

1. Introduction

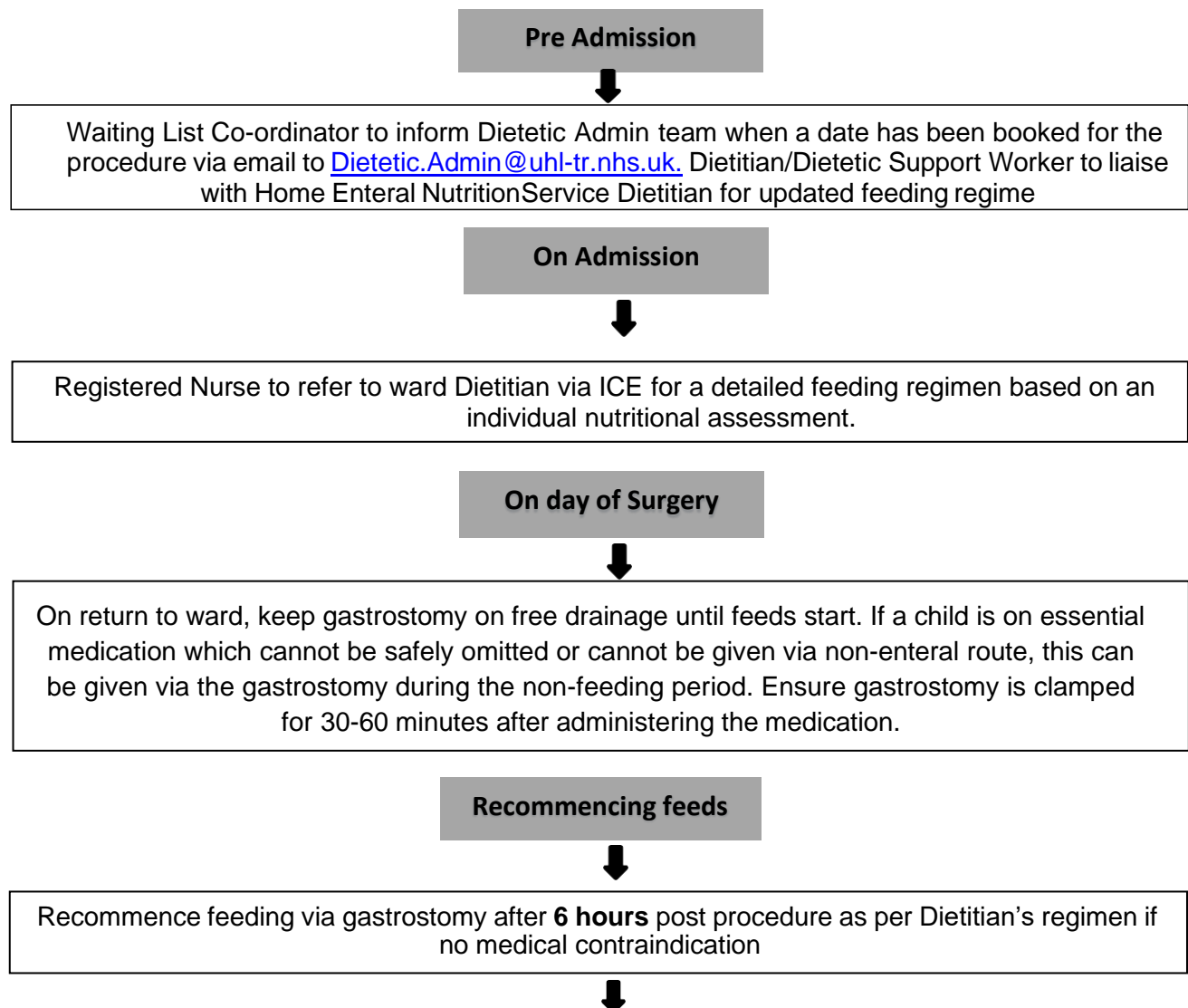
These guidelines are to inform ward registered nursing staff and medical teams of the appropriate feeding regime to be used when starting feeding following Nissen's fundoplication and gastrostomy insertion.

2. Scope

These guidelines apply to Paediatric patients admitted to Paediatric wards across University Hospitals of Leicester. Paediatric patients are classified as being under 16 years of age or those under 19 years of age in special education.

3. Recommendations, Standards and Procedural Statements

- Procedure / Process for commencing feeding post Nissen's Fundoplication and Gastrostomy placement in Paediatric Patients:



Ensure child remains on maintenance IV fluids as per surgeon advice until established on full enteral feeds. Registered Nurse to adjust IV fluids to account for feed/fluid flushes administered. Please refer to 'Fluid Management' guidelines



Continue to increase volume of feeds as per feeding plan until target volume is achieved.

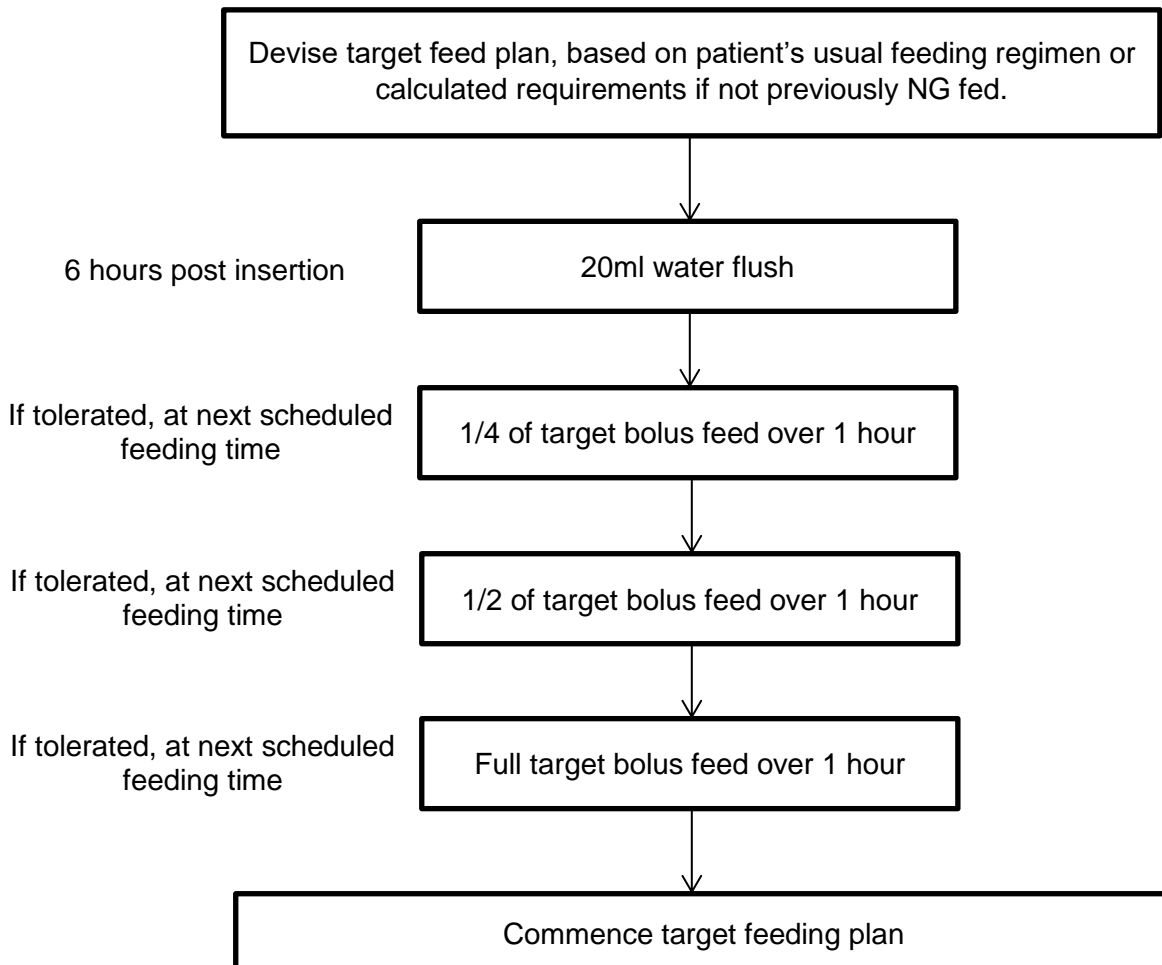
3.2 When to commence feeding

Enteral Tube Feeding should commence 6 hours post Nissen's fundoplication and gastrostomy placement in all patients unless directed otherwise by the Consultant Paediatric Surgeon.

For patients who have had a pyloroplasty along with a Nissen's fundoplication and gastrostomy, feeds should not commence until 24 hours post procedure unless directed otherwise by Consultant Paediatric Surgeon.

3.3 Dietitian Plan for commencing feeding

If currently having bolus feeds via NG or not previously NG fed:



- If require less than 3 bolus per day, follow plan as above, increasing volumes every 4 hours until
- If giving bolus over 1 hour means that rate exceeds usual rate, feed at usual rate.

If currently fed continuously via NG (See Appendix 1 for examples):

- If <15kg, start feeds at 2ml/kg and increase by 2ml/kg every 4 hours until target rate/volume is reached
- If >15kg, start feeds at 1ml/kg and increase by 1ml/kg every 3 hours until target rate/volume is reached

3.4 Patients who ate by mouth before surgery

- Commence feeds as per the bolus or continuous regimen (provided by dietitian)
- As the procedure uses the fundus of the stomach to tighten the junction between the oesophagus and stomach, the overall size/capacity of the stomach is temporarily reduced by about 10% and therefore some alteration in the child's diet will be necessary.
- Patient will be able to have clear fluids/ liquids on return to the ward. Once fluids are tolerated, patients will be required to follow a pureed diet for at least 3 days following surgery (**see Appendix 2**).
- Patients will then be required to follow a soft diet for a minimum of four weeks and can introduce a normal diet as tolerated.
- If patient is already on a modified consistency diet, continue to follow Speech and Language Therapy recommendations.

3.5 Preparing for discharge home

- The ward Dietitian needs to be made aware of patients pending discharge from the ward as soon as possible.
- Parents/carers should be trained by Registered Nurse and nursing associates regarding the correct procedure for feeding in preparation for discharge home. (Please refer to 'PEG teaching package for parents located on ward).
- The ward Dietitian will advise parents of a suitable feeding plan for home and refer to the local HomeEnteral Nutrition Services for registration of the patient with Homeward for ongoing feed equipment and ancillaries.
- Upon discharge Registered Nurses should provide parents/ carers with a 7 days supply (10 days if bank holiday) of feed, ENFit giving sets and syringes from ward supplies. Please refer to 'Going home with an enteral feeding tube' patient information leaflet.'

4. Education and Training

None

5. Monitoring and Audit Criteria

What will be measured to monitor compliance	How will compliance be monitored	Monitoring Lead	Frequency	Reporting arrangements
All paediatric inpatients with Nissen's fundoplication and gastrostomy to commence feeds 6 hours post procedure (unless contraindicated)	Ward Dietitian to check if early feeding protocol has been applied on assessment	Senior Dietitian	Annual	To Paediatric Consultants and Paediatric Dietitians

6. Key Words

Enteral feeding, Nissen's, Fundoplication, Gastrostomy, Paediatric

The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.

As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

CONTACT AND REVIEW DETAILS	
Guideline Lead (Name and Title) Megan Jeffrey (Senior Paediatric Dietitian) Mr Haitham Dagash (Consultant Paediatric Surgeon)	Executive Lead Julie Hogg Chief Nurse
Details of Changes made during review: Addition of bolus feeding plan Includes foods to avoid	

Appendix 1: Example Continuous Enteral Tube Feeding Plan

If child weighs 15kg

Commence feeds at 2ml/kg/hr and advance by 2ml/kg every 4 hours

Time	Rate per hour		Volume of feed delivered per 4 hours
0-4 ^o	2ml/kg/hr =	30ml/hr	120ml
4-8 ^o	4ml/kg/hr=	60ml/hr	240ml
8-12 ^o	6ml/kg/hr=	90ml/hr	360ml
Total volume of feed delivered in 12 hours = 720ml			

If child weighs 25kg

Commence feeds at 1ml/kg/hr and advance by 1ml/kg every 3 hours

Time	Rate per hour		Volume of feed delivered per 3 hours
0-3 ^o	1ml/kg/hr =	25ml/hr	75ml
3-6 ^o	2ml/kg/hr=	50ml/hr	150ml
6-9 ^o	3ml/kg/hr=	75ml/hr	225ml
9-12 ^o	4ml/kg/hr=	100ml/hr	300ml
Total volume of feed delivered in 12 hours = 750ml			

Appendix 2: Dietary modification

Diet advice		
Food group:	<u>Pureed diet (3-4 days)</u>	<u>Soft diet (4 weeks)</u>
Breads, other cereals and potatoes	<ul style="list-style-type: none"> • Porridge mixed to a smooth consistency • Breakfast cereals softened with milk to a smooth consistency • Pasta pureed with sauce • Mashed potatoes 	<ul style="list-style-type: none"> • Porridge • Breakfast cereals softened with milk • Orzo pasta/rice/cous cous with sauce • Mashed potatoes • Jacket potatoes without skin
Meat/ Fish/ Alternatives	<ul style="list-style-type: none"> • Pureed meat, fish, poultry, pulses with sauces • Pureed scrambled egg (make with milk and try mixing in cheese or pureed tomatoes) 	<ul style="list-style-type: none"> • Flaked fish • Minced beef, chicken, turkey and gravy • Omelette, scrambled, poached or boiled egg • Baked beans • Well-cooked lentils
Dairy Foods	<ul style="list-style-type: none"> • All types of milk • Smooth yoghurt • Cheese spread/soft cheese • Milk based desserts, custard, pureed rice pudding/semolina, ice cream 	<ul style="list-style-type: none"> • Milk • Yoghurt • Cheese • Milk Puddings
Fruit and Vegetables	<ul style="list-style-type: none"> • Pureed tinned stewed or soft fresh fruits e.g. peaches, berries, bananas 	<ul style="list-style-type: none"> • Tinned, stewed or soft fresh fruits • Mashed or soft cooked vegetables
Desserts	<ul style="list-style-type: none"> • Mousses • Semolina, rice pudding • Ice cream, Custard, Jelly 	<ul style="list-style-type: none"> • Rice pudding • Biscuits softened with warm drink, cake softened with custard
Foods/Drinks to avoid	<ul style="list-style-type: none"> • Very hot or cold fluids/purees • Fizzy drinks (these can cause bloating and gas) • Caffeine • Citrus fruit/juices, e.g. orange juice 	<ul style="list-style-type: none"> • Solid lumps of food (these may get stuck in the oesophagus) • Bread • Crackers • Hard biscuits • Pastry • Dry meats such as cold cuts and steak

Appendix 3: Paediatric Enteral Tube Feed Regimen – Post Nissen’s Fundoplication and Gastrostomy Insertion

NAME: WEIGHT:.....

DATE OF BIRTH: FLUID REQUIREMENT (mls/kg/ day):

S NUMBER: ENERGY REQUIREMENT (kcal/kg/day):

Usual/target feeding plan: _____

To be completed by Registered Nurse

Date	Time	Feed name + volume	Rate of feed	Continuous or bolus?	Vomiting (Y/N)	Bowels opened (Y/N) Please indicate type	Gastrostomy site clean and healthy (Y/N)	Initial and signature

Comments:

Dietitian’s Name (Print): Designation: Dietitian’s Signatu re:.....

Bleed/Extension No:..... Date and Time:.....

Title: Commencing Feeding Post Nissens Fundoplication and Gastrostomy UHL Childrens Nutrition and Dietetics Guideline

NAME:

S NUMBER: DATE OF BIRTH:

To be completed by Registered Nurse

Date	Time	Feed name	Rate of feed	Continuous or bolus?	Vomiting (Y/N)	Bowels opened (Y/N) Please indicate type	Gastrostomy site clean and healthy (Y/N)	Initial and signature

Comments:

Dietitian's Name (Print):

Designation: Dietitian's Signature:

Bleed/Extension No:.....

Date and Time:.....

Title: Commencing Feeding Post Nissens Fundoplication and Gastrostomy UHL Childrens Nutrition and Dietetics Guideline

V: Approved by Women's & Children's Q&S Board : August 2020 Trust Ref: C26/2010
 Approved by Childrens Quality and Performance Board 25/09/2020 Approved by CSI CMG Quality and Safety Meeting 14/10/2020

Next Review: August 2026

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