Clinical Guideline

ENTERAL FEEDING GUIDELINE (PAEDIATRIC)

SETTING
Bristol Royal Hospital For Children (BRHC) and Neonatal Intensive Care Unit (NICU)

FOR STAFF
All clinical staff

PATIENTS
Paediatric inpatients

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Extended until April 2021
1 INTRODUCTION

The aim of this guideline is to provide clear, evidence based guidance and procedure for Enteral Tube Feeding (ETF) to minimise potential risks and ensure safe management of enteral tube-fed infants and children. Separate guidelines are in place on the Paediatric Intensive Care Unit and NICU for some aspects of enteral feeding procedure and care.

In severe or chronic illness, some children will require artificial feeding with specially formulated liquid feeds. Where possible, feeding should take place via the gastrointestinal tract rather than intravenously e.g. orogastric, nasogastric, naso-jejunal, gastrostomy, jejunostomy and gastro-jejunal feeding (these methods together constitute ETF).

Standards are highlighted in bold and should be audited within 6 months of the guidelines being operational. Limited data exists in this area, therefore where not referenced the standards advised are considered Best Practice (BP).

2 REFERRAL AND ASSESSMENT FOR ENTERAL TUBE FEEDING

2.1 Indications for Enteral Tube Feeding

<table>
<thead>
<tr>
<th>Indication</th>
<th>Example conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to suck / swallow</td>
<td>Ventilated patients, trauma, neurological handicap, degenerative disorders, severe developmental delay</td>
</tr>
<tr>
<td>Unsafe swallow</td>
<td></td>
</tr>
<tr>
<td>Poor suck</td>
<td>Premature infants, cardiac babies</td>
</tr>
<tr>
<td>Increased requirements</td>
<td>Cystic fibrosis, congenital heart disease, burns</td>
</tr>
<tr>
<td>Anorexia secondary to illness</td>
<td>Malignancy, liver disease, renal failure</td>
</tr>
<tr>
<td>Congenital abnormalities</td>
<td>Tracheo-oesophageal fistula, oesophageal atresia, orofacial malformations,</td>
</tr>
<tr>
<td>Malabsorption</td>
<td>Short bowel syndrome</td>
</tr>
<tr>
<td>Unpalatability of specialised feeds</td>
<td>Inflammatory bowel disease</td>
</tr>
<tr>
<td>Continuous supply of nutrients to prevent hypoglycaemia</td>
<td>Glycogen storage disease Type 1</td>
</tr>
</tbody>
</table>

Adapted from Parental and Enteral Nutrition Group (PENG) ‘Pocket Guide to Clinical Nutrition’

2.2 Referral to the Dietitian

The Nurse must refer all children admitted electively for ETF to the Dietitian within 24 working hours, as well as those admitted who are already tube fed

- Call Extension 28802 and leave a message with the patient’s name, Trust number, reason for admission, type of tube, feed name, ward, and Consultant
- For elective admissions for ETF, the Nutrition and Dietetic service require pre-admission advance notice from the Medical Team to ensure discharge is not delayed
- All patients requiring ETF must be admitted. ETF cannot be set up on a day case basis
- Inform carers that admission will likely be 3 – 5 working days duration

The Medical Team placing a gastrostomy / gastro-jejunal tube / jejunostomy, or changing a tube, must notify the Dietitian within 24 working hours of placement in order to arrange equipment and support at home

- Fax a completed Enteral Feeding Tube Change Notification Form to the Nutrition and Dietetics department (form held in the Feeding Form folder on the Surgical shared drive)
- Hard copies should be held in Theatres, Ward 36, Clinical Investigations Unit, Accident and
Patients will be seen by the Dietitian in line with Dietetic Referral Priority Levels for Paediatrics. The Dietitian must provide a Yellow Feed Plan for the patient’s nursing folder

- The Dietitian must update the plan after every change to a feeding regimen
- The plan will include feed name, volumes, feeding method, flushes and tube type.

The Nurse must read and action the Yellow Feed Plan carefully, checking feed name exactly matches the feed provided and that feeding rate and dose are correct

- Complete and sign the Ward Feeding Record to confirm this has been carried out (BRHC)
- Document feeding rate and dose on the fluid balance chart upon each feed change

3 IMPLEMENTING ENTERAL TUBE FEEDING

3.1 Method of Enteral Tube Feeding

- Enteral feeds may be given as bolus feeds via gravity or enteral feeding pump, continuous pump feeding, or a combination. The chosen regimen will depend on:
  - Type of tube in situ
  - Gastrointestinal (GI) function
  - Oral feeding habits
  - Practicalities of feeding for the family if home ETF is required

- Feeding regimens must fit in with other clinical priorities e.g. physiotherapy, medications
- Appendix 1 details routes of feeding and common feeding regimens

The feed regimen deemed most appropriate must be a joint decision agreed by the Consultant, Dietitian and Nurse, in conjunction with parents/carers and the patient

3.2 Nasogastric/Orogastric Tube Feeding

- Nasogastric / Orogastric Tubes Clinical Guideline

3.3 Naso-Jejunal Tube Feeding

- Naso-Jejunal Tubes Clinical Guideline

3.4 Gastrostomy Tube Feeding

- Gastrostomy Tubes Clinical Guideline
- Gastrostomy Tubes Emergency Replacement Guideline

3.5 Gastro-Jejunal / Jejunostomy Tube Feeding

- Gastro-Jejunal / Jejunostomy Tubes Clinical Guideline

3.6 Preparation of the Child

- ETF is deemed by law a medical intervention. Consent must be sought and documented by a clinician involved in the patient’s care. If parents cannot consent on behalf of their child, a
best interest decision with the rationale for treatment must be recorded in the medical notes by the Consultant

Ideally patients should receive preparation before tube placement from a Nurse, with input from a Play Therapist for young children (exception NICU)

- Older children must have the procedure explained and see the tube that will be placed
- A resource box and teddy bear is used by the Play Department to explain the procedure to young children. Contact the Play Department on Extension: 28194
- A Play Therapy Referral Form must be completed and handed to the Play Therapist

3.7 Setting Up and Administering Enteral Tube Feeds

All feed preparation and decanting must be done in the Special Feed Unit (SFU) under direction of the Dietitian and in line with Guidelines for making up special feeds for infants and children in hospital

- Preparation of feeds at ward level must be minimized. The SFU/Feed room (NICU) are clean areas, where the preparation process is tightly controlled
- The exception is expressed breast milk (EBM), which cannot be taken into the SFU at BRHC
- Powdered infant formula (PIF) feeds must always be made in SFU because the water needs to be pre-boiled and at the correct temperature
- If the Dietitian is unavailable, a Doctor must complete a Special Feed Request Form (available from Paediatric Dietetics Website and the SFU) and hand to staff in the SFU
- The SFU is located on Level 6 at the back of Ward 32. It is open 8am – 4pm 7 days a week
- If SFU staff are unavailable, a Nurse must make up the feed in the SFU following the Nurse Manual for Making Special Feeds Out of Hours in the SFU. There are a number of trained Associate Practitioner (AP) and Health Care Assistants who can be contacted in these situations to make up a feed out of hours in the SFU (see the notice board outside the SFU)
- There is a ‘Feed Room’ on NICU where all infant feeds, with the exception of PIF, are made

The Nurse must set up the enteral tube feeding system and administer feeds in line with the Enteral Feeding Infection Control Guideline

3.7.1 How to set up and administer continuous enteral feeds

Equipment:
Prescribed enteral feed (at room temperature)
Pump and drip stand
Giving set
Sterile water
Purple enteral syringe (largest size possible i.e. 60ml or 20ml neonates)
pH indicator strips (if NGT in place)
Feeding extension set / adaptor (if required)
Apron, gloves, alcohol wipes

Procedure:
- Wash hands as per Trust hand hygiene policy (wear gloves and apron for jejunal feeding)
- Take the equipment to the patient’s bedside or appropriate private space
- Explain the procedure to the patient or carer and encourage them to assist where possible
- Position the patient’s upper body if appropriate at a minimum angle of 30 - 45 degrees angle
during feeding and for 30 – 60 minutes after feeding to minimise nausea and vomiting

- Check expiry date and time of the feed and wipe the container with an alcohol wipe
- Close the clamp on the giving set
- Shake the bag or bottle, twist off the cap, and without touching the spike tightly screw onto the giving set to break the foil seal (hold bag with the cap upwards to prevent leaking)
- Hang the bag on the drip stand and prime the giving set to ensure there are no air bubbles
- Uncap end of tube – connect adaptor or extension set if using a low profile button device
- If NG feeding, check tube position prior to setting up feed
- Flush the enteral tube before feeding (refer to each specific tube clinical guideline). Exception NICU – do not flush NGT / OGT due to risk of fluid overload
- Connect the giving set to the feeding tube and open the clamp
- Document date and time of changing the giving set and container
- Set administration rate as instructed by the Dietitian on the Yellow Feed Plan and press start
- Ensure the patient is comfortable and observe for signs feeding intolerance (refer to troubleshooting guide in each tube clinical guideline)
- Once feeding is complete, flush the enteral tube again (exception NICU)
- Remove extension set or adaptor if used and replace the tube cap / clamp the tube
- Wash (or sterilise) the extension set ready for the next feed. Refer to Enteral Feeding Infection Control Guideline
- Dispose of equipment safely
- Document feed volume given, feeding rate and flush volumes on the fluid balance chart
- Do not put any other liquids down the tube not recommended by the Dietitian (exception water flushes and medications)

### 3.7.2 How to administer syringe bolus feeds

**Equipment:**
- Prescribed enteral feed (at room temperature)
- 60ml purple enteral syringe (20ml may be used for neonates)
- Sterile water
- pH indicator strips (if NG feeding)
- Feeding extension set / adaptor (if required)
- Apron, gloves, alcohol wipes

**Procedure:**
- Wash hands as per Trust hand hygiene policy (wear gloves and apron for jejunal feeding)
- Take the equipment to the patient’s bedside or appropriate private space
- Explain the procedure to the patient or carer and encourage them to assist where possible
- Position the patient’s upper body if appropriate at a minimum angle of 30 - 45 degrees angle during feeding and for 30 – 60 minutes after feeding to minimise nausea and vomiting
- Check expiry date and time of the feed and wipe the container with an alcohol wipe
- Shake the bag/bottle and undo the container top
- If NG feeding, check tube position prior to setting up feed
- Uncap end of tube – connect adaptor or extension set if using a low profile button device
- Open the clamp on the tube, if present, and close once flush has been given
- Flush the tube before feeding (refer to specific tube clinical guideline for guidance). Exception NICU – do not flush NGT or OGT due to the risk of fluid overload
- Remove syringe plunger and connect tip of the syringe to the feeding tube/extension set
- Slowly fill syringe with the required feed dose (do not overfill in case spillage occurs)
- Open the clamp and allow the feed to flow through slowly using gravity
- Hold the syringe at a comfortable height around 10cm above the feeding tube
- Do not rush the bolus feed, as this may cause discomfort
- If necessary, lower the height of the syringe to decrease speed of delivery
- Prior to the syringe emptying, top up with feed until the required volume has been given
● Ensure the patient is comfortable and observe for signs of feeding intolerance (refer to troubleshooting guide in each tube clinical guideline)

● Once feeding is complete, flush the tube again (exception NICU)

● Remove syringe and/or extension set and replace the tube cap. Clamp the tube

● Wash (or sterilise) the extension set ready for the next feed. Refer to Enteral Feeding Infection Control Guideline

● Document time of giving the feed, volume given and flush volumes on the fluid balance chart

● If giving a set volume of feed – decant into a syringe or container first and store remaining feed in a fridge for up to 24 hours. Label with the patient’s name, date and time of opening

● Do not put anything down the tube that is not recommended by the Dietitian

3.7.3 How to administer feeds via enteral syringe pump

If the patient is receiving expressed breast milk as their enteral feed and a continuous infusion is required, an Enteral Feeding Syringe Driver should be used, not a standard enteral pump.

For more information, see the Standard Operating Procedure Feeding Expressed Breast Milk Via Enteral Feeding Syringe Driver

3.8 Emergency (out of hours) Feeding Regimens

All patients needing ETF must be referred to the Dietitian for assessment and an individualized Yellow Feed Plan will be provided

● If the Dietitian is unavailable, an appropriate emergency regimen must be authorized by the Consultant (see table below - also available on the DMS)

● Refer to the Dietitian for individual assessment on the first working day e.g. after weekends

<table>
<thead>
<tr>
<th>Emergency Feeding Regimen</th>
<th>Patient Group</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PICU Feeding Guideline</strong></td>
<td>Paediatric Intensive Care Unit (PICU) patients</td>
</tr>
<tr>
<td><strong>New-born Feeding</strong></td>
<td>Neonates on the Neonatal Intensive Care Unit (NICU)</td>
</tr>
<tr>
<td><strong>Nasogastric Emergency Feeding Regimen for Oncology/Haematology Patients</strong></td>
<td>Oncology and Haematology patients</td>
</tr>
<tr>
<td><strong>Out of Hours Nasogastric and Gastrostomy Feeding Regimen</strong></td>
<td>Patients requiring nasogastric or gastrostomy feeding</td>
</tr>
</tbody>
</table>
4 ADMINISTERING FLUIDS AND MEDICATIONS

The Nurse must give medicines and fluids in line with the Policy on the Use of Oral / Enteral Syringes to Administer Oral Liquid Medicines, Feed and Fluids via Enteral Feeding Tubes

4.1 Administration of water via an enteral feeding tube

- If NGT in situ, check tube position prior to administration of water. The pH should be 5.5 or less.
- Sterile water must be used for giving water via an enteral feeding tube in hospital
- Flushing of all tubes is vital to prevent blocking, decrease infection and keep patency. Exception NICU – do not flush NGT or OGT (due to small fluid volumes and fluid balance)
- Enteral feeding tubes must be flushed before and after feeding, and each medication
- Extra fluids may be advised by the Dietitian or Medical Team
- The largest syringe size possible must be chosen (20 - 60ml) to reduce pressure on the tube
- The Dietitian will usually advise an age-appropriate volume of water to flush with
- Refer to each specific tube clinical nursing guideline for advice on flushing a feeding tube
- Emergency Department advice for giving fluids via a feeding tube: Guideline for management of children presenting to children’s emergency department with gastroenteritis

4.2 Administration of medications via an enteral feeding tube

- Choose the largest size enteral syringe possible that still enables accurate dosing
- Liquid or soluble medications are advised (consult with a Pharmacist) to minimise blockages
- Some medications may be crushed and dissolved in sterile water before use, however this may fall outside the drug’s product licence (consult with a Pharmacist before administering)
- Medications must not be added directly to a child’s feed unless agreed by a Consultant
- Medications must not be given via a jejunal tube without confirmation from a Pharmacist that they are suitable for jejunal administration
- Some medications must not be crushed. Always seek advice from the Pharmacist
- Flush with 5 – 10ml sterile water between medications (exception NICU) to prevent mixing

4.3 Common drug and enteral feed interactions

<table>
<thead>
<tr>
<th>Phenytoin, Digoxin, Carbamazepine</th>
<th>Check blood levels of these drugs regularly if patient is on enteral feeds. A higher dose may be required.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antacids / PPI’s</td>
<td>These drugs can block a feeding tube (the metal ions bind to proteins). Consider alternative medications.</td>
</tr>
<tr>
<td>Penicillin’s</td>
<td>Absorption may be reduced by feeds. A higher drug dose may be required. If possible, stop feeding 1 hour before and 2 hours after administration</td>
</tr>
<tr>
<td>Antibiotics e.g. ciprofloxacin, tetracycline’s, rifampicin</td>
<td>Absorption may be reduced by feeds. Consider alternative medications or a higher dose.</td>
</tr>
</tbody>
</table>

Adapted from PENG ‘Pocket Guide to Clinical Nutrition’
5 EQUIPMENT MANAGEMENT

- **Enteral Feeding Equipment Management SOP**
  This SOP outlines the types, maintenance and storage of enteral tube feeding equipment
- **Expressed breast milk must be given via an enteral syringe driver**

  **SOP Feeding Expressed Breast Milk Via Enteral Feeding Syringe Driver**

6 INFECTION CONTROL PROCEDURES

- **Enteral Feeding Infection Control Guideline**

7 MONITORING ENTERAL TUBE FEEDING

7.1 Tube care

  **Nasogastric/Orogastric Tubes Clinical Guideline**
  **Naso-Jejunal Tubes Clinical Guideline**
  **Gastrostomy Tubes Clinical Guideline**
  **Gastro-Jejunal / Jejunostomy Tubes Clinical Guideline**

7.2 Assessment of feeding tolerance

The Nurse must document all feeds and aspects of feed tolerance clearly on the patient's Paediatric / NICU Fluid Balance Chart and Core Care Plan Booklet

- Monitor signs of feed intolerance - vomiting, constipation, diarrhoea, abdominal distension
- Record vomiting episodes (and volume) and gastric aspirates if requested
- Monitor daily fluid intake and alert the Medical Team to the need for additional IV fluids
- Diluted feeds are not normally necessary and must be discussed with the Dietitian
- If there is a perceived need to change a regimen, discuss with the Dietitian or Doctor

If there is a concern with feeding intolerance (e.g. vomiting, aspiration) gastric aspirates may be checked before each bolus feed or 4 - 6 hourly during continuous feeding

- Usually, if aspirates are > 5ml/kg feeds may have to be delayed. The rule for checking aspirates and replacement differs according to the patient's condition and Medical Team. For example, NICU have different aspirate replacement guidelines - see New-born Feeding.
- **Do not stop feeds without discussing with the Medical Team and Dietitian**
- Check the patient is not lying flat during feeding and raise the bed by 30 – 45 degrees angle
- A slower feeding rate over a longer period, or smaller bolus feeds more frequently may help to reduce nausea and vomiting. Contact the Dietitian to review the feeding regimen
All infants and children should have their stooling recorded and assessed to monitor for constipation or diarrhoea.

- If diarrhoea presents, investigations should include a review of antibiotic therapy and/or hyperosmolar drugs, and stool tests for infection and reducing substances.
- Discontinuing enteral feeds is often unnecessary and may worsen clinical condition and lead to reduced nutritional intake in an unwell child. Contact the Dietitian to review the plan.
- If diarrhoea is persistent following a gastroenteritis infection, discuss feed choice with the Dietitian.
- ETF may be continued if no infective agent is identified and diarrhoea is not causing inconvenience other than increased nappy changes.
- ETF may be discontinued if perianal skin is increasingly breaking down. Good skin care is vital for ETF to continue successfully.
- If constipation presents, consider whether the patient is taking in adequate fluids, and in babies and children > 1 year consider a fibre-containing feed (contact the Dietitian).

7.3 Troubleshooting

- Refer to each separate clinical nursing guideline for guidance on troubleshooting tubes:
  - Nasogastric/Orogastric Tubes Clinical Guideline
  - Naso-Jejunal Tubes Clinical Guideline
  - Gastrostomy Tubes Clinical Guideline
  - Gastro-Jejunal / Jejunostomy Tubes Clinical Guideline

7.4 Reintroduction of Oral Feeding

Progression with oral feeding must be encouraged if the child is able to feed orally. Patients tolerating increasing amounts of oral diet must not be taken off tube feeding without an assessment by the Dietitian.

- Oral feeding and development of feeding skills should be encouraged if safe to do so.
- A planned, gradual reduction of tube feeds is advised to maintain weight.
- Close monitoring of the child’s oral intake over this transitional period is important.
- All food intake must be recorded on a food record chart.
- To encourage oral feeding:
  - Start slowly, perhaps once daily, offering small amounts of food or milk. Never force feed.
  - Discuss with the Dietitian stopping enteral feeds 1 - 2 hours prior to an oral feed.
  - Sit in front of the child while trying with oral feeds so that you can be seen at all times.
  - Give as much positive encouragement if foods are accepted.
  - Introduce new tastes gradually, strong tasting foods are often better than bland foods.
  - An older infant who has been exclusively tube may not accept foods normal for age.

If there is any doubt over swallowing ability the patient must be assessed by a specialist Speech and Language Therapist (SALT) to minimise the risk of aspiration.

- Some patients will be enterally tube-fed because of an unsafe swallow or dysphagia.
- Children who have prolonged hospitalisation with ETF can develop negative experiences.
around eating, which in turn can lead to feeding difficulties

- Patients with poor oral intake and/or not taking bottles may benefit from referral to SALT
- Contact Extension 28498 (bleep 4925). Referrals are prioritised according to clinical need

8 DISCHARGING FROM HOSPITAL TO HOME

8.1 Planning for discharge

The correct procedure for discharging a patient home on ETF must be followed by all members of the multidisciplinary team. A minimum of 3 working days notice is needed to enable safe discharge of children on tube feeding

- The decision to enterally feed at home must be made jointly by parents/carers, the Medical Team, Dietitian and Nursing Staff. Home circumstances and the benefits of home enteral feeding must be carefully considered in light of the child’s diagnosis
- The child must be tolerating their feeds and gaining weight appropriately before discharge

Adequate feed and ancillaries must be organised for discharge by the Nurse and Dietitian. Parents and carers must be signed off as competent to manage enteral feeding at home

- The Dietitian must refer the patient to the local Home Enteral Feeding (HEF) Team
- The Dietitian must order feeds via pharmacy and deliver a pump and stand to the ward
- The ward must order 7 days’ supply of equipment and ancillaries prior to discharge
- Parents and carers must be informed of differences in community policy before discharge
- The Nurse must complete an ‘Enteral Feeding Equipment Checklist for Discharge’ and follow the discharge flowchart included in each tube teaching pack

If a patient is to go home on overnight nasogastric or naso-jejunal tube feeding, the Nurse must complete the ‘Risk Assessment for Overnight Tube Feeding’ in the teaching pack. Any actions arising from this assessment should be noted on the ‘Bristol NGT Referral Form’ which is also within the teaching pack.

- Bolus feeding must be considered in preference to continuous pump feeds where possible. Parents or carers must be informed of the risks associated with overnight pump feeding
- Community home enteral feeding teams will not accept a referral for overnight tube feeding at home without this risk assessment having been completed prior to discharge.
- The Dietitian will inform the Medical Team if overnight feeding is not supported at home

8.2 Patient teaching

The Nurse must be satisfied that parents and carers are competent to administer tube feeds and ensure the teaching pack assessment checklist is completed before discharge

- Once the decision has been made for the child to be fed at home, a coordinated teaching program must be initiated with the patient and parents or carers
- Teaching must be initiated and completed by ward staff
● The correct teaching pack for home must be used:

Nasogastric Tube Teaching Pack
Naso-jejunal Tube Teaching Pack
Gastrostomy Tube Teaching Pack
Gastro-jejunal / Jejunostomy Teaching Pack

● Patients receive additional training from a Community Nurse before or just after discharge

8.3 Home Management Services (HMS)

● HMS is Bristol’s HEF team, a team of HEF Dietitians, Dietetic Support Workers, and Nurses
● The hospital Dietitian is responsible for making a referral to HMS prior to discharge
● For complex patients meeting agreed ‘complex patient criteria’ a referral can be made to HMS (by the Dietitian) using an early involvement form to allow Nutricia nurses to attend discharge planning meetings where relevant and help with the discharge process
● For nasogastric tube-fed patients requiring a referral to HMS, a Nurse must complete the ‘Nasogastric Bristol Referral Form’ in the Nasogastric Tube Teaching Pack and return to the Dietitian immediately. HMS will not accept a referral without a Nurse completing this form
● Once referral paperwork is completed home delivery will take place within 3 working days
● The Medical Team must give 3 working days’ notice of discharge to the Dietitian
● Referrals will only be accepted if enteral feeding is required for at least 4 weeks
● Referrals can be made for nursing-only care, or for both nursing and dietetic care. Dietetic care may be retained at the discretion of the hospital Dietitian

8.4 Children’s Community Nursing Team (CCN Team)

Patients living in Bristol who are likely to need ETF for less than 4 weeks must be referred to the CCN Team, or the Community Neonatal Team CNT (NICU patients)

● The CCN Team are located on Level 5 and can be contacted on Extension 28555
● The Dietitian must refer to the CCN Team in line with the CCN Team Referral Flowchart
● The CNT are based on NICU – contact on Extension 285252
● The discharging Ward must provide 7 days’ of equipment and feed at discharge
● Thereafter, ongoing supply of equipment and feeds must be ordered weekly by the discharging ward for the duration of tube feeding
● Parents and carers must be informed to collect the feeds and/or equipment from the ward, alternatively the CCN Team or CNT may be able to take the supplies to the patient’s home
● Dietitian will refer to HMS for home delivery and nursing care if ETF continues over 4 weeks

8.5 Referrals Out of Bristol Area

● Patients residing outside of Bristol are referred to the local HEF team by the Dietitian
● The Nurse must inform the patient’s local community nursing team before discharge
● The Medical Team must give 3 working days’ notice of discharge to the Dietitian
● 3 - 5 working days’ notice is required to arrange home equipment delivery
● The ward must order 7 days’ supply of ancillaries for discharge (unless informed differently by the managing Dietitian)
● The Dietitian is responsible for ordering feed TTOs from pharmacy
● Equipment and feeds may differ depending on the patient’s residential area. The Dietitian must discuss any differences with the patient and Parents/Carers before discharge

8.6 Discharge to Temporary Accommodation (Sam’s or Rhys’ House - CLIC)

Patients discharged to temporary accommodation must be supported by the discharging ward for the duration of ETF

● The ward must provide 7 days’ supply of equipment and feed for discharge
● Weekly equipment supplies must then be ordered by the ward for duration of tube feeding
● Weekly feed TTOs are ordered by the Dietitian for the duration of tube feeding
● Parents or carers must be informed to collect supplies from the ward
● The Dietitian will refer to the local HEF Team, if and when appropriate, for home deliveries

8.7 Patient Information and Support

● For all patients being discharged after an enteral feeding tube change, the Nurse must provide parents or carers with an Enteral Feeding Tube Change Advice Sheet
● Patients with a Gastrostomy, Gastro-Jejunal, or Jejunostomy tube may be given a company booklet by the Dietitian
● Nutricia Flocare Infinity Paediatric Instructions are available for children learning to feed via an enteral feeding pump
● Families may also wish to contact the charity and support agency Half-PINNT

9 STAFF TRAINING

Competency For Insertion And Confirming Position Of Naso Gastric And Oro Gastric Tubes

Competency For Administration Of Bolus Nasogastric Orogastric Tube Feeds In Neonates And Paediatrics And Adults
10 REFERENCES AND BIBLIOGRAPHY


3 A.S.P.E.N. Board of Directors and Clinical Guidelines Task Force (2002) Guidelines for the use of parenteral and enteral nutrition in adults and paediatric patients. *JPEN; 26:* supp1


8 Great Ormond Street Hospital – online guidelines for gastrostomy and jejunostomy feeding


10 Horwood A (1992) A literature review of recent advances in enteral feeding and the increased understanding of the gut. *Intensive Crit Care Nurs; 8* (3): 185-8


12 I.C.N.A. Enteral Feeding Guidelines


17 National Institute of Clinical Excellence (2012) Infection Prevention and Control


20 Nutricia Clinical 2008 Enteral Feeding in Infants and Children (endorsed by the BDA)


**SAFETY**

- Risk of harm from children/neonates entangled in lines
- Risk of harm caused by misplaced nasogastric feeding tubes

**QUERIES**

Paediatric Nutrition and Dietetic Services, Extension 28802
### APPENDIX 1

**Table 1: Types of feeding route for the delivery of ETF**

<table>
<thead>
<tr>
<th>Delivery Route</th>
<th>Indications</th>
<th>Contradictions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nasogastric (NG) feeding</strong></td>
<td><strong>SHORT TERM FEEDING</strong></td>
<td>Persistent vomiting, Severe delayed gastric emptying, Intestinal obstruction, Severe gastro-oesophageal reflux with risk of aspiration</td>
</tr>
<tr>
<td></td>
<td>Normal gastric function, but child is unable to achieve their full nutritional requirements orally.</td>
<td></td>
</tr>
<tr>
<td><strong>Gastrostomy feeding</strong></td>
<td><strong>LONG TERM FEEDING</strong></td>
<td>As for NG feeding, plus:</td>
</tr>
<tr>
<td>- Percutaneous Endoscopic Gastrostomy (PEG)</td>
<td>As for NG feeding, where feeding is likely required for over 6 weeks duration</td>
<td>Complete intestinal obstruction, Gross ascites, Severe obesity, Clotting abnormalities</td>
</tr>
<tr>
<td>- Surgical / Laparoscopic Balloon Gastrostomy (G Tube)</td>
<td>PLUS Congenital abnormalities (oesophageal atresia or trachea-oesophageal fistula), Oesophageal injury or dysmotility, Cystic fibrosis, Cancer, Cerebral palsy</td>
<td></td>
</tr>
<tr>
<td>- Malecot catheter [NPSA Risk Exemption Strategy Malecots]</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Post-pyloric feeding</strong></td>
<td>Persistent vomiting, Severe delayed gastric emptying, Gastroparesis, Severe gastro-oesophageal reflux with risk of aspiration</td>
<td>Complete intestinal obstruction, Gross ascites, Severe obesity, Clotting abnormalities</td>
</tr>
<tr>
<td>- Naso-jejunal (NJ) feeding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Jejunostomy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Gastrostomy with jejunal extension / Gastro- Jejunal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Adapted from PENG ‘Pocket Guide to Clinical Nutrition’
Table 2: Common enteral feeding regimens

<table>
<thead>
<tr>
<th>Regimen</th>
<th>Indications</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bolus feeding</td>
<td>First choice as more physiological Well tolerated in normal GI function</td>
<td>Usually given via enteral feeding syringe under gravity</td>
</tr>
<tr>
<td></td>
<td>Stimulates bile flow</td>
<td>3 – 4 hourly boluses commonly used in infants</td>
</tr>
<tr>
<td></td>
<td>Simulates normal 'feed' times</td>
<td>A feeding pump can be used to deliver a measured amount over a set time for larger volumes or children who tolerate feeds less well (except breast milk).</td>
</tr>
<tr>
<td></td>
<td><strong>Not indicated for post-pyloric feeding</strong></td>
<td></td>
</tr>
<tr>
<td>Oral feeds with bolus top ups</td>
<td>Children and infants taking some oral feeds or solid food</td>
<td>Feed or food is offered orally and the remaining feed volume is given via the feeding tube</td>
</tr>
<tr>
<td></td>
<td>Children who tire easily taking oral feeds (congenital heart disease)</td>
<td></td>
</tr>
</tbody>
</table>
| Continuous feeds Up to 24 hours duration | Infant and children with gastric dysmotility, severe reflux, short bowel syndrome | Feed administered continuously without interruption.  
                                        | Jejunal feeding                                                              | NB. When feeding gastrically a 4 hour break within a 24 hour period is advised to allow stomach pH to normalise and reduce the risk of bacterial infection |
|                                      | **If giving breast milk, use enteral syringe feeding pump.**                 |                                                                                                    |
| Continuous overnight feeding +/- bolus feeds in the day | To supplement oral intake and achieve full nutritional requirements           | Pump feeding overnight +/- bolus feeds in the day to mimic normal mealtimes.                       |
|                                      | Allows flexibility of daytime activities                                      | **Last resort** method of feeding due to the risk of aspiration and strangulation in condition such as neurodisabilities. This needs to be assessed before starting feeding |
| Intermittent                         | Interval of rest required e.g. 4 hours feeding, followed by 2 hours rest.    | Feed is given by pump for specific periods with breaks                                            |