A Systematic Review of Management of Avoidant/Restrictive Food Intake Disorder (ARFID) in Pediatric Hospitals

Authors: Eamonn Byrne 1, Niamh Doody 1,2, Dr Laura Ridgeway 1, Prof Fiona McNicholas 1, 2, 3
Affiliations: 1 School of Medicine, University College Dublin, 2 Lucena Child and Adolescent Mental Health Service (CAMHS), 3 CHI Crumlin
Contact details of lead author: eamonn.byrne@ucd.ie

Introduction

- ARFID was introduced to DSM in 2013.
- It is a feeding or eating disturbance which manifests as a consistent failure to meet appropriate nutritional or energy requirements resulting in:
  (i) Significant weight loss/failure to meet expected weight gain;
  (ii) Nutritional deficiency; (iii) Dependence on enteral feeding or oral supplementation; (iv) A marked interference on psychosocial function
- Table 1 shows the results of three studies which investigated the prevelance of ARFID, across three countries. (1, 2, 3)

Table 1: ARFID Prevalence

Study Demographic	Study design	Prevelance %
n=1444 8-13 year olds in Switzerland	Self rated Questionnaire	3 .2
n=4816 schoolchildren in Taiwan	Self report	<1
n=5733 adolescents aged 15+ in Australia	Interview	0.3

Aims of the Review

- To date there is no systematic review focusing solely on management of ARFID in inpatient or partial hospitalization settings.
- Accumulate current knowledge and practices for the inpatient management of Avoidant Restrictive Food Intake Disorder (ARFID) in paediatric hospital settings.
- Produce an evidenced based guide for to clinicians regarding the inpatient care of their patients.

Methods

- Search strategy was developed and pre-registered on PROSPERO (August 26th 2020):
  - Management of ARFID, in peadiatric hospital setting, published from 2013
- Protocol followed PRISMA-P guidelines.
- Database searched: Embase, CINAHL, PsychInfo, Pubmed and Web of Science
- Exported results to Endnote then to Rayyan, where screening was conducted.
- All 3 authors independently screened each text according to inclusion/exclusion criteria.
- 2 of the 3 authors screened each full text and, when a disagreement arose, the third author was consulted and the text was discussed until a unanimous decision was made.
- PRISMA flow chart was created and displayed below.

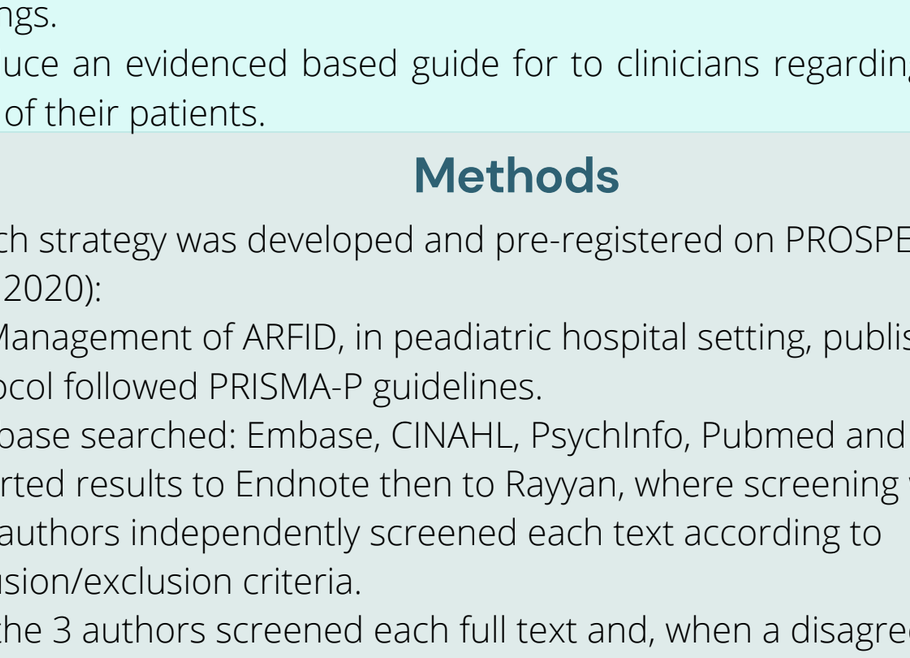

Figure 1. PRISMA flow chart for Inclusion/Exclusion of Texts

Results

Pharmocological Management

- Used in 9 out of 18 papers included in our review.
- In one survey of physicians 1/4 reported prescribing medication during inpatient treatment of their patient. (4)
- 6/7 of the physicians who prescribed medication in the above study used **selective serotonin reuptake inhibitors.**

Atypical antipsychotics were also seen in a number of papers in our review

- The success of **Olanzapine,** known to be effective in treating Anorexia Nervosa (AN), was seen in a study of its use in the management of nine patients with ARFID. (5)
- Two further case studies included in the review also cited its successful use in the patient in question in each case.

Nutritional Rehabilitation

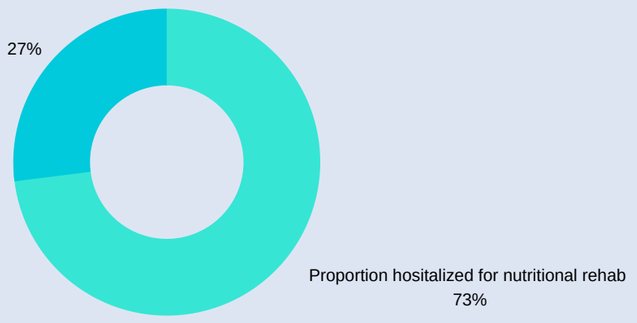

Figure 2. Proportion of physicians in one US survey who admitted patients for refeeding

- In the study seen in figure two (right) only 50% of physicians used a standardised refeeding protocol, and more than half of the remainder used one designed for Anoerixia Nervosa. (4)

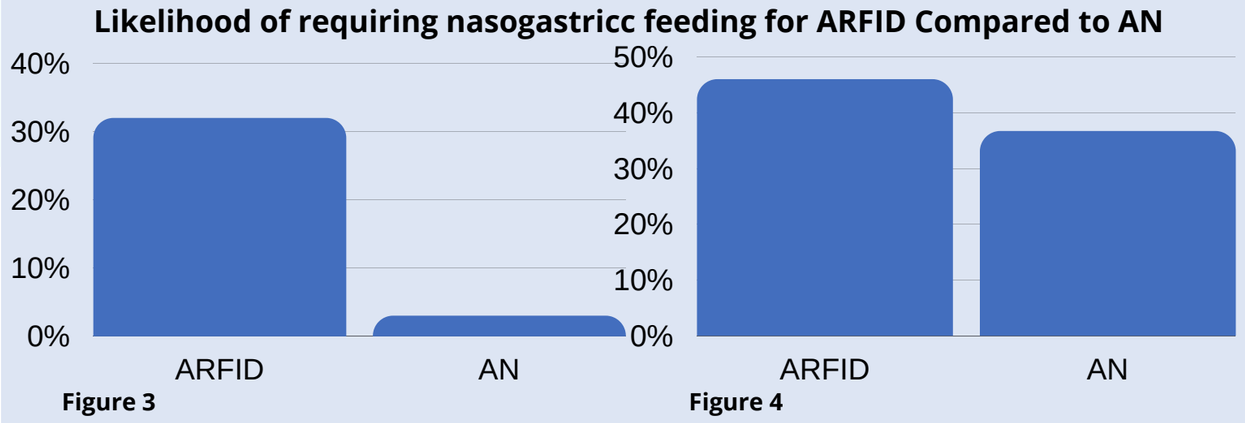

Figure 3 **Figure 4**

In one chart review included in our study a significant statistical difference was found between the likelihood of requiring nasogatsric feeding when comparing ARFID with AN. (Figure 3)

Another chart review included, however, did not find a significant difference between the two groups. The ARFID group were still more likely to require nasogastric feeding though. (Figure 4)

Psychological & Behavioural Management

Three of the included papers in the review focused solely on psychological or behavioural intervention in the management of ARFID. All three reported positive results, with one of the papers highlighted below

- **55% no longer met criteria for ARFID**
- **90.9% reported ARFID as being in remission**

Seen in one of the three papers, these are the results for a 3 month follow up of 11 patients receiving cognitive behavioural therapy as inpatients for ARFID. (6)

Conclusion

- In the majority of cases, physicians are not following any guidelines which relate specifically to ARFID.
- The most effective management seems to be that which is done using a protocol similar to Anorexia Nervosa.
- Family Based Therapy (FBT) is becoming increasingly used in the treatment of restrictive eating disorders, such as ARFID. Even within inpatient settings it is clear physicians believe FBT to be at the forefront of treating eating disorders.
- The published literature to date in relation to ARFID is sparse and interventions are limited.
- Further research is needed into the eating disorder in order to educate those managing patients on the best possible methods of doing so.
- Clear guidelines surrounding the management of ARFID patients would greatly improve the outcomes of their treatment.

References

1. Kurz S, van Dyck Z, Dremmel D, Munsch S, Hilbert A. Early-onset restrictive eating disturbances in primary school boys and girls. Eur Child Adolesc Psychiatry. 2015;24(7):779-85. Published online October 9, 2014. doi:10.1007/s00787-014-0622-z
2. Chen Y., Chen W.J., Lin K., Shen L., and Gau S.S. Prevalence of DSM-5 mental disorders in a nationally representative sample of children in Taiwan: methodology and main findings. Epidemiol. Psychiatr. Sci. 2019;30:1-9
3. Hay P, Mitchison D, Collado AEL, Gonzalez-Chica DA, Stocks N, Touyz S. Burden and health-related quality of life of eating disorders, including Avoidant/Restrictive Food Intake Disorder (ARFID), in the Australian population. J Eat Disord. 2017;5:21. doi:10.1186/s40337-017-0149-z
4. Guss CE, Richmond TK, Forman S. A survey of physician practices on the inpatient medical stabilization of patients with avoidant/restrictive food intake disorder. J Eat Disord. 2018;6:22. Published 2018 Sep 26. doi:10.1186/s40337-018-0212-4
5. Brewerton TD, D'Agostino M. Adjunctive Use of Olanzapine in the Treatment of Avoidant Restrictive Food Intake Disorder in Children and Adolescents in an Eating Disorders Program. J Child Adolesc psychopharmacol. 2017;27(10):920-922. doi:10.1089/cap.2017.0133
6. Dumont E, Jansen A, Kroes D, de Haan E, Mulkens S. A new cognitive behaviour therapy for adolescents with avoidant/restrictive food intake disorder in a day treatment setting: A clinical case series. Int J Eat Disord. 2019;52(4):447-458. doi:10.1002/eat.23053