







A US-Based Consensus on Diagnostic Overlap and Distinction for Pediatric Feeding Disorder and Avoidant/Restrictive Food Intake Disorder

¹School of Nursing, University of North Carolina at Wilmington, Wilmington, North Carolina, USA | ²Feeding Matters, Phoenix, Arizona, USA | ³Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, USA | ⁴Banner-University Medical Center South, Tucson, Arizona, USA | ⁵The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, USA | ⁶Massachusetts General Hospital, Boston, Massachusetts, USA | ⁷Duke University Health Center, Durham, North Carolina, USA | ⁸Duke Children's Hospital and Health Center, Durham, North Carolina, USA | ⁹Rogers Behavioral Health Oconomowoc Main Campus, Atlanta, Georgia, USA | ¹⁰Equip, California, USA | ¹¹The Children's Hospital of Philadelphia, Pennsylvania, USA | ¹²Nationwide Children's Hospital, Columbus, Ohio, USA | ¹³Zero to Three, Washington, Columbia, USA | ¹⁴Emory Medical School, Children's Healthcare of Atlanta, Atlanta, Georgia, USA

Correspondence: Hayley H. Estrem (estremh@uncw.edu)

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ABSTRACT

Objective: As diagnoses covering dysfunctional feeding and eating in pediatrics, avoidant/restrictive food intake disorder (ARFID) and pediatric feeding disorder (PFD) contain inherent areas of overlap in their diagnostic criteria. Areas of overlap include criteria regarding nutritional consequences associated with feeding/eating dysfunction and shared emphasis on possible psychosocial impairment associated with restricted food intake. Complicating the differential diagnosis process is a lack of guidance regarding when the two conditions occur independently, co-qualify, and/or transition into the other. Feeding Matters' Research Initiatives Task Force planned and hosted a PFD-ARFID consensus meeting, with the aim of reaching a consensus regarding diagnostic clarity on PFD and ARFID.

Method: Criteria for participation focused on US residents who either: (a) served as an author on the ARFID workgroup or PFD consensus papers, or (b) provided community representation via board or committee roles. The consensus process followed three stages: prework, the meeting, and post-work/writing. Twelve participants were present for the meeting, with 14 involved in preand post-work/writing.

Results: The final panel included four psychologists representing the ARFID community and seven multidisciplinary members representing PFD's four domains (medical, nutrition, skill, and psychosocial) plus a Zero-to-Three community representative and two representatives from Feeding Matters. Results yielded 10 consensus statements and visuals to support the consensus statements.

Abbreviations: ARFID, avoidant/restrictive food intake disorder; PFD, pediatric feeding disorder.

Permission has been granted from Feeding Matters to share graphics originally made available on their website www.feedingmatters.org (Figure 1, Data S1) and from a virtual conference presentation of an abstract of this paper in April 2024 (Figure 3).

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Discussion: The consensus process and results underscore an ongoing need to improve diagnostic systems and reinforce calls for strengthening healthcare expertise for both PFD and ARFID. Community-based participatory research is recommended to advance both diagnoses and reduce ambiguity in practice settings.

1 | Introduction

Feeding and eating dysfunction spanning infancy, childhood, and/or adolescence have historically lacked a shared conceptual framework essential for conducting high-quality child health research (Estrem et al. 2017). Terms describing dysfunctional feeding/eating prior to adulthood include failure to thrive, non-organic failure to thrive, dysphagia, malnutrition, infantile anorexia, post-traumatic feeding disorder, feeding disorder of infancy and early childhood, and other conceptualizations primarily developed and studied within discipline-specific frameworks (Estrem et al. 2017; Noel 2023; Sharp et al. 2022). Avoidant/restrictive food intake disorder (ARFID) and pediatric feeding disorder (PFD) represent recent diagnoses relevant to pediatric populations with the potential to improve upon the limitations of single-discipline nomenclature and promote the adoption of a broader multidisciplinary framework for clinical and research activities (Sharp et al. 2022). Their introduction has generated growing clinical utilization and sparked empirical investigation, with over 457 publications focusing on PFD and/or ARFID cited in PubMed since 2019 (when PFD was introduced by Goday et al. 2019).

Developed by expert consensus of psychiatrists and psychologists, ARFID was introduced in 2013 in the feeding and eating disorders section of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (APA 2013). ARFID was intended to replace and extend the DSM-IV diagnosis of feeding disorder in infancy and early childhood (APA 1994). This extension involved pivoting to a lifespan approach to symptom onset—with ARFID emphasizing that a disruption in an individual's relationship with food may emerge and/or persist from infancy into adulthood (Sharp and Stubbs 2019). The definition involves an eating or feeding disturbance associated with an apparent lack of interest in eating food, avoidance based on sensory characteristics of food, and/or concern about the aversive consequences of eating (APA 2013). Notably, these symptoms are provided as examples of factors that may influence eating in ARFID; other factors may prove relevant with additional research into ARFID phenomenology. To meet the criteria for ARFID, patients must present with significant impairment in one or more of four categories: significant weight loss (or failure to achieve expected weight gain or faltering growth in children), significant nutritional deficiency, dependence on enteral feeding or oral formula supplementation, and/or marked interference with psychosocial function. The placement of ARFID in DSM-5 underscores its conceptualization as a psychiatric illness. Although it shares many nutritional hallmarks of other eating disorders, ARFID is distinguished by the fact that body image is not a primary motivation for food restriction or avoidance.

Introduced in 2019, PFD was developed via multidisciplinary expert consensus based on the World Health Organization (WHO) International Classification of Functioning, Disability,

and Health framework (ICF). PFD is defined as a disturbance in oral intake of nutrients lasting at least 2 weeks, that is not ageappropriate (Goday et al. 2019). Age-appropriate feeding refers to feeding function based on chronological age rather than developmental age (i.e., skill acquisition enabling progression from breast and/or bottle feeding to self-feeding a variety of developmentally appropriate foods). The PFD diagnostic framework involves four potentially equal domains: medical, nutritional, feeding skill, and psychosocial dysfunction. Dysfunction in PFD may occur within a single area or in combination with other domains. The definition of PFD includes similar psychosocial dysfunction outlined in ARFID, while also identifying psychosocial factors across developmental, mental/behavioral health, social, and environmental influences in line with WHO ICF. The PFD multidisciplinary framework also provides a diagnostic home for infants and young children whose feeding difficulties emerge from medical complications, developmental concerns, and/or skill-based complications that may subsequently present as nutritional and/or psychosocial sequelae.

ARFID and PFD are diagnoses covering dysfunctional feeding and eating in pediatrics that contain inherent areas of overlap in their diagnostic criteria (Figure 1). These include almost verbatim criteria regarding nutritional consequences associated with feeding/eating dysfunction and shared emphasis on possible psychosocial impairment associated with restricted food intake. A recent review highlighted this overlap while also identifying notable differences between the two conditions (Noel 2023). Distinctions include PFD's diagnostic origins in the WHO ICF versus DSM-5 for ARFID and PFD's inclusion of medical and skill dysfunction as etiological causes of restricted intake. Noel (2023) also identified the burden placed on medical providers to effectively navigate the clinical criteria for ARFID and PFD and determine appropriate treatment and referral pathways. Complicating the differential diagnosis process is a lack of guidance regarding when the two conditions qualify independently, co-qualify, and/or transition into the other.

Progress toward establishing an explanatory link between the two conditions requires further research. Undertaking this research first requires greater diagnostic clarity. We convened a panel with the aim of reaching a consensus regarding diagnostic clarity on PFD and ARFID. This article presents the resultant 10 consensus statements and an agenda to advance pediatric clinical care and future research.

2 | Method

Feeding Matters' Research Initiatives Task Force planned and hosted the PFD-ARFID consensus meeting. Criteria for participation focused on US residents who either: (a) served as an author on the ARFID workgroup (Eddy et al. 2019) or PFD consensus (Goday et al. 2019) papers, or (b) provided community

Summary

- Avoidant/restrictive food intake disorder has much in common with pediatric feeding disorder, including overlapping diagnostic criteria.
- The overlap has led to clinical confusion and stymied research/practice efforts, which potentially impact patients and families.
- We convened US-based experts to gain clarity between these diagnoses for feeding and eating dysfunction and arrived at 10 consensus statements, data-based best guidance for determining age-appropriate feeding skill, and future directions for continued dialogue.

representation via board or committee roles in Feeding Matters. Based on these criteria, invitations were sent to 19 potential participants; 14 (74%) agreed to participate. The final panel included four psychologists from the ARFID community and seven multidisciplinary members from the PFD community (two psychologists; two pediatricians; two speech-language pathologists; and an occupational therapist), two Feeding Matters'

Task Force facilitators and community representatives, plus a Zero-to-Three (a national nonprofit organization focused on early child development) community representative. Following confirmation of the expert panel, the development of the 10 consensus statements involved three major stages (See Appendix S2 for details).

3 | Results

Statement 1: ARFID is the only feeding and eating disorder that explicitly mentions *feeding* in this section of disorders in the *DSM-5*, but the manual should provide guidance about what distinguishes a feeding disorder from an eating disorder.

DSM-5 introduced a new organizational framework with the section "Feeding and Eating Disorders", which subsumed ARFID into the same subheading as other persistent disturbances of eating or eating-related behavior including pica, rumination disorder, binge-eating disorder, anorexia nervosa, bulimia nervosa, and other specified feeding or eating disorder. Of note, ARFID is the only diagnosis referencing *feeding* in addition to *eating*. This likely reflects ARFID's historical connection

ARFID and PFD Diagnostic Overlap

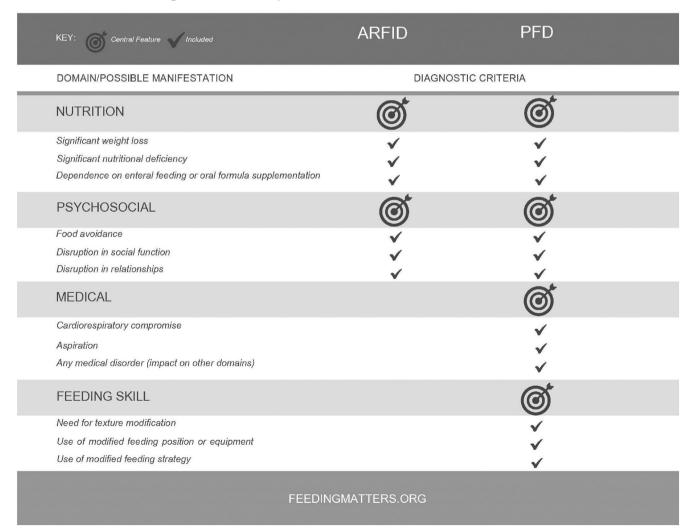


FIGURE 1 | ARFID and PFD diagnostic overlap. Made available with permission from feeding matters organization.

to the *DSM-IV* diagnosis of feeding disorder in infancy or early childhood (APA 1994). However, *DSM-5* provides little guidance regarding what constitutes a feeding versus eating disorder (Kennedy, Wick, and Keel 2018). The *DSM-5* does use the term feeding exclusively to describe avoidant/restrictive food intake among infants and young children, suggesting that age and developmental status likely represent key differentiators when considering ARFID from a feeding versus eating disorder perspective.

The panel agreed that *feeding* is a term often applied to infants and younger children to reflect the importance and age-appropriate nature of the parent-child dyad in delivering and promoting food intake; eating more closely aligns with an individual's relationship with food, mature eating skills, and movement toward greater independence during meals occurring during later childhood and adolescence. This distinction also aligns with the literature. Research involving infants and young children receiving care at pediatric centers often uses the term feeding disorder (Estrem et al. 2022). Descriptions of patients with ARFID accessing care at eating disorders programs tend to involve older children and adolescents with a history of independent eating (Bourne et al. 2020).

Statement 2: There is a clear diagnostic overlap between PFD and ARFID, but both definitions would benefit from further clarity regarding how to navigate this overlap.

ARFID's (2013) introduction into diagnostic nomenclature predated the formalization of PFD in 2019, precluding any direct reference to PFD in DSM-5. That said, a limitation of the 2022 text revision of the DSM-5 criteria for ARFID is the failure to acknowledge ARFID's connection with PFD. DSM-5 currently emphasizes that ARFID "most commonly develops in infancy or early childhood" but does not specify how the development and course may differ in pediatric populations versus adults (APA 2013). Conversely, the PFD consensus paper references ARFID and presents the rationale for developing a broader diagnostic umbrella for patients whose disruption in oral intake is precipitated by medical or feeding skill dysfunction (Goday et al. 2019). The Radcliffe ARFID Workgroup (Eddy et al. 2019) acknowledged the PFD consensus paper (Goday et al. 2019) and highlighted the challenge of differential diagnosis, including important questions about when psychosocial dysfunction in PFD necessitates consideration of an ARFID diagnosis.

The panel agreed that future iterations of both diagnoses should reference each other in a structured manner. This will reduce confusion, improve the precision of research studying both conditions, and may yield insights into underlying mechanisms and etiologies (Kennedy, Wick, and Keel 2018; Noel 2023).

Statement 3: The relationship between PFD and ARFID is such that they can influence one another, criteria can be met for both conditions, or they can exist in isolation.

1. PFD occurs in isolation: PFD often involves medically complex infants and young children with conditions prohibiting safe feeding (e.g., aspiration), contributing to

feeding fatigue (e.g., oral motor deficits), and/or resulting in painful eating (e.g., unmanaged reflux) (Goday et al. 2019). In such cases, clinical manifestations may include psychosocial dysfunction in the form of feeding refusal in infancy and/or nutritional dysfunction (e.g., the need for enteral feeding). This dysfunction, however, can be directly attributed to a concurrent medical condition, thus consistent with a diagnosis of PFD but potentially excluding a diagnosis of ARFID if medical management of the underlying medical condition or clearance to begin oral feeding (e.g., after passing a swallow study) may also resolve the PFD without the need for other therapeutic intervention (if middle childhood, see consensus point #6).

- 2. PFD transitions into ARFID: Some medically complex children, however, may develop conditioned food aversion when unpleasant consequences are repeatedly paired with eating over several years (Goday et al. 2019). When present, resolution of underlying medical concerns may not improve oral intake because of persistent, disruptive mealtime behaviors aimed at avoiding contact with food. Food avoidance or restriction in ARFID may represent a conditioned negative response associated with food intake (APA 2013). When ARFID becomes the primary intervention focus, the panel emphasized the need for continued monitoring of other PFD domains and that both diagnoses be applied to children whose development of feeding skills is incomplete and whose medical situations are also changeable.
- 3. ARFID causes emergence of PFD: ARFID may emerge later in infancy or early childhood with an etiology unrelated to feeding skill development (e.g., following a traumatic event like choking and repeated vomiting during illness) or following a period where the child was progressing through expected feeding milestones (e.g., transitioning from bottle feeding to the introduction of food). Altered feeding experiences associated with ARFID subsequently hold the potential to impair further feeding skill development if the avoidance/restriction limits exposure to food textures (e.g., learning to chew) or other mealtime experiences (e.g., learning to self-feed) yet to fully develop (McMahon et al. 2023; Volkert et al. 2021). In such cases, the panel agreed criteria for both PFD and ARFID could be met, and intervention would likely require consideration of both chronic food refusal and skill-based deficits.
- 4. ARFID occurs in isolation: Symptoms of ARFID such as sensory-based food avoidance or lack of interest in eating or food may emerge in infancy or very early childhood, but not be so severe as to interfere with the achievement of feeding milestones. Selective eating and neophobia are developmentally typical during this period. Impairment associated with these eating restrictions can emerge years after the restrictions themselves. In such cases, children may seek treatment for eating a limited volume or variety of age-appropriate textured table foods, but not present with the skill deficits or medical complications of PFD. Such patients would meet the criteria for ARFID alone. Similarly, food-related traumas (e.g., choking) or new

onset of appetite loss can occur at any age throughout the lifespan, and descriptions of older children, adolescents, and adults accessing care at eating disorder programs frequently include a triggering event resulting in ARFID onset following an extended period of typical eating.

Statement 4: A multidisciplinary lens is beneficial for evaluating and treating both PFD and ARFID; however, the involvement and relative contribution of disciplines differ by treatment setting.

The recommended standard of care for PFD parallels its multidisciplinary framework, with contributions from a provider team that includes a physician, dietitian, speech/language pathologist or occupational therapist, and psychosocial specialist (e.g., psychologist) (Sharp et al. 2017). In this multidisciplinary model, professionals individually assess the child according to their given domain and then collectively determine if the child can eat safely, functionally, and efficiently as expected for age. Risk of dysfunction or the presence of impairment in more than one domain is particularly salient at younger ages and in children with higher levels of medical severity and complexity (Eddy et al. 2019; Noel 2023; Sharp et al. 2022). Multidomain screening and/or assessment provides necessary safeguards for introducing and/or advancing foods with medically complex, developmentally delayed, and/ or feeding skill-impaired patients.

Among older patients, ARFID diagnostic criteria do not directly speak to multidisciplinary assessment; however, at a minimum, expert consensus recommends the involvement of a medical professional and mental health clinician as part of routine

evaluation and diagnosis (Eddy et al. 2019). Further, given an older age of treatment presentation for patients with ARFID (in isolation) relative to PFD (in isolation or PFD that transitions to ARFID), more than half of individuals with ARFID meet criteria for a co-occurring psychiatric disorder, most commonly an anxiety disorder (Kambanis et al. 2020). Given that medical comorbidities and medical complications secondary to restrictive eating are also common (Aulinas et al. 2020), input from dietitians, gastroenterologists, and endocrinologists is indicated based on presenting symptoms and case complexity.

Feeding disorder and eating disorder communities likely differ in overall approach to multidisciplinary evaluation when ARFID is suspected, particularly in relation to feeding skills. For ARFID in isolation, experts on the panel agreed that onset is typically later in life than with PFD in isolation. For example, a young person who has met all developmental feeding milestones achieved adequate volume and variety, and then suddenly developed ARFID with an acute fear of vomiting in adolescence is unlikely to need intervention from the feeding skill domain. Involvement from the feeding skill domain would certainly be recommended if ARFID developed as a complication of PFD and the patient did not achieve critical feeding milestones (Figure 2). For children, criteria for both ARFID and PFD may be met and evaluation for feeding skills would need to be included.

Statement 5: In determining the best diagnostic fit, medical screening and feeding skill assessment should be part of assessment protocols for both ARFID and PFD providers.

Members representing the PFD community emphasized the need for:

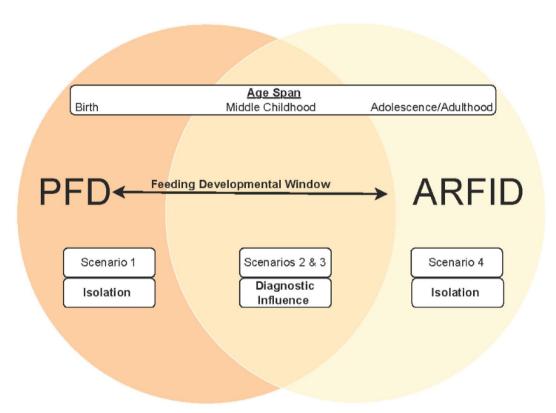


FIGURE 2 | Proposed ARFID and PFD influential relationship.

- Medical screening to ensure timely identification of underlying systemic diseases and/or gastrointestinal disorders that may contribute to the onset or exacerbation of food avoidance/restriction.
- Assessment of feeding skills (e.g., swallow safety) given the medical and developmental complexity of infants and children with PFD who are at risk for developing ARFID if such deficits are not addressed.

Members representing ARFID emphasized the need for:

- Medical screening in older children with ARFID due to the risk for medical consequences of avoidant/restrictive eating, such as low weight and malnutrition (e.g., bone loss, hypogonadism, insufficient vitamin and mineral composition). This practice has been largely informed by routine evaluation processes for other eating disorders (e.g., anorexia nervosa) that may require adaptations, such as screening for vitamin deficiencies in the medical assessment of ARFID (Brigham et al. 2018).
- Expanding the medical assessment umbrella to include potential medical contributors, particularly when ARFID transitions from PFD. Feeding skill screening was also agreed to enhance routine care (particularly among children with complicated medical histories); however, conducting uniform assessments (e.g., swallow studies) is unnecessary for all ARFID cases.

Recommendations to support the timely and proper identification of feeding skills are presented in Table 1. The panel also identified the PFD case report form framework as a resource for providers in both communities regarding etiological and maintaining factors (Sharp et al. 2022).

Statement 6: The feeding development period (birth through infancy and toddler period into early and middle childhood) needs to be considered when determining diagnosis and planning treatment for both ARFID and PFD.

 $\begin{tabular}{lll} \textbf{TABLE 1} & | & \textbf{Clinical recommendations for assessing feeding skill} \\ \textbf{domain.} \\ \end{tabular}$

- 1. Determining presence of an age-appropriate diet and mealtime behaviors
- 2. Obtaining a detailed history of feeding skill development from infancy to present day
- 3. Assessing for structural implications (e.g., cleft lip/palate, facial weakness, laryngomalacia) which may impact feeding, eating and swallowing safety
- 4. Utilization of a parent or family member report tool (e.g., infant and child feeding questionnaire, PediEAT, or ChOMPS) presented in the person's preferred language to effectively capture family concerns
- 5. Determining functionality of the child's feeding, eating and swallowing behaviors and potential risk for nutritional and/or medical decline

Note: Parent or family report tool references: Infant and child feeding questionnaire Silverman et al. 2020; Thoyre et al. 2018; Park et al. (2019).

Infancy and the toddler period represent critical windows for early feeding skill development (Alford et al. 2019; Pediatric Committee on Injury and Prevention, 2010; European-Commission n.d.; Harris, Smith, and Harris 1984; New York State Department of Health n.d.; Pathways 2023; Zero-to-Three n.d.) early and middle childhood representing windows for feeding skill refinement (Alford et al. 2019; Pediatric Committee on Injury and Prevention, 2010; Harris, Smith, and Harris 1984; IDDSI 2019). During infancy and the toddler period, achievement of early feeding milestones is influenced by a variety of factors, including gestational age, birth weight, type of early feeding, and introduction of complementary feeding practices (ASHA 2010). Achievement of early feeding skills is also associated with the attainment of early fine and gross motor milestones to promote movement toward self-feeding (Carruth et al. 2004) and cognitive milestones to support greater independence and social participation during meals (Alford et al. 2019). Timing of food exposure and practice also appears critical, with the late introduction of beginner and lumpy foods (>6 months and >9 months, respectively) and finger feeding (>9 months) shown to be predictive of later development of feeding difficulties (Sdravou et al. 2023).

While key early feeding milestones unfold over the first 2 years of life (e.g., the transition from a milk-based diet to the introduction of solids of increasing texture; beginning self-feeding), feeding skill progress continues throughout ages of 2-5 years (Carruth et al. 2004; CDC 2023; Pathways 2023; Zero-to-Three n.d.), and refinement of skills continues in early childhood (Alvar et al. 2021; Arkenberg et al. 2023; Harris, Smith, and Harris 1984; IDDSI 2019). Infants, toddlers, and young children (in particular) and (to a certain extent) through middle childhood remain at increased choking risk due to the ongoing development of feeding skills (Figure 3). Areas of ongoing skill development include oral motor skills (e.g., biting, chewing), manual skills (e.g., cutting up foods, bringing food/liquids to mouth), and cognitive skills (e.g., food selection, distractibility). While feeding skills are being refined, children continue to benefit from assistance in food selection and preparation (e.g., size and texture of food pieces offered) and mealtime environment (e.g., seating and utensils appropriate for their age/size, minimizing distractions) (Pediatric Committee on Injury and Prevention, 2010; Harris, Smith, and Harris 1984; New York State Dept. of Health n.d.; IDDSI 2019).

The panel agreed that age and feeding skill acquisition from infancy through early childhood represent important considerations for demarcating the relationship between PFD and ARFID. The PFD consensus paper identified "fully functional" in the feeding skill domain as involving safe, age-appropriate, and efficient eating/drinking (Goday et al. 2019). The panel emphasized that the ability to eat/drink independently generally should occur by middle childhood. At this point, the transition from ARFID to PFD (based on a skill-based dysfunction contributing to avoiding/restricting food) is a less common outcome. However, achieving independent feeding skills may take longer in children with medical and/or developmental complexity.

Statement 7: PFD that transitions into ARFID likely involves a different etiological pathway than ARFID in isolation. Age of onset, learning history with food and eating, and disorder course (among other developmental and learning histories) are

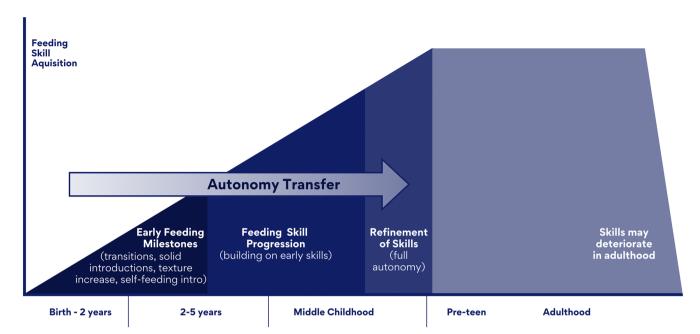


FIGURE 3 | Feeding development window.

important considerations in diagnosis. Both pathways involve a negative association with food.

Infants and young children with PFD at risk for developing ARFID most often present with medical and developmental conditions that prohibit, disrupt, or interrupt the developmental process of becoming an independent eater (Alford et al. 2019). Dysfunction may be present at birth, such as in children with congenital heart disease who require prolonged hospitalization and critical care interventions that delay and subvert the acquisition of feeding skills (Goday et al. 2019). In other cases, feeding skill concerns follow difficulty making a major developmental shift—such as transitioning from liquids to solids or moving from pureed to table foods—particularly among children with severe motor and cognitive delays whose nutritional needs may eventually exceed their feeding skill (Goday et al. 2019).

ARFID in isolation most typically occurs in older children, adolescents, or adults with age-appropriate, intact feeding skills, and food avoidance or restrictions may be caused by selective and neophobic eating, poor appetite or a lack of hedonic motivation to eat, or fear of aversive consequences of eating like choking and vomiting or allergic reaction.

The panel agreed that both pathways in ARFID involve an individual developing a negative association with or belief about food that drives food avoidance/restriction (Thomas and Eddy 2019). The etiology likely depends on the individual's learning history, medical and psychiatric history, the cognitive features associated, and the age of onset.

Statement 8: Age of onset is an important consideration; both ARFID and unresolved PFD may be present in adulthood, but only ARFID may emerge in adulthood.

The term *pediatric* in PFD implies an onset in infancy through childhood, however, guidance is not provided for the transition

to adulthood if PFD is unresolved (Goday et al. 2019). The panel agreed that ongoing dysfunction associated with PFD may present in adulthood, a possibility particularly salient among individuals with severe medical and developmental conditions (e.g., level V cerebral palsy). In such cases, persistent impairment in one or more systems may impede safe or efficient eating and, thus, continue to present as dysfunction in any of the four PFD domains.

In contrast, ARFID is explicitly intended to recognize that avoidant and restrictive eating symptoms can occur across the lifespan, including possibly first emerging in adulthood. Also, while ARFID explicitly includes infancy as a common age of onset, it is important to note that most current ARFID pediatric research from the eating disorders community is with older children and adolescents, many of whom present for eating disorder care with a relatively long history of untreated symptoms (Bourne et al. 2020). This emphasizes a need for further research on both PFD and ARFID in younger cohorts.

Statement 9: The proposed phenotypes of ARFID (i.e., sensory sensitivity, fear of aversive consequences, lack of interest in eating or food) apply throughout the lifespan; however, the presentation of symptoms may vary by age and developmental status.

Primary ARFID presentations of selective/restrictive eating, lack of interest in eating, and fear of aversive consequences represent the nosology presented in *DSM-5* and are consistent with prior categorical models of feeding disorder (APA 1994, 2013). These presentations have been documented in clinical populations and epidemiological research (Eddy et al. 2015; Kurz et al. 2015). The three-dimensional model of the neurobiology of ARFID posits that the three prototypic presentations are not mutually exclusive and vary in terms of severity within a given individual's ARFID presentation (Thomas et al. 2017). The three-dimensional model allows for feeding and eating difficulties to present in multiple domains and, accordingly, the focus of intervention often necessitates a multi-target approach

(e.g., expand the diet and increase the volume of food consumed during meals). The three ARFID phenotypes are highly discussed in ARFID, but not in PFD. It could be an area for investigation in PFD, because young children (who are more likely to be diagnosed with PFD) are less able to engage in meta-cognition to share rationales for their behavior than older children and adolescents (who are more likely to be diagnosed with ARFID).

The panel agreed that the symptom presentation likely differs between younger and older children and adolescents given inherent differences in developmental status and potentially different underlying mechanisms. Learning (respondent and operant) was emphasized as a contributor to the development, maintenance, and/or remediation of ARFID across the lifespan; however, a greater role of cognition in the pathology and remediation was emphasized by the eating disorder panelists. This distinction is consistent with the treatment literature. The literature supporting treatments for infants and young children with PFD that transition into ARFID most often cites behavioral intervention and parent training as the central strategies for expanding the diet (Sharp et al. 2017), while cognitive behavioral therapy (Dumont et al. 2019; Thomas et al. 2020) and familybased treatment (Lock, Sadeh-Sharvit, and L'Insalata 2019) are more frequently referenced as promising ARFID treatments in older children and adolescents.

Statement 10: Because of the overlap and influential nature between PFD and ARFID, it is vital that both fields partner to refine and share terminology, identify common outcome measures, and continue to pursue open communication to inform future research options.

The panel agreed on the importance of continuing this work to further elucidate the relationship between the two diagnoses. Members identified areas for future collaboration that included exploring similarities and differences in assessment and treatment approaches, identifying, developing, and sharing common measures to promote early and more efficient detection of both PFD and ARFID and further refining terminology to provide greater rigor in research.

4 | Discussion

This expert consensus sought to enhance clarity regarding the relationship between PFD and ARFID and establish the foundation for a better understanding of the epidemiology, assessment, and treatment of these two conditions. Together, the resultant 10 consensus statements (Figure 4) are intended to help health professionals navigate the diagnostic process (Noel 2023). Greater diagnostic clarity also holds the potential to improve future research across the feeding and eating disorders communities. Community-based participatory research regarding experiences with diagnostic navigation and treatment may also be an area for future work to inform the communities on how to best move forward together.

A key takeaway from the consensus-building process is the clear benefit of continued dialogue and collaboration across the feeding and eating disorders communities. Both PFD and ARFID capture pediatric populations with a disrupted relationship with food that is distinct from other feeding and eating disorders. To date, however, the two fields have largely operated in silos. Despite a historical connection to the DSM-IV diagnosis of feeding disorder in infancy or early childhood, it has been the eating disorder community that has advanced much of the research on ARFID as a "new" diagnostic entity (Sharp and Stubbs 2019). Examples include a growing body of research evaluating the adaptation of established eating disorder treatments for ARFID, such as cognitive behavioral therapy for ARFID (CBT-AR) (Dumont et al. 2019; Thomas et al. 2020).

In the pediatric feeding community, the introduction of PFD emphasized the benefit of a multidisciplinary lens for assessing feeding concerns in pediatric populations (Sharp et al. 2022). This includes the recognition that the feeding skill and medical domains represent critical etiological factors to consider when evaluating and treating infants and young children who restrict their food intake (Goday et al. 2019). PFD was not intended to bifurcate the field or create diagnostic confusion in the broader clinical and research communities; however, the impetus for this consensus highlights likely challenges in the differential diagnosis process now that both conditions are in the diagnostic ecosystem.

Prevalence estimates suggest that both PFD and ARFID are common. PFD impacts one in 37 children under the age of 5 (Kovacic et al. 2021) and ARFID affects 0.3%-15.5% of children and adolescents (Sanchez-Cerezo et al. 2023). This suggests healthcare providers will be increasingly called upon to support families as they navigate the complexities of the assessment and treatment landscape. Continued efforts to enhance our understanding of PFD and ARFID should also coincide with building knowledge, capacity, and resources to effectively manage these conditions. This has to come with education that those with PFD and ARFID may also present as normal and/or overweight, and one cannot rely on growth charts alone as a reflection of successful feeding. Awareness is also needed to promote the detection of significant detrimental outcomes associated with both conditions, including impaired cognitive and emotional functioning, complications related to chronic vitamin and micronutrient deficiencies (e.g., scurvy), high caregiver stress, and the need for recurrent hospitalizations to manage symptoms (Carruth et al. 2004; Kurz et al. 2015; Sdravou et al. 2023).

A few limitations of this consensus work warrant mention. First, our group focused exclusively on US-based experts because PFD is only recognized as an ICD-10 diagnosis in the United States and ARFID originated from the American Psychiatric Association's DSM framework. ARFID, however, was recently added to the ICD-11 and both conditions (and the challenges they present) are likely relevant to the work of our colleagues outside the US. Second, representation from the eating disorders community exclusively involved psychologists, while recruitment from the PFD community involved a multidisciplinary group of experts. PFD's multidisciplinary framework and ARFID's psychiatric roots informed our approach to convening the panel; however, a multidisciplinary lens is beneficial for evaluating and treating both PFD and ARFID. Third, in the discussion of age, the cases of children with PFD that "age out" of pediatric classification with unresolved PFD arose. We encourage the field to consider this worthy topic further.

SUMMARY OF PFD-ARFID CONSENSUS STATEMENTS

- ARFID is the only feeding and eating disorder that explicitly mentions feeding in this section of disorders in the DSM-5, but the manual should provide guidance about what distinguishes a feeding disorder from an eating disorder.
- There is clear diagnostic overlap between PFD and ARFID, but both definitions would benefit from further clarity regarding how to navigate this overlap.
- The relationship between PFD and ARFID is such that they can influence one another, criteria can be met for both conditions, or they can exist in isolation. The panel discussed four different scenarios outlining this relationship.
- A multidisciplinary lens is beneficial for evaluating and treating both PFD and ARFID; however, the involvement and relative contribution of disciplines differs by treatment setting.
- In determining the best diagnostic fit, medical screening and feeding skill assessment should be part of assessment protocols for both ARFID and PFD providers.
- The feeding development period (birth through infancy and toddler period, early and middle childhood) needs to be considered when determining diagnosis and planning treatment for both ARFID and PFD.
- PFD that transitions into ARFID likely involves a different etiological pathway than ARFID in isolation.

 Age of onset, learning history with food and eating, disorder course (among other developmental and learning histories) are important considerations in diagnosis. Both pathways involve a negative association with food.
- Age of onset is an important consideration; both ARFID and unresolved PFD may be present in adulthood, but only ARFID may emerge in adulthood.
- The proposed phenotypes of ARFID (i.e., sensory sensitivity, fear of aversive consequences, lack of interest in eating or food) apply throughout the lifespan; however, the presentation of symptoms may vary by age and developmental status.
- Because of the overlap and influential nature between PFD and ARFID, it is vital that both fields partner to refine and share terminology, identify common outcome measures, and continue to pursue open communication to inform future research options.



FIGURE 4 | Reference list of 10 consensus summit statements.

Together, this consensus work underscores a continued need to improve diagnostic systems and reinforces calls for strengthening community-based expertise for both PFD (Sharp et al. 2024) and ARFID (Eddy et al. 2019). We hope this work will provide the foundation for a sustained effort that involves colleagues from across the globe working collaboratively to advance the field. Feeding Matters' Research Initiatives Task Force recently hosted a feeding and eating psychology summit in 2024 to continue this work. It is anticipated that this event will continue in subsequent years and a logical next step for future planning is to include a global perspective and to invite other disciplines involved in the assessment and treatment of ARFID. Members of this workgroup also hold leadership in professional organizations (e.g., Eating Disorders Research Society) that represent potential avenues to further build a collaborative network. With advancement through research, both diagnoses will likely

continue to evolve, and, ideally, diagnostic ambiguity will decrease. Future diagnostic refinement should also consider building an acknowledging link between the two conditions (Noel 2023).

Author Contributions

Hayley H. Estrem: conceptualization, data curation, methodology, writing – original draft, writing – review and editing. Jaclyn L. Pederson: conceptualization, data curation, funding acquisition, methodology, writing – original draft, writing – review and editing. Pamela Dodrill: methodology, writing – original draft, writing – review and editing. Cuyler Romeo: conceptualization, methodology, writing – original draft, writing – review and editing. Kelsey Thompson: conceptualization, methodology, writing – original draft, writing – review and editing. Jennifer J. Thomas: writing – original draft, writing

review and editing. Nancy Zucker: writing – original draft, writing
 review and editing. Richard Noel: writing – original draft, writing
 review and editing. Hana Zickgraf: writing – original draft, writing – review and editing. Jessie Menzel: writing – original draft, writing – review and editing. Colleen T. Lukens: writing – original draft, writing – review and editing. Praveen S. Goday: writing – review and editing. Sarah MacLaughlin: writing – review and editing. William G. Sharp: conceptualization, funding acquisition, methodology, project administration, writing – original draft, writing – review and editing.

Conflicts of Interest

Authors that attended the August 2023 consensus meeting had the option to accept a travel stipend covered by Marcus Foundation funding.

Data Availability Statement

The authors have nothing to report.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section.