

The Role of the Dietitian in the Assessment and Treatment of Children and Young people with Avoidant Restrictive Food Intake Disorder (ARFID):

Written by the BDA ARFID Special Interest Group

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This position paper has been written by members of the ARFID Special Interest Group (ARFID SIG). The ARFID SIG is part of the British Dietetic Association (BDA) CAMHS sub-group of the Mental Health SIG. The authors collaborated with members of the Paediatric Specialist Group. ARFID Awareness UK (AAUK) were also consulted (AAUK) to include the voice of patients and carers.

The need for a position paper came about from the recognition of ARFID as an eating disorder in both the DSM-5 criteria and ICD11 in 2013 and 2022 respectively. This position paper has focused on Children and Young People (CYP).

A group of dedicated and highly specialist dietitians in eating disorders and paediatrics UK wide convened. The draft was circulated to specialist ARFID colleagues including paediatricians, psychologists, and dietitians.

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Executive Summary

Avoidant/Restrictive Food Intake Disorder (ARFID) was introduced as a new mental health and behaviour disorder diagnosis in 2013. ARFID is characterised by a pattern of eating that avoids certain foods or food groups entirely and/or eating small amounts due to lack of interest in food, high sensitivity to sensory aspects of food (such as texture, colour, or taste), and/or fear of aversive consequences such as being sick or choking. These restrictive eating patterns can result in significant health problems. It differs from other eating disorders in that people with ARFID do not restrict their food intake for the specific purpose of losing weight or managing feelings of fear and anxiety around their shape and size.

Dietitians with specialist training are essential for the management of ARFID from the point of assessment and diagnosis and throughout treatment. When dietitians are not embedded within a team and dietetic time is not adequately resourced, there is likely to be nutritional and dietary compromise of patients^{1,2}. This will impact on their physical health and wellbeing, psychosocial functioning, quality of life, growth and may lengthen treatment of the patient with ARFID³. In turn this is likely to have cost implications, impact the rest of the team and affect patient care if the patient deteriorates further in health.

Services are currently being developed for CYP with ARFID throughout the UK. Funding to support adequate dietetic time in ARFID services is essential and this paper aims to identify what the BDA considers is adequate and why. Misdiagnosing and underdiagnosing ARFID has serious implications for patient care, and it requires specialist and multidisciplinary assessment and care pathways⁴. This position paper highlights the importance of early identification of nutritional deficit and management and the important role of dietitians.

Professor Waller (2019) comments that ARFID is *'old wine in a new bottle'* with a clear definition, description of the problem, identification, and intervention.

Clinically, many dietitians agree that this is not a new problem, but a new definition and we have the skills, experience, and expertise to work with these patients.

Purpose of Position Statement

Across hospitals and health providers in the UK conversations are starting about ARFID services. This position paper is written by dietitians for dietitians, clinicians, commissioners, and service users to influence and support their position with those

who provide and commission services for CYP with ARFID. This paper will help to raise awareness that dietitians are central to the assessment and treatment of these patients. When a team is adequately resourced with dietetic time, the contributions of the dietitian are invaluable to children, young people, their families as well as the team as a whole 1-3,5,6.

What service users want...

ARFID Awareness UK, on behalf of parents/carers and individuals with ARFID says:

"Regardless of whether a GP is familiar with ARFID, he/she most often will refer a CYP with a restricted or avoidant diet to a dietitian for assessment/advice. As the first 'specialist' that the CYP is seeing, it is critical that the dietitian has been properly trained in the diagnosis and management of ARFID so that he/she is able to give the family advice."

"Advice from well-meaning family/friends, blogs, nurseries, health visitors and nutritionists that, although appropriate for the average CYP, could exacerbate the anxieties that underpin ARFID, resulting in further avoidant/restrictive eating and compound nutritional deficiencies. A dietitian with limited/no experience could do the same."

"With no two presentations of ARFID being the same, it is critical that the specialist dietitian is able to tailor the CYPs care plan to his/her needs; and that the dietitian is a principal member of a CYPs MDT team. ARFID is an anxiety based psychological disorder of which the dietitian manages its manifestation. Because other disciplines including clinical psychology, occupational therapists and speech and language therapists also have a role to play in the long-term treatment of ARFID, dietitians need to be working in partnership with them to ensure that they are providing optimal care."

Why are Specialist Dietitians important?

Dr Rosan Meyer says:

"The risk of not employing a specialist dietitian with knowledge on working with ARFID as part of a multidisciplinary team managing patients with ARFID may therefore lead to provision of inappropriate dietary advice, which may do more psychological and/or physical harm by not recognising that patients with this diagnosis require unique sensory, psychological and nutritional management strategies."

The BDA emphasises in this position paper that there is limited research on the role and efficacy on *all* clinicians in ARFID, not just dietitians. Research is developing continuously, and it is hoped that this will include the role of the dietitian in ARFID.

Background

ARFID is an eating disorder, newly categorised as a diagnosis in DSM-5 in 2013, but previously referred to by different names such as selective eating disorder, fussy eating, feeding disorder of infancy and early childhood⁷. Dietitians have been seeing patients with forms of restricted eating (some now known to have met the criteria for ARFID) for many years in a variety of settings including paediatrics, community child and adolescent mental health services (CAMHS), and adult services, such as gastroenterology and community.

Many Trusts and Health Boards do not have a dedicated clinical pathway or service for providing assessment and treatment to children, young people (YP) or adults with ARFID. Referrals for ARFID present in multiple services but as they do not fit 'criteria' and/or are unable to access clinical expertise they fall between the gaps. The clinical expertise is not present within any one service to meet the complex needs of this group of children. There are no evidence / practice guidelines which clearly describe the service specifications and clinical pathway required to manage this population.

Pathways need to be created locally to determine appropriate multi-disciplinary assessment and treatment for CYP with ARFID. This has major implication for funding/resourcing of dietetic time within services and specifically many CAMHS and CYP Eating Disorders Services and paediatrics where these patients are currently being signposted.

ARFID criteria

ARFID is a feeding disorder manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with at least one of the following criteria: significant nutritional deficiency, significant weight loss or failure to gain adequate weight, dependence on oral supplementation or tube feeding, and/or marked interference with psychosocial functioning. Avoidant restrictive feeding behaviours may arise because of poor tolerance of specific sensory-related aspects of food, fear of adverse consequences of feeding, and/or an overall lack of interest in food or feeding as classified in World Health Organization International Classification of Diseases, 11th Revision (ICD-11) definitions⁸.

Summary of key messages:

Children and young people with ARFID present with complicated and varied histories and risk factors that include medical and psychological factors affecting nutritional intake.

Nutrients have very specific biological functions within the body. Nutritional deficiencies are known to be present in children and young people with ARFID and/or the common co-morbidities associated with ARFID such as autism and attention deficit hyperactivity disorder¹.

CYP often present with extremely restricted intakes - severe selectivity refers to fewer than 10 foods in the diet. It becomes more problematic to obtain adequate nutrients the more selective the child's intake becomes.

Such diets put immense psychological and financial pressure on families, from obtaining and preparing safe foods, and often therefore different meals for family members, and an inevitable sense of failure some parents may experience.

Chronic poor diet can lead to physical compromise and clinical manifestations of weight loss (or faltering growth) and marked nutritional deficiencies3. The nutritional deficiencies are often specific to one or more nutrients and need correcting individually rather than with a generic multi-vitamin/mineral supplement.

The resourcing of skilled dietitians working with CYP with ARFID needs careful planning to be able to provide the necessary assessment and intervention. Consistent recommendations for eating disorders are for dietetic intervention to be part of a multidisciplinary team intervention, and not an intervention to be delivered in isolation⁶.

All dietitians working with CYP with ARFID should have specific training around ARFID. CAMHS dietitians who do not have a paediatric background will benefit from additional training to develop paediatric skills and knowledge. Likewise, paediatric dietitians are likely to benefit from additional training in mental health.

Importance of nutrients in our diets

An unbalanced or inadequate diet increases the risk of nutritional deficiencies which in turn can lead to impairment of quality of life and even be life threatening.

Vitamins and minerals are nutrients needed by the body (in small amounts) for growth and to remain healthy. Most people obtain the vitamins and minerals required by having a varied and balanced diet. CYP with ARFID have a restricted intake whereby certain foods or food groups are omitted⁵. These are often fruit, vegetables, and meat with a reliance on carbohydrates. This leads to insufficient amounts or a sub-optimal intake of macronutrients and/or micronutrients, such as vitamins, minerals, and essential fatty acids. Where the nutrients fall below sub-optimal, the consequences on the body can be marked.

Each nutrient plays a specific role within the body, whether that is to give energy, keep the immune system strong, regulate hormones, help develop bones and other structures and heal injuries, to name a few.

Lack of nutrients can lead to lethargy, weight loss, scurvy, mimic symptoms of leukaemia, joint pain, anaemia and many other symptoms. These can have a severe impact on quality of life, including potential blindness and impacting on mental health. Nutritional deficiencies can even be life threatening.

Individual nutrients have interactions with other nutrients, and with medication. Excessive intake of one nutrient can impair the absorption of another (for example, calcium and iron). Some nutrients can even be toxic and supplements and special diets for children with autism for example, commonly result in excessive amounts of some nutrients and deficiencies in others⁹. Recommending a generic multivitamin and mineral supplement may potentially be harmful and/or further compromise nutrition.

Nutritional risk

While there is a paucity of evidence to date, there are several papers emerging identifying specific nutrient deficiencies in ARFID. Clinically, significant nutritional deficiency is one of the diagnostic criteria for ARFID.

We know that the prevalence of concomitant gastrointestinal symptoms (e.g. constipation and diarrhoea) is very high in ARFID patients, which may be a consequence of severity of malnourishment¹⁰, but may also precede the eating difficulties¹¹. Children with ARFID often present with different degrees of malnutrition and this can take many years to be reversed¹². It is also known that the consequences of the long-term deficits in nutrition (not only vitamins and minerals but also energy requirements) could impact growth and development^{11,13}, highlighting the importance of early intervention and treatment in individuals with ARFID. The impact on growth and development can be assessed by carefully reviewing the centiles on a growth chart over a period – paediatricians and many dietitians with paediatric/ CAMHS experience are skilled at this.

The extent and nature of nutritional deficiency varies and has historically been widely reported in individual case studies. In a qualitative systematic review of case reports, Yule et al¹ (2021) reported, 69.7% cases of scurvy due to vitamin C deficiency, 17.1% cases of eye diseases secondary to vitamin A deficiency. Other common deficiencies were thiamine, vitamin B12 and vitamin D. Importantly, 63% were of normal weight where weight data were available. Patients who are at a healthy weight or above a healthy weight can be deficient in one or more micronutrients¹. Therefore, physical health in isolation is not a good way of assessing risk in this patient group.

Another study showed prevalence of anaemia, hypokalaemia and hypophosphatemia in patients who needed to be hospitalized. This was corroborated by other papers alongside deficiencies in vitamin D, B12, B2, A, C, E, K, iron, and folate¹⁴⁻¹⁸.

Studies on autism and selective eaters also highlight nutritional deficiencies such as vitamin E, calcium, vitamin A, iron, and zinc¹⁹⁻²³. Sharp et al²¹ (2018), found high levels of deficiencies in children with autism and food selectivity where 97% were deficient in vitamin D, 83% deficient in vitamin E and 71% deficient in calcium.

Faraag et al (2021)⁴, Harshman et al (2019)⁵ and Schmit et al (2021)² in larger observational studies all identify nutritional inadequacy to varying degrees in ARFID. Children were found to have less variety of foods and in inadequate amounts, less protein than controls and low levels of thiamine (B1), riboflavin (B2), vitamins C and K. They also only met 20-30% of the recommended intake for most vitamins and minerals due to low vegetable intake².

There is consensus among the three studies that nutritional deficiency should be identified early in assessment and addressed in treatment^{2,4,5}.

Following on from this, it is recommended that a multimodal approach is used to assess nutritional status. This includes clinical examination, dietary assessment, and nutritional biomarkers. If there are concerns about infection or inflammation, C-reactive protein and serum albumin should be checked as these can affect plasma vitamin and mineral concentrations²⁴.

Nutrients can be classified into two types based on the way in which the body responds to a nutrient deficiency: Type I and Type II nutrients²⁵.

Type I nutrients are those nutrients whose deficiency results in specific physical signs, such as anaemia, scurvy, beriberi. Deficiency of type I nutrients does not have any effect on growth or body weight. Examples of Type I nutrients includes selenium, iron and copper. Diagnosis of Type I nutrient deficiency and can be done via clinical symptoms and blood tests.

Type II nutrients are those nutrients whose deficiency results in reduced growth or weight loss, but blood concentrations of specific vitamins and minerals remain within normal limits. For example, if a diet is deficient in Type II nutrient like zinc, growth stops, followed by weight loss. The concentration of zinc in the major tissues remains normal and there are no deficiency signs. Other examples of Type II nutrients include magnesium, sulphur, and essential amino acids. The aim of Type II nutrient deficiency is to preserve plasma and tissue levels even at the expense of growth, repair, and immune system. Therefore, deficiency of Type II nutrients does not show any physical signs or clinical symptoms and is difficult to identify.

There are no characteristic symptoms to distinguish which Type II nutrient deficiency an individual has. Computer nutritional analysis of the diet, interpreted by a skilled dietitian, may be able to help identify the Type II nutrient deficiencies.

In Type II nutrient deficiency, growth stops, the body starts to conserve the nutrient, and its excretion falls to very low levels. Additionally, during severe deficiency, the body might break down its own tissues followed by reduction of appetite.

Developmental and nutritional history of children with ARFID is important to assess the chronic nature of nutritional deficiencies. This is different from other eating disorders. Nutritional deficiencies may be misdiagnosed as medical problems. For example, scurvy wrongly being diagnosed as leukaemia²⁶ and systemic lupus erythematosus masking scurvy²⁷.

Recommendations for practice suggest that nutritional deficiency should be accurately identified and treated early.

In considering the nutritional risks associated with ARFID it is helpful to compare the nutritional differences and associated risks with other eating disorders, for example anorexia nervosa.

Table 1 Nutritional and dietary differences between ARFID and anorexia nervosa

Feature	ARFID	Anorexia Nervosa
Chronicity	Often chronic/long term	Often more acute
Variety in diet	Selective (severe less than 10 foods, extreme less than 5 foods)	Often varied, although certain food groups may be omitted
Food brand preference	Often very brand specific	Not brand specific
Food Colour	Often prefers one colour such as beige	Not generally an issue
Food Texture	Often prefers limited textures, such as dry or crunchy	Not generally an issue
Multivitamin and mineral supplement	Risk of toxicity (e.g. vitamin A, iron, calcium) due to oversupply through supplements	Toxicity unlikely
Food groups and nutrients	Excessive intake of some nutrients where the diet relies on a few food items (e.g., milk, carbohydrates, sodium)	Some foods may be omitted (e.g. fats, carbohydrates, dairy)
Growth and development	Can be overweight/underweight or healthy weight. Stunting could be an issue	Underweight at diagnosis, not generally a long-term issue
Vitamin and mineral supplement	Needs specific supplementation often alongside or instead of general multivitamin and mineral. Can be difficult to find acceptable preparation due to taste	General multivitamin and mineral supplement usually acceptable
Nutritional Supplements	Often not acceptable due to taste preferences	Can be used for 'top up' or food refusal
Protein deficiency	Likely with extreme restriction if based around carbohydrate foods	Unlikely
High sugar intake	Likely with high intake of sugary foods such as biscuits. This can be particularly detrimental to oral health.	Unlikely
Constipation related to lack of fibre in diet	Likely due to reliance on highly processed foods and low intake of fruit and vegetables.	Unlikely long-term issue

Role of dietitian with CYP with ARFID

As one of the diagnostic criteria for ARFID includes nutritional deficiency as a core component, a detailed nutritional assessment is essential for diagnosis and management. This assessment will include a detailed food diary, discussions around feeding history and family eating patterns, any medical problems that may have impacted dietary intake or tolerance such as earlier cow's milk protein allergy (CMPA), anaemia and constipation, as well as explore any sensitivities and taste preferences. This should also include anthropometrics and clinical and dietary assessment alongside targeted biochemistry with blood markers that are sensitive and specific to what is being measured²⁸. For most nutrients, there are no blood markers that alone identify nutritional compromise.

For patients with limited or no dietetic intervention there is likely to be nutritional and dietary compromise^{29,12}. This will impact on physical health and wellbeing, psychosocial functioning, quality of life, growth and will delay treatment^{3,5}. This will have cost implications if the patient deteriorates further in health.

In many areas of the UK there are gaps in the provision of ARFID services, and it is not possible to absorb patients within the current dietetic workload. Anecdotally, dietetic resources have not risen in many areas in line with other professional groups in CAMHS eating disorders services. Projects led by dietitians are underway to quantify the scale of this problem, which will no doubt be informative. At the present time, services are being planned and commissioned. The BDA is concerned that "access to a dietitian" is written into some service documents which is unhelpful and unclear as to its meaning. Young people and their families need more than "access to a dietitian", which we assume to mean a small amount of time snatched from busy, generic community or hospital out-patient clinics or existing, often inadequately resourced, dietetic resources within CAMHS eating disorders services. Suitably experienced and remunerated dietitians must be an integral part of the team with adequate time to perform their role.

ARFID affects all age groups and treatment should be multimodal and supported by a multidisciplinary team. The specialist team should include dietitians, mental health providers (psychology and / or mental health nurses) and occupational therapists, with referral routes to speech and language therapists, psychiatrists and paediatricians¹³. The dietitian's contribution within an MDT assessment and treatment pathway is significant. An example of the complexity of steps of assessment and dietetic intervention in relation to eating disorders can be found in Heruc et al (2020)⁶.

Dietitians' contribution as part of the MDT

Typically, the dietitian can gather detailed information on the feeding history as part of the clinical assessment and meaningfully interpret growth and development over a period. They can guide and interpret blood biochemistry in relation to nutritional deficiencies as well as take a detailed diet history which will form the foundation of dietary interventions. Dietitians are skilled in teasing out what people eat versus what they report eating. They are experts in adapting the diet to meet specific nutritional needs, working with patients and carers to find acceptable solutions, reviewing, and adapting as needed by the client. Dietitians are experts in translating nutritional knowledge into dietary actions and educating patients so that they understand how to make their own decisions about food, and which goes beyond simply producing a meal plan⁶. The dietitian is a source of unbiased nutritional information based on sound scientific knowledge and is a unique resource within the multidisciplinary team.

Dietitians aim to ensure nutritional adequacy, reduce anxiety around mealtimes, establish functional feeding patterns and help expand the diet.

Dietitians are the only registered professionals within the NHS who can assess age specific nutritional adequacy in relation to macro- and micronutrient content and recognise the likely impact of sub-optimal intakes.

The role and responsibilities of a dietitian working in a non-specialist ARFID context e.g. general paediatric or community clinic

Non-specialist ARFID dietitians are often limited by the time they have e.g., 30-minute appointments and they often do not have access to MDT support and opportunity for intense and regular follow up.

They provide specific dietary advice that is tailored to the patient needs – additional training may be required for specific recognition of ARFID.

They are skilled in providing nutritional care planning and nutritional education to patients, parents and carers adapted to the needs and circumstances of the patient and their environment.

They can articulate the short- and long-term consequences of restrictive eating.

They discuss the role of appetite on eating and physical, psychological, and environmental factors that affect appetite and dietary intake and offer solutions to any problems in collaboration with the patient, family, and carers.

They are skilled in empowering patients, families, and healthcare professionals to facilitate dietary changes.

They support restoration of physical health including weight, height, and correction of nutritional deficiencies where possible. Nutritional deficiencies will be unique to each patient and will need an individualised plan for correcting by specific supplementation and / or appropriate dietary management.

They have expert knowledge of nasogastric feeding (NG) and percutaneous endoscopic gastrostomy feeding (PEG) and should lead on nutritional support as appropriate in liaison with medical colleagues.

Dietitians will also be mindful of tube dependency.

They are skilled in the planning the safe reintroduction of nutrition following significant nutritional compromise.

The role and responsibilities of a specialist dietitian working with children and young people with ARFID

The Specialist dietitian may have a background in CAMHS and/or paediatrics but will have acquired the following knowledge and skills – and have had additional training in ARFID.

Highly specialist dietitians, advanced clinical practitioners and consultant dietitians may also have appropriate clinical and leadership skills to lead an ARFID service.

Appointments will be at least an hour long in the context of an MDT approach and with the ability for regular intense follow ups.

They have in-depth expertise to help bring about behaviour change – supported by additional training.

They can provide expert contribution to the multi-disciplinary team to assess and manage the CYP's significant nutritional risks.

They lead or participate in joint sessions and attend reviews with mental health practitioners in their team.

They frequently work with other agencies such as schools and social care.

They safely manage very underweight/medically compromised CYP in the community.

They work with families and CYP with high levels of distress and anxiety and high levels of expressed emotions.

They apply behavioural approaches such as family-based treatment for ARFID.

They use techniques such as food chaining, food desensitisation, food exposure, and steps to eating.

They can articulate the short- and long-term consequences of restrictive eating.

They are well placed to apply techniques such as CBT-AR and CBT-T with training.

They recognise the need to provide longer and more frequent appointments for the specialist dietetic and therapeutic work required with CYP with ARFID.

They are skilled in understanding, assessing, and interpreting growth and development in children and young people and provide essential input where there are concerns about failure to achieve expected growth potential or significant weight loss.

They have expert and up to date knowledge and experience of oral nutritional supplements suitable for younger age groups.

They are often experienced in running parent nutrition education groups.

Professor Glenn Waller, Professor in Clinical Psychology, says:

"Those who are used to behavioural approaches such as dietitians are very good at CBT-T."

"Allied Health Professionals such as dietitians, occupational therapists and physiotherapists focus on behaviour and so this makes for good therapists."

Staffing recommendations

Within an ARFID service, dietitians should be core and services require a specialist Band 7 Dietitian as a minimum. Specialist dietitians are well placed to advance their skills and knowledge into a Band 8a advanced clinical practitioner role.

As services grow, it is important to recognise the skill mix of dietitians and a second dietitian will typically be graded at Band 6. Any further dietetic staff can be banded at Band 5 where there is daily access to more senior dietitians for expert guidance and support.

Adequate resourcing of dietetic provision is essential, and this must include clinical contact time as well as nonclinical contact time. Supervision time, mentoring, continuing professional development as well as service and resource development must also be factored into the time allocated for the dietitian.

Dietetic time for CYP with ARFID must be quantifiable and stated as WTE.

For example, a 1.0 WTE dietitian may be able to see 76 children or young people with ARFID per annum.

This has been calculated using the BDA 'Safe staffing, safe workload guidance' (2016)³⁰.

The total estimated dietetic time for an individual patient with ARFID under a CAMHS setting is 20-23 hours per patient. This is made up of non-clinical and clinical time as explained below. Some dietitians provide an enhanced service which includes delivering parent groups and food exposure work.

Total of non-clinical and clinical time per patient

The total of both non-clinical and clinical time per patient gives an indication of the dietetic time that is necessary on average per patient.

Per patient, this is approximately 16-17 care contact hours (direct patient contact and indirect patient activity) + 25-35% other dietetic activity = **20-23 hours**.

A 1.0WTE dietitian may be able to see 76 children and young people with ARFID per annum.

In some teams, the dietitian has an extended role such as taking responsibility for writing assessment documentation and communicating with referrers on behalf of the MDT, or leading strategic developments within the service. Others clinically and operationally lead the ARFID service. These additional responsibilities would need to be taken into consideration per post and locality.

Other dietetic activity

When considering the dietetic time in any provision, it is essential to consider the non-clinical time of the dietitian. The BDA states its concern that this is frequently an area that is not taken into consideration when dietetic hours are calculated for a service^{30,31}. An additional 25-35% time is to be added for non-clinical time depending on the job banding.

Examples of non-clinical time are varied and include service and resource development, audit and evaluation, continuing professional development, supervision, attendance of team meetings and annual leave. Clinicians in eating disorder practice are also advised to have clinical supervision as a form of formal learning and reflective practice. Dietitians would likely benefit from formal clinical supervision, with the aim of encouraging safe and competent practice⁶. CPD and lifelong learning are necessary for the development of everyone who works in health and social care and for the experience of service users³¹. These examples are like those for other clinicians within the team and are not unique to dietitians, although services will need to consider mechanisms for maintaining dietetic skills and knowledge where dietitians sit outside of the ARFID service MDT.

Care contact time

Based on the experience of dietitians working with CYP with ARFID in the community, the estimated time per patient for assessment and intervention is appropriately 15 - 20 hours. As with any patient with an eating disorder, some will require more time, and some will require less time. This will be dependent on several different factors

including co-morbidities, readiness to make dietary changes and liaison time needed with schools and other agencies.

Dietetic hours required	Time in hours
Initial assessment time is estimated at 2-3 hours. If the dietitian	2 - 3
writes GP letters, and carries out additional associated	
paperwork, further time needs to be allowed	
Additional clinical work associated with a new patient following	3
assessment, including a detailed dietary analysis of nutritional	
intake	
Mealtime management/planning and advice	3
Further out-patient appointments	5
One mid-way review	1.5
Discharge planning	1.5

Dietitian's providing enhanced services

Some dietitians where there is adequate funding can provide some additional services. Parent groups are helpful to support parents with management of their anxiety which then supports dietary change. Dietitians are also capable of carrying out food exposure work.

Examples include:

Parent groups consisting of 2 x 90-minute sessions over a period of 2 consecutive weeks

Food exposure sessions consisting of 8 x 30 - 60-minute sessions over a period of 2 to 4 months.

The BDA's position regarding CYP and ARFID

Dietitians have a unique mix of skills and knowledge in numerous areas including nutrition, physiology, psychology, sociology, biochemistry, and behaviour change which can be applied to support patients with thoughts and behaviours around food, weight, and appetite.

Dietitians are skilled in dietary planning, meal planning and preparation and adapting dietary intake to meet specific clinical needs. Dietitians are experts in food composition and food properties, the effect of food and dietary intake on physical and mental health.

The core training of dietitians includes nutrition, metabolism, biochemistry, physiology, behaviour change and communication which are essential for this work. Depending on experience after training, and opportunities to specialise in areas such as paediatrics, eating disorders, and CAMHS, dietitians will complement their existing skills. Specialist ARFID dietitians will have training and qualifications in psychological therapies. These may include family based and cognitive behavioural approaches such as Family Based Treatment (FBT), Cognitive Behavioural Therapy (CBT) and food exposure work.

Summary

Nutritional deficiency and its consequences are at the core of the ARFID diagnostic criteria.

Dietitians are the key health care professionals with expertise regarding food and nutrition. They have the clinical skills to translate the science of nutrition to improve physical health and treat conditions by educating and giving practical advice to patients, parents, carers, and colleagues.

Dietitians should be embedded within the ARFID MDT to provide comprehensive nutritional assessments and dietary interventions as well as be a resource within the MDT for teaching, training, consultation, and supervision.

This document provides a thorough account of what you need to know about the important role of the dietitian and adequate resources required when developing ARFID services for children and young people.

References

- Yule, S.; Wanik, J.; Holm, E.R.; Bruder M.B.; Shanley, E.; Sherman, C.Q.; Fitterman, M.; Lerner, J.; Marcello, M.; Parenchuck, N.; Roman-White, C.; Ziff, M. (2021). Nutritional Deficiency Disease Secondary to ARFID Symptoms Associated with Autism and the Broad Autism Phenotype: A Qualitative Systematic Review of Case Reports and Case Series. Journal of the Academy of Nutrition and Dietetics, 12:3.
- Schmidt, R.; Hiemisch, A; Kiess, W.; von Klitzing, K.; Schlensog-Schuster, F.;
 Hilbert, A. (2021). Macro- and Micronutrient Intake in Children with Avoidant/Restrictive Food Intake Disorder. Nutrients, 13, 400.
- 3. Yanagimoto, Y.; Ishizaki, Y.; Kaneko, K. (2020). Iron Deficiency anaemia, stunted growth and developmental delay due to ARFID in ASD. BioPsychoSocial Medicine; 14.
- Farag, F.; Sims, A.; Strudwick, K.; Carrasco, J.; Waters, A.; Ford, V.; Hopkins, J.; Whitlingum, G.; Absoud, M.; Kelly, V.B. (2021). Avoidant/ Restrictive Food Intake Disorder and Autism Spectrum Disorder: Clinical Implications for Assessment and Management. Developmental Medicine and Child Neurology; 64:2, 176-182.
- 5. Harshman, S.G.; Wons O.; Rogers, M.S.; Izquierdo, A.M.; Pulumo, R.L.; Asanza, E.; Misra M.; Lawson, E.A.; Eddy K.T.; Thomas, J.J.; Holmes, T.M.; Micali N. (2019). A diet high in processed foods, total carbohydrates and added sugars, and low in vegetables and protein is characteristic of youth with avoidant/restrictive food intake disorder Nutrients; 11:9.
- Heruc, G.; Hart, S.; Stiles, G.; Fleming, K.; Casey, A.; Sutherland, F.; Jeffrey, S.; Robertson, M.; Hurst, K. (2020). ANZAED Practice and training standards for dietitians providing eating disorder treatment. Journal of Eating Disorders 8:77.
- 7. American Psychiatric Association (2013). Diagnostic and statistical manual of mental disorders (5th ed.).

- 8. World Health Organisation. (2018). International Classification of Diseases for mortality and morbidity statistics (11th Revision).
- Stewart, P.A.; Hyman, S.L.; Schmidt, B.L.; Johnson, C.R.; Jill James, S.; Manning-Courtney, P. (2015). Dietary Supplementation in Children with Autism Spectrum Disorders: Common, Insufficient, and Excessive. Journal of the Academy of Nutrition and Dietetics 115:8, 1237-1248.
- 10. Zucker, N.; La Via, M.; Craske, M.G.; Foukal, M.; Harris, A.; Datta, N.; Savereide, E.; Maslow, G. (2019). Feeling and Body Investigators (FBI) ARFID division: an acceptance-based interoceptive exposure treatment for children with ARFID. International Journal of Eating Disorders, 52:2, 466-472.
- 11. Williams, K.E.; Hendy, H.M.; Field, D.G.; Belousov, Y.; Riegel, K.; Harclerode, W. (2015). Implications of Avoidant/Restrictive Food Intake Disorder (ARFID) on Children with Feeding Problems, Children's Health Care, 44:4, 307-321.
- 12. Lucarelli, L.; Sechi, C.; Cimino, S.; and Chatoor, I. (2018). Avoidant/Restrictive Food Intake Disorder: A Longitudinal Study of Malnutrition and Psychopathological Risk Factors From 2 to 11 Years of Age. Front. Psychol. 9, 1608.
- 13. Taylor, C.M.; Steerm, C.D.; Hays, N.P.; Emmett, P. (2019). Growth and body composition in children who are picky eaters: a longitudinal view. European Journal of Clinical Nutrition, 73, 869–878.
- 14. Chandran, J.J.; Anderson, G.; Kennedy, A.; Kohn, M.; Clarke, S. (2015). Subacute combined degeneration of the spinal cord in an adolescent male with avoidant/restrictive food intake disorder: A clinical case report. Int. J. Eat. Disorders. 48, 1176–1179.
- 15. Chiarello, F.; Marini, E.; Ballerini, A.; Ricca, V. (2018). Optic neuropathy due to nutritional deficiency in a male adolescent with Avoidant/Restrictive Food Intake Disorder: A case report. Eat. Weight Disord. 23, 533–535.
- 16. Görmez, A.; Kılıç, A.; Kırpınar, İ. (2018). Avoidant/Restrictive Food Intake Disorder: An adult case responding to cognitive behavioral therapy. Clin. Case Stud., 17, 443–452.

- 17. Strandjord, S.E.; Sieke, E.H.; Richmond, M.; Rome, E.S (2015). Avoidant/restrictive food intake disorder: Illness and hospital course in patients hospitalized for nutritional insufficiency. J. Adolesc. Health, 57, 673–678.
- 18. Bryant-Waugh, R. (2013). Avoidant restrictive food intake disorder: An illustrative case example. Int. J. Eat. Disord., 46, 420–423.
- Mari-Bauset, S.; Ilopis-Gonsalez, A.; Zazpe-Garcia, I.; Mari-Sanchis, A.; Morales-Suarez-Varela, M. (2015). Nutritional status of children with autism spectrum disorders (ASDs): a case-control study. Journal of Autism and Developmental Disorders, 45:203–12.
- 20. Sidrak, S.; Yoong, T. and Woolfenden, S. (2014). Iron deficiency in children with global developmental delay and autism spectrum disorder. J Paediatr Child Health, 50:356–61.
- 21. Sharp, W.G.; Postorino, V.; McCracken, C.E.; Berry, R.C.; Criado, K.K.; Burrell, T.L.; Scahill, L. (2018) Nutrient Status, and Growth Parameters in Children with Autism Spectrum Disorder and Severe Food Selectivity. J Acad Nutr Diet., 118:10, 1943-1950.
- 22. Taylor, C.M.; Northstone, K.; Wernimont, S.M.; Emmett, P. (2016). Macro and micronutrient intakes in picky eaters: a cause for concern. American Journal of Clinical Nutrition, 104,1647–56.
- 23. Galloway, A.T.; Fiorito, L.; Lee, Y.; Birch, L.L. (2005). Parental pressure, dietary patterns, and weight status among girls who are "picky eaters". Journal of American Diet Assoc., 105:541–8.
- 24. Gerasimidis, K.; Bronsky, J.; Catchpole, A. et al. (2020). Assessment and interpretation of vitamin and trace element status in sick children: a position paper from the European society for paediatric gastroenterology hepatology, and nutrition committee on nutrition. Journal of Paediatric Gastroenterology and Nutrition, 70: 6 873-881.
- 25. Golden, M. (2009). Proposed recommended nutrient densities for moderately malnourished children. Food Nutrition Bull 30 (3 Suppl), S267-342.

- 26. Benezech, S.; Hartmann, C.; Morfin, D.; Bertrand, Y.; Domenach, C. (2020). Is it leukemia, doctor? No, it's scurvy induced by an ARFID! Eur J Clin Nutr 74, 1247–1249.
- 27. Likhitweerawong, N.; Boonchooduang, N.; Morakote, W. et al. (2021). Scurvy mimicking as systemic lupus erythematosus. BMJ Case Reports, 14.
- 28. Munro, L. and Meyer, R.W. (2021). ARFID: An introduction to diagnosis & Management. University of Winchester. https://store.winchester.ac.uk/short-courses/faculty-of-health-and-wellbeing/healthcare-professionals/arfid-an-introduction-to-diagnosis-and-management [Accessed online March 2021]
- 29. Nicely, T.A.; Lane-Loney, S.; Masciulli, E.; Hollenbeck, C.S.; Ornstein, R.M. (2014) Prevalence and characteristics of avoidant/restrictive food intake disorder in a cohort of young patients in day treatment for eating disorders. Journal of Eating Disorders, 2014, 2:21.
- 30.British Dietetic Association (2016). Safe Staffing Safe Workload Guidance. https://www.bda.uk.com/uploads/assets/53c343b0-c925-4513-a5d6d08b9b24ba2a/Safe-Staffing-Workload-Guidance.pdf [Accessed June 2022]
- 31.NHS England and NHS Improvement (2019). Job planning the clinical workforce allied health professionals A best practice guide. https://www.england.nhs.uk/ahp/allied-health-professionals-job-planning-a-best-practice-guide/ [Accessed June 2022]