developmentally supportive EI services to complement medical management. Consider the following case example: A tube-fed infant who was born prematurely had multiple negative experiences around their face and mouth (e.g., intubation, repeated tube placement, and suctioning), experienced respiratory difficulties, and demonstrated aspiration with Level 0 (thin) liquids during a videofluoroscopic swallow study. This infant subsequently struggled with early bottle feedings and their parents' anxiety around difficult oral feedings increased over time. The infant was not able to take in enough nutrition orally to begin transitioning away from g-tube feeding. The infant's parents received conflicting information from medical providers regarding why their infant continued to struggle and how to facilitate more positive mealtime experiences. Subsequently, the infant did not appear to enjoy early experiences with solid foods at six months of age. The family often provided tube feedings during naps or playtime due to the feeding schedule determined by their medical team. This infant missed out on multiple developmental opportunities for positive oral-sensory learning experiences, tactile exploration of food, and opportunities for connection with caregivers during feeding. Furthermore, this infant may not have learned how to participate in family mealtimes if they were not included at the family's table as a result of a tube feeding schedule (Morris, 2010; Wilken, 2012).

EI providers support families like this one by collaborating with parents to identify developmentally focused opportunities for participation in family mealtime routines while considering the recommendations of the child's medical team. This child could be brought to the table for family meals, where they would have opportunities to participate when they were ready to do so. This infant could be exposed to sights and smells of food and have opportunities to explore utensils and food with their hands, supporting acquisition of developmental prefeeding skills that might make transitioning to oral eating easier. Opportunities to socialize and observe others' participation in mealtime would continue to support the infant's learning.

When we ignore the developmental impact of past and ongoing medical and feeding-related experiences, we risk causing real harm and missing opportunities to support families holistically.

## Provider Training Standards

There is a critical need for development of educational and clinical experience requirements for EI service coordinators, SLPs, and other professionals working with children with PFD. EI programs across the United States offer free and fee-based professional feeding-related training opportunities in various capacities; however, these offerings are curated by administrators in each state without guidance of consistent standards regarding curriculum or duration of training. Feeding Matters (2020) found that out of 35 states surveyed, none required specialized training and many service coordinators determined provider qualifications based on provider self-report (Feeding Matters, 2020). While many SLPs and other EI providers seek to implement the guiding principles of EI by supporting family mealtime routines responsively, many would benefit from advanced training in order to do so more effectively. If clinicians do not receive appropriate training and utilize non-responsive practices, there is a risk of the clinician making a family's feeding experiences worse instead of better.

In the absence of provider training standards, administrators and service coordinators who serve as gatekeepers in EI may have an expectation that feeding problems fall within the scope of one specific discipline, typically speech-language pathology, occupational therapy, or nutrition, and make referrals accordingly without regard for a specific provider's training and experience or recognition of the need for a multidisciplinary approach (Henton, 2018). Until standards are established, efforts should be made to identify providers of all relevant disciplines who possess this specialized skill set. Qualified mental health providers are also essential in assessment of a child with PFD but may not be included on the initial evaluation team due to lack of awareness of the impact of PFD on parent mental health and family dynamics. Service coordinators can help families understand why specific providers should be included on the EI evaluation and/or IFSP team. When agreeing to provide services to a child with PFD and their family, SLPs and all EI providers must adhere to guidance from their professional organizations regarding scope of practice and competence standards (American Speech-Language-Hearing Association, 2016; Clark et al., 2007). Until standards for clinical training and provider education are put in place by EI-governing bodies, it is the responsibility of each state and territory's administrators and providers to independently seek adequate training necessary to implement best practices for children with PFD and their families.

## Recommendations for EI Provider Training Standards

Establishing feeding-related educational and training requirements for EI service coordinators and providers could facilitate more accurate identification of qualified providers and likely improve the quality of care throughout EI programs. Required EI provider training should include information regarding the evidence currently available in the field of feeding; responsive feeding therapy practices are evidence-informed and align well with family-focused EI principles and methods. All prioritize a child's autonomy and emphasize and empower the parent, rather than a provider as the primary mealtime partner facilitating a child's emerging self-regulation, change, and growth (Cormack et al., 2020; Klein, 2012; Morris, 2003). Training regarding application of EI methods, such as routines-based intervention, parent coaching, and anticipatory guidance to mealtime routines would prepare providers to comprehensively support children with PFD.

Routines-based intervention, in which professionals and families collaborate to support a child's participation in routines in the home while working toward a family's goals, has been shown to support improved functioning in feeding routines (Hwang et al., 2013). Providers can use joint problem-solving during mealtimes to increase parent responsivity. When parents use responsive strategies at mealtimes, the feeding relationship is strengthened. Use of responsive strategies at mealtimes has also been shown to result in other positive child development and family outcomes, including reduced parental stress, decreased conflict, reduced food fussiness, and increased incorporation of fruits and vegetables in a child's diet (Cormack et al., 2020; Coulthard & Sealy, 2017; DeCosta et al., 2017; Henton, 2018; Nicklaus, 2016). EI sessions scheduled during regular meal or snack time routines offer ideal opportunities for embedded learning opportunities for all involved caregivers. This is particularly beneficial, as extended family members and childcare workers can have a significant impact on parental feeding practices, mealtime routines, and child eating outcomes (Farrow, 2014).

Parent coaching is a strategy in which a practitioner supports parental learning by encouraging reflection on their actions and evaluation of the effectiveness of those actions in order to plan how they might approach a future situation (Rush & Shelden, 2019). Through observation and reflective questioning, providers can understand parents' individual concerns, unique perspectives, and observations regarding past and present mealtime experiences (Rush & Shelden, 2005). Coaching can help parents learn to recognize their child's strengths and needs and understand why their child might be struggling at mealtimes. Parents may have different approaches to feeding their child based on their parental role, past experiences, and

expectations, all of which impact use of nonresponsive or responsive strategies and long-term outcomes (Daniels, 2019; Ellis et al., 2016; Finnane et al., 2017; Jani et al., 2015). In the coaching process, parents can learn to make more appropriate, developmentally supportive modifications at mealtimes, offering a just-right challenge to support skill development (Ayres, 1972). Use of this capacity-building practice can result in higher levels of parental felt competence and has been linked to less frequent conflict and use of controlling feeding practices during mealtimes (Aviram et al., 2015). Coaching also has the potential to strengthen relationships between parents when it is tailored to parents' individual styles and facilitates agreement on feeding practices, rather than exacerbating conflict (Daniels, 2019).

Clinicians in EI who are well-trained can use these methods to explore and consider the impact of socioeconomic factors, cultural practices, and family resources on food choices and feeding style, including use of responsive versus nonresponsive strategies (Harris et al., 2018; Hughes et al., 2006; Worobey et al., 2013). Providing support in a manner that is sensitive and responsive to cultural, linguistic, and socioeconomic diversity can build capacities of parents and other family members to take active and responsive roles in mealtime routines (DEC, 2014). Finally, providers who are trained in use of routines-based intervention and coaching at mealtimes can engage in collaborative reassessment of parental priorities, ongoing parent education, and timely introduction of new capacity-building responsive intervention strategies (McWilliam, 2010).

Provider training should also include instruction regarding provision of anticipatory guidance regarding feeding development. Anticipatory guidance is a strategy supported by both DEC Recommended Practices and literature evaluating parent education interventions to improve mealtime practices (Daniels, 2019; DEC, 2014; Kerzner et al., 2015; Satter, 1995). Anticipatory guidance educates parents about expected infant and toddler developmental stages and potential responses rather than providing advice once problems arise. EI clinicians can be trained to provide guidance regarding timing of expected milestones, transitions to new textures, self-feeding, impact of illness on eating, mealtime dynamics, as well as developmental stages that are potentially stressful, such as times when children may appear to be more picky and rejecting of unfamiliar foods. Parents who understand variation in expected intake of older infants and toddlers as well as the need for a feeding schedule that aligns with expected appetite and satiety cycles can set up a child to feel hunger that drives the desire to eat and self-regulate (Kerzner et al., 2015; Satter, 1995). SLPs can refer to and collaborate with registered dietitians and medical specialists who can provide parents with complementary guidance regarding nutrition and expectations for weight gain and

growth or identify other reasons for slower than expected growth, such as growth hormone deficiency or malabsorption. Providers learning to offer anticipatory guidance at mealtimes should be encouraged to prioritize understanding of individual caregivers' preferences regarding the volume and type of information provided.

Receiving anticipatory guidance is associated with positive outcomes, such as ability to modify feeding practices, decreased use of nonresponsive strategies at mealtimes, and higher likelihood of describing children as easy to feed (Daniels, 2019). Parental concerns, stress level, and use of negative feeding practices in response to increased pickiness and other expected stages of feeding development can be reduced with this support (Daniels et al., 2015; Kerzner et al., 2015; Satter, 2005; Walton et al., 2017). Children whose parents received this information also exhibited decreased food fussiness and slightly improved variety of intake of fruits and vegetables (Daniels, 2019). A program incorporating anticipatory guidance produced the lasting effect of enabling mothers to trust that their children would eat enough (Daniels et al., 2015). When providers are adequately trained to offer parents information about feeding development, parents can learn to expect and recognize changing intake patterns, food preferences, and bids for autonomy at the table, maintain responsivity, and avoid increased conflict and stress.

## Future Directions

Several opportunities for further research in the field were identified. Comprehensive data collection on feeding-related policies and practices in EI programs in all states and territories is necessary. Determining the current frequency with which children with PFD are deemed eligible or ineligible for EI, as well as qualitative assessment of parents' experiences during the EI evaluation/assessment process, would aid in understanding the impact of current EI eligibility practices and further support the need for improvement. Qualitative assessment of the psychosocial experiences related to PFD of a wide variety of parents and families is needed, including those with diverse family structures from different social, economic and cultural groups. Examination of the efficacy of parent coaching and routines-based intervention with the above-referenced populations would support clinicians in individualizing care while encouraging responsive feeding practices. It would be helpful to further examine the processes for curating ongoing provider training in each state and territory and ensure that trained providers' insight is included in curriculum planning. Lastly, gathering additional information regarding practices of SLPs and other EI clinicians working with children with PFD in all states and territories would aid in identifying critical next steps for



systemic improvement beyond those described in this clinical focus article.

## Conclusions

Children with PFD and their families benefit from multiple aspects of the developmental family-focused support available through EI programs in the United States. Currently, a portion of this population faces barriers to accessing EI support due to a lack of an auto-qualifying diagnosis related to feeding, lack of stand-alone feeding-specific assessment tools for use in determining eligibility, differing interpretations of EI guidelines, and lack of specific provider training standards. PFD should be recognized as a diagnosis with significant developmental impact and children with this diagnosis should be automatically eligible for EI services. Approved, feeding-specific stand-alone testing tools for use during the eligibility determination process would enhance providers' ability to identify specific developmental feeding concerns and individualize care. In order to consistently and universally provide children with PFD access to high-quality evidence-based support, program administrators, in collaboration with researchers and clinicians, should establish specific clinical education and training requirements for service coordinators, SLPs and other EI providers. Cumulatively, these impactful changes within EI programs would continue to support strong and trusting relationships between parents and children, support feeding skill development, and more broadly, enable children and their families to thrive.

## Author Contributions

**Stephanie C. Cohen:** Conceptualization (Lead), Writing – original draft (Lead), Writing – review & editing (Lead). **Karen Dilfer:** Conceptualization (Supporting), Writing – original draft (Supporting), Writing – review & editing (Supporting).

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