Joint Trust Guideline for Management of Faltering Growth (Failure to Thrive) in Babies and Young Children

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V2.3	April 2021	Consultant Paediatricians	No clinical changes
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Previous Titles for this Document:

Previous Title/Amalgamated Titles	Date Revised
None	Not applicable

Distribution Control

Printed copies of this document should be considered out of date. The most up to date version is available from the Trust Intranet.

Consultation

The following were consulted during the development of this document:
Dr Ambadkar, Paediatrician (JPUH)
Dr Prakash Mathew (JPUH)
Paediatric Medical Staff
Chief of Service Paediatrics

Monitoring and Review of Procedural Document

The document owner is responsible for monitoring and reviewing the effectiveness of this Procedural Document. This review is continuous however as a minimum will be achieved at the point this procedural document requires a review e.g. changes in legislation, findings from incidents or document expiry.

Relationship of this document to other procedural documents

This document is a clinical guideline applicable to Acute Collaborative (JPUH and NNUHFT); please refer to local Trust's procedural documents for further guidance, as noted in Section 5.

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1. Introduction

1.1. Rationale

Failure to thrive – or faltering growth, is defined as a significant interruption in the expected rate of growth compared to other children of similar age and sex during early childhood. It is a persistent, gradually evolving phenomenon which can frequently and relatively easily go undetected, particularly in children who do not frequently access healthcare.

Faltering growth is not a finite diagnosis; rather it is a symptom of other underlying organic or non-organic problems. In the long-term, faltering growth is associated with reduced adult height, impaired academic performance and increased incidence of behavioural and psychological disturbance.

Early recognition, investigation and diagnosis of the underlying causes of faltering growth rely on adequate awareness and vigilance of all healthcare professionals. Faltering growth may not be a child's presenting complaint when seeking healthcare advice, hence it is essential that all children are assessed to screen for evidence of this problem whenever they are seen.

This guideline aims to provide an outline for the initial assessment and investigation of children highlighted as having signs of faltering growth. As the underlying causes are wide ranging and often multifactoral please refer to other relevant guidelines to investigate specific diagnoses after completing the basic checks listed here.

1.2. Objectives

The objectives of this clinical guideline are:

1) To facilitate early recognition of faltering growth
2) To ensure thorough and methodical investigation of all cases of faltering growth.
3) To avoid unnecessary investigations or need for repeated painful procedures e.g. venepuncture.

1.3. Scope

Covers children age 4 weeks to 5 years where medical cause for faltering growth is not already known.

Diagnostic criteria

Faltering growth should be considered in children who are over 4 weeks of age with a combination of the following:

1) Children with weight crossing 1 centile space where birthweight or previous weight was below the 9th centile; or weight crossing 2 centile spaces where weight was between 9th -91st centiles; or weight crossing 3 centile spaces where weight was above the 91st centile.

2) Growth persistently below 2nd centile (weight and/or height)
3) Asymmetrical weight and head circumference measurements (e.g. weight on 5th centile, head circumference on 50th centile.)

Be aware of other conditions which present with the same signs as above but would not be in keeping with an overall impression of failure to thrive– e.g. familial small stature (+/- catch down growth), Russell-Silver syndrome, hydrocephalus.

1.4. Glossary

The following terms and abbreviations have been used within this document:

2. Responsibilities

Paediatric Nurses/Healthcare Assistants: To accurately measure height and weight at every patient contact and plot on appropriate growth chart. For children Under 2 years, head circumference also to be measured and plotted.

Paediatricians: to consider growth measurements and patterns alongside physical examination of a child at each patient contact.

3. Processes to be followed

3.1. Identifying children at risk

All children admitted to NNUH, whether acutely, electively or seen in outpatient clinic should have height and weight measured and plotted on an age appropriate centile chart.

All children under 2 years, and all over 2 years who are found to be below the normal height or weight range (<2nd centile) or crossing down 2 centiles should also have head circumference measured and plotted.

Wherever possible these measurements should be compared with previous ones recorded in the child’s handheld health record (“red book”).

3.2. Medical History

A thorough history, ideally from the child’s primary care giver(s) is key and in most cases, will help determine whether a cause is likely to be organic or non-organic. History must include:

Presentation: when was concern first raised, by whom, why? Attempts made to improve growth so far, any period of normal growth?

Birth history: gestation, antenatal issues, condition at birth, jaundice, any treatment received in neonatal period.

Feeding history: Breast/bottle fed, type of milk used, volume and frequency of feeds, age at weaning, amount and type of fluids taken (i.e. milk/juice etc.) food intolerances/allergies, reflux symptoms. It is often useful to ask parents to describe a typical day's intake.
A food diary recording food intake and mealtime issues may be useful.

In milk fed babies consider whether any of the following are contributing to faltering growth:

- Ineffective suckling in breast fed infants
- Ineffective bottle feeding
- Feeding patterns or routines used
- Feeding aversion
- Carer-infant interaction / how carer responds to feeding cues
- Physical disorders affecting feeding

In weaned babies/children consider whether any of the following are contributing to faltering growth:

- Mealtime arrangements and practices
- Types of food offered
- Appetite
- Food aversion / avoidance
- Carer-child interactions
- Physical disorders affecting feeding

Medical issues: Specifically enquire about each system

Respiratory/cardiac: breathing problems, wheeze, chronic cough, recurrent infections, cyanotic episodes, pallor or sweating (especially with feeds), tachypnoea

Gastrointestinal: Passage of meconium, stool frequency and description, vomiting, abdominal pain or distension.

Neurological/development: Milestones so far, vision and hearing, seizures.

Other: skin rashes/birthmarks, joint pain or swelling, infectious diseases, urinary problems.

Medications: any medicines used and why, vaccination history, allergies.

Family and social history: Complete a detailed family tree including name, ages and ethnicity of parents, siblings and additional people within family (step-parents, half-siblings etc.).

Relevant medical issues in family members (e.g. cystic fibrosis (C.F), cardiac disease, familial short stature).
Any recent change in family structure, childcare, contact with social services, name of health visitor and any other professionals involved.

3.3. Initial investigations

Full physical examination: to include height, weight, head circumference, respiratory, cardiovascular, gastrointestinal and neurological examinations, fundoscopy where possible. Fully undress the child to check for skin lesions.

Calculate mid-parental height where possible. Additional concern should be raised by a child's height centile that is more than 2 centile spaces below the mid parental height centile.

In a child, over 2 years calculate the BMI centile

Observations: Pulse and respiratory rate, blood pressure, oxygen saturations (pre-and post-ductal measurements), temperature.

If a clear organic cause is not identified after the first consultation, it is sensible to **check family background with on call social worker** to rule out ongoing concerns.

3.4. Further investigations

Beyond the baseline tests looking for an organic cause (see quick reference guide), further investigations will mostly be guided by findings of history and examination.

Please refer to relevant trust guidelines for investigations for, and initial management of, other specific medical conditions.

3.5. Initial management

If initial history and examination do not reveal any signs of specific organic illness then the most common cause of faltering growth is inadequate nutrition.

This can be intentional or non-intentional and many parents are unaware of the nutritional requirements of small children.

Parents/carers should be offered advice on positive feeding practices, including:

- Appropriate food choices in terms of quantity, type and texture for a child's developmental stage
- Establishing regular eating schedules
- Encouraging relaxed and enjoyable mealtimes
- Avoiding coercive feeding

- Setting reasonable boundaries for mealtime behaviour while avoiding punitive approaches
- Making sure mealtimes are not too brief or too long
- Eating together as a family or with other children
- Encouraging young children to feed themselves
- Allowing young children to be messy with food

Involvement of paediatric dietician may be useful if further advice is required on increasing nutrient density of diet beyond that achieved through basic advice on food choices, e.g. if considering short term dietary fortification with energy rich foods.

In children where the diagnosis is either uncertain, or where there is a high suspicion of a non-organic cause (i.e. inadequate feeding), before further, potentially invasive investigations are done, review by the paediatric dietician and trial of tailored meal plan is advised.

Children with faltering growth should not be kept as inpatients unless they are acutely unwell or there is specific intervention that requires this; e.g. commencing tube feeding / safeguarding concerns.

The decision of whether to allow a child to be discharged with close follow up while a trial of feeding takes place will take into account:

1.) Severity of the faltering growth and overall physical condition of the child.
2.) How likely an alternative diagnosis is felt to be?
3.) Safeguarding concerns – e.g. neglect.
4.) Logistic implications – e.g. availability of patient transport for follow ups, availability of inpatient beds.

3.6. Weight Monitoring

Children with faltering growth will require ongoing follow up under a named consultant while there are concerns around faltering growth. Frequency of weight measurement is dependent on age and degree of progress but should not usually exceed:

- Weekly in babies age 1-6 months
- Fortnightly in babies age 6-12 months
- Monthly in children over 1 year

Weight loss after the first weeks of life is unusual and may justify more frequent monitoring than recommended above.

Child's length or height should be monitored no more often than every 3 months.

3.7. Management after feeding trial

3.7.1. Good weight gain

Liaise with dietician, health visitor, safeguarding teams (if felt to be necessary by consultant). Child may need a pre-discharge planning meeting if an inpatient.

Ensure close follow up and weight monitoring as described above until growth is steady.

3.7.2. Poor weight gain despite sustained period of adequate intake:

Likely organic cause of faltering growth if meal plan well followed. Ensure meal plan was followed strictly. If not, then explore reasons why.

Baseline investigations should include urine MC&S, FBC and blood film, U&E, LFT and bone profile, coeliac screen and thyroid function tests.

Further, more specific investigations will be dependent on presentation but may include: stool culture, abdominal USS, cardiac echo, karyotype, micro-array +/- other specific genetics (dependent on clinical features).

Consider short term dietary fortification using energy dense food or trial of oral liquid nutritional supplement – under guidance of dietician.

- Reassess need regularly, taking into account weight change, linear growth, intake of other foods, tolerance, adherence and views of the carer.

Enteral tube feeding should only be used with appropriate MDT involvement and with specific agreements on:

- Goals of treatment (e.g. target weight)
- Strategy for withdrawal when goals are reached

4. References

1. Krugman SD et al, Failure to thrive. Am Fam Physician 2003;68:(5):879–84.
2. Olsen EM et al, Failure to thrive: the prevalence and concurrence of anthropometric criteria in a general infant population. Arch Dis Child 2007;92:(2):109–14.
3. Wright CM, Identification and management of failure to thrive: a community perspective. Arch Dis Child 2000;82**:** (1):5–9

5. Audit of the Process

Compliance with the process will be monitored through the following:

1. All children presenting to inpatient or outpatient paediatrics will have height and weight measured and documented in the medical notes in an age appropriate growth chart.
2. All children under 2 years will have head circumference measured.
3. A diagnosis of faltering growth will be considered in all children height/weight parameters within the range described above.

Key elements	Process for Monitoring	By Whom (Individual / group /committee)	Responsible Governance Committee /dept	Frequency of monitoring
Recorded measurements for all children at every inpatient admission	Audit of records / Spot checks	Paediatrics	Paediatric Governance	Every 2 years
Recorded measurement of children at paediatric every outpatient attendance	Audit of records/ Spot checks	Paediatrics	Paediatric Governance	Every 2 years
Head circumference measurement to be completed in all children under 2 years	Audit of records/spot checks	Paediatrics	Paediatric governance	Every 2 years
Faltering growth to be further assessed in all children meeting criteria (where diagnosis not already known)	Audit of records	Paediatrics	Paediatric Governance	Every 2 years

The audit results are to be discussed at relevant governance meetings to review the results and recommendations for further action. Then sent to divisional governance who will ensure that the actions and recommendations are suitable and sufficient.

6. Appendices

There are no appendices for this document.

7. Equality Impact Assessment (EIA)

Type of function or policy	New

Division	Womens and Childrens	**Department**	Paediatrics
Name of person completing form	B Watling	**Date**	26/9/24

Equality Area	Potential Negative Impact	Impact Positive Impact	Which groups are affected	Full Impact Assessment Required YES/NO
Race	None	None		No
Pregnancy & Maternity	None	None		No
Disability	None	None		No
Religion and beliefs	None	None		No
Sex	None	None		No
Gender reassignment	None	None		No
Sexual Orientation	None	None		No
Age	None	None		No
Marriage & Civil Partnership	None	None		No
EDS2 – How does this change impact the Equality and Diversity Strategic plan (contact HR or see EDS2 plan)?	No impact			

- **A full assessment will only be required if: The impact is potentially discriminatory under the general equality duty**
- **Any groups of patients/staff/visitors or communities could be potentially disadvantaged by the policy or function/service**
- **The policy or function/service is assessed to be of high significance**

IF IN DOUBT A FULL IMPACT ASSESSMENT FORM IS REQUIRED

The review of the existing policy re-affirms the rights of all groups and clarifies the individual, managerial and organisational responsibilities in line with statutory and best practice guidance.