ST. PATRICK'S CENTRE (KILKENNY)
KELLS ROAD KILKENNY

Policy Document

POLICY TITLE: Enteral Feeding Policy

Prepared by: Enteral Support and Training Group	Approval Date: 14.09.2018	Review Date: 14.09.2020
Policy Number 10 – Other Policies	Approved By: Signed: David Kilian Operations Manager Signed: Board Member	

Mission Statement

To enable people to live a good life, in their own home, with supports and opportunities to become active, valued and inclusive members of their local communities.

To enable a supported self-directed living (SSDL) model of provision which is underpinned by our beliefs, values and vision.

Review Date: Revision No: _____	Amendments required: _____	New Revision Status: _____
Reviewed by:	Approved By: Signed:_____ Operations Manager	

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Acknowledgements

Thank you to Ms Catherine Keenan, Senior Gastroenterology Dietitian, St. Luke's General Hospital Kilkenny for her sharing her expertise.

1 Policy Statement

St. Patrick's Centre Kilkenny is committed to ensuring that people supported by St Patrick's Centre being fed by enteral feeding receive safe and optimum care.

2 Purpose

Enteral tube feeding encompasses delivery of nutrients via tube to the gastrointestinal tract. Enteral feeding may be necessary when a person supported by St Patrick's Centre is unable to maintain their nutritional status.

These guidelines aim to ensure the correct initiation and management of enteral tube feeding at all times to ensure:

- Optimal nutritional status is achieved
- Minimal possible complications
- Correct equipment is used by staff
- Provide evidence based guidance to support clinical practice

3 Scope

These guidelines apply to all healthcare professionals involved in the care of people supported by St Patrick's Centre fed by an enteral tube

4 Legislation/ Other Related Policies

HSE SE Aseptic Technique Policy 2013

HSE SE Standard Precautions Policy 2011

HSE South/SE Personal Protective Equipment/Clothing 2011

HSE SE Decontamination Policy 2008

5 Glossary of Terms/Definitions/Abbreviations

5.1 Percutaneous Endoscopic Gastrostomy (PEG)

Gastrostomy feeding tube which has been inserted directly through the abdominal wall into the stomach using an endoscope

5.2 Nasogastric (NG)

A feeding tube placed nasally into the oesophagus and then placed into the stomach

5.3 Radiologically Inserted Gastrostomy (RIG)

A RIG tube is placed under radiological guidance and should only be used when a person supported by St Patrick's Centre has an oesophageal obstruction or is not suitable for a PEG.

5.4 Aseptic Non Touch Technique (ANTT)

A specific type of aseptic technique with a unique theoretical and clinical practice framework based upon the original concept of key-part and key-site protection (HSE SE aseptic technique policy 2013).

5.5 Abbreviations

GI	Gastro-intestinal
LPGD	Low profile Gastrostomy device
NG	Nasogastric
PEG	Percutaneous Endoscopic Gastrostomy
PEJ	Percutaneous Endoscopic Jejunostomy

6 Roles and Responsibilities

6.1 It is the responsibility of the Team Leader

- To liaise with the person concerned, and their family, as appropriate.
- It is also the responsibility of the Team Leader to ensure that all staff are aware of the following:
  - → Standard precautions are adhered to at all times.
  - → The enteral feed prescribed by the dietitian or doctor is followed.
  - → To monitor the person supported for complications arising from enteral feeding.
  - → Feeds are ordered from pharmacy.
  - → To report any problems with feed or tube to the doctors or dietitians.
  - → Any problems with mouth care are reported to the GP and Speech and Language Therapist.
  - → Onward referrals are made as appropriate.
  - → All team members have relevant up to date training
  - → The multidisciplinary team is informed of assessment results, diagnosis, prognosis and enteral feeding management arrangements.

6.2 It is the responsibility of the pharmacist

- To supply enteral feeding requirements to the house.
- To advise on the suitability of any medications to be given via the enteral feeding tube.

6.3 It is the responsibility of the Nurse/Trained Individual

- To adhere to standard precautions at all times.
- To follow the enteral feeding regime provided by the dietitian or doctor.

- To monitor people supported by St Patrick's Centre for complications arising from enteral feeding; temperature, bowel activity, fluid balance, blood glucose, serum electrolytes.
- To monitor a person supported by St Patrick's Centre's weight monthly or more often if required.
- To order feeds/equipment from pharmacy.
- To care for stoma site.
- To secure NG tubes.
- To remove NG tubes, if trained to do so.
- To repass NG tubes, if trained to do so.
- To provide daily mouth care.
- To report any problems with feed or tube to the doctors and dietitians.
- To report any problems with mouth care to the doctors and Speech and Language Therapist.
- To educate other healthcare professionals on enteral nutrition, as requested.

6.4 It is the responsibility of the Doctor

- To adhere to standard precautions at all times.
- To refer people supported by St Patrick's Centre to the dietitian for nutritional assessment and enteral feeding.
- To review medications that may need to be given via enteral feeding tube.
- To monitor blood results, assess the risks and supplement as required and/or treat refeeding syndrome.
- To treat any infections at the peg site.
- To monitor the person supported by St Patrick's Centre's progress on enteral feeding.
- To advise enteral feeds be discontinued if appropriate.
- To make onward referrals as appropriate.

6.5 It is the responsibility of the Dietitian

- To adhere to standard precautions at all times.
- To assess nutritional requirements and prescribe an appropriate enteral feeding regime.
- To monitor tolerance of feed and adjust accordingly.
- To monitor blood results, assess the risks and advise on treatment of refeeding syndrome.
- To monitor weight.
- To advise Nursing staff/Team Leader/Trained Individuals when feeds are changed.
- To adjust enteral feeds with oral nutrition, if required.
- To advise that the enteral feed be discontinued, if appropriate.
- To educate other healthcare professionals on enteral nutrition, as requested.
- To make onward referrals as appropriate.

6.6 It is the responsibility of the Speech and Language Therapist

- To adhere to standard precautions at all times.
- To determine the safety and efficacy of the person supported by St Patrick's Centre's oropharyngeal swallow function by clinical dysphagia examination and /or with objective assessment.
- To evaluate any concurrent communication deficits, determine diagnosis, prognosis, intervention and management recommendations.
- To inform the person supported by St Patrick's Centre and family members, as appropriate and all healthcare team involved in the care of the a person supported by St Patrick's Centre of assessment results, diagnosis, prognosis and management recommendations regarding eating, drinking and swallowing (EDS) for each a person supported by St Patrick's Centre, including:
  - → strategies to aid swallowing e.g. chin tuck, head tilt
  - → altering the consistency of foods and drinks
  - → providing strategies for safe feeding

→ Recommends use of specific equipment to aid eating/drinking.
→ Oral hygiene guidelines.

- To advise re safe positioning.
- To inform the multidisciplinary team of assessment results, diagnosis, prognosis and management recommendations for each a person supported by St Patrick's Centre, including advice re safe positioning.
- To make further referral as necessary e.g. Occupational Therapist.
- To discuss assessment results, diagnosis, and prognosis and management recommendations with the person supported by St Patrick's Centre and family members, as appropriate.
- To liaise with the Team Leader, Nursing Staff, Dietitian and Doctor in cases where the Speech and Language Therapist has considered the thickest oral consistency is unsafe due to further risk of aspiration.
- To refer for on-going Speech and Language Therapist (SALT) intervention as appropriate

7 Procedures

7.1 Indications for nutrition support

7.1.1 Nutrition support should be considered in people supported by St Patrick's Centre who are malnourished, as defined by any of the following:

- A BMI <18.5 Kg/m2 or BMI under 22 in older adults.
- Unintentional weight loss > 20% in 1 year; >10% in last 6 months;>7.5% in last 3 months
- A BMI < 20 Kg/m2 and unintentional weight loss > 5% with the last 3-6 months
- Estimated energy intake < 50% -&5% of estimated energy requirement
- Unable or unwilling to eat sufficient energy/protein to maintain a healthy weight
- Food avoidance and/or lack of interest in food
- Change in functional indicators e.g. hand grip strength or other measures of physical activity and/or strength.

NOTE. Malnutrition can occur at any BMI.

7.1.2 Healthcare professionals involved in starting or stopping nutrition support should:

- Obtain consent from the person supported by St Patrick's Centre

- Be aware that the provision of nutrition support is not always appropriate (Medical Council Guidelines 2010)

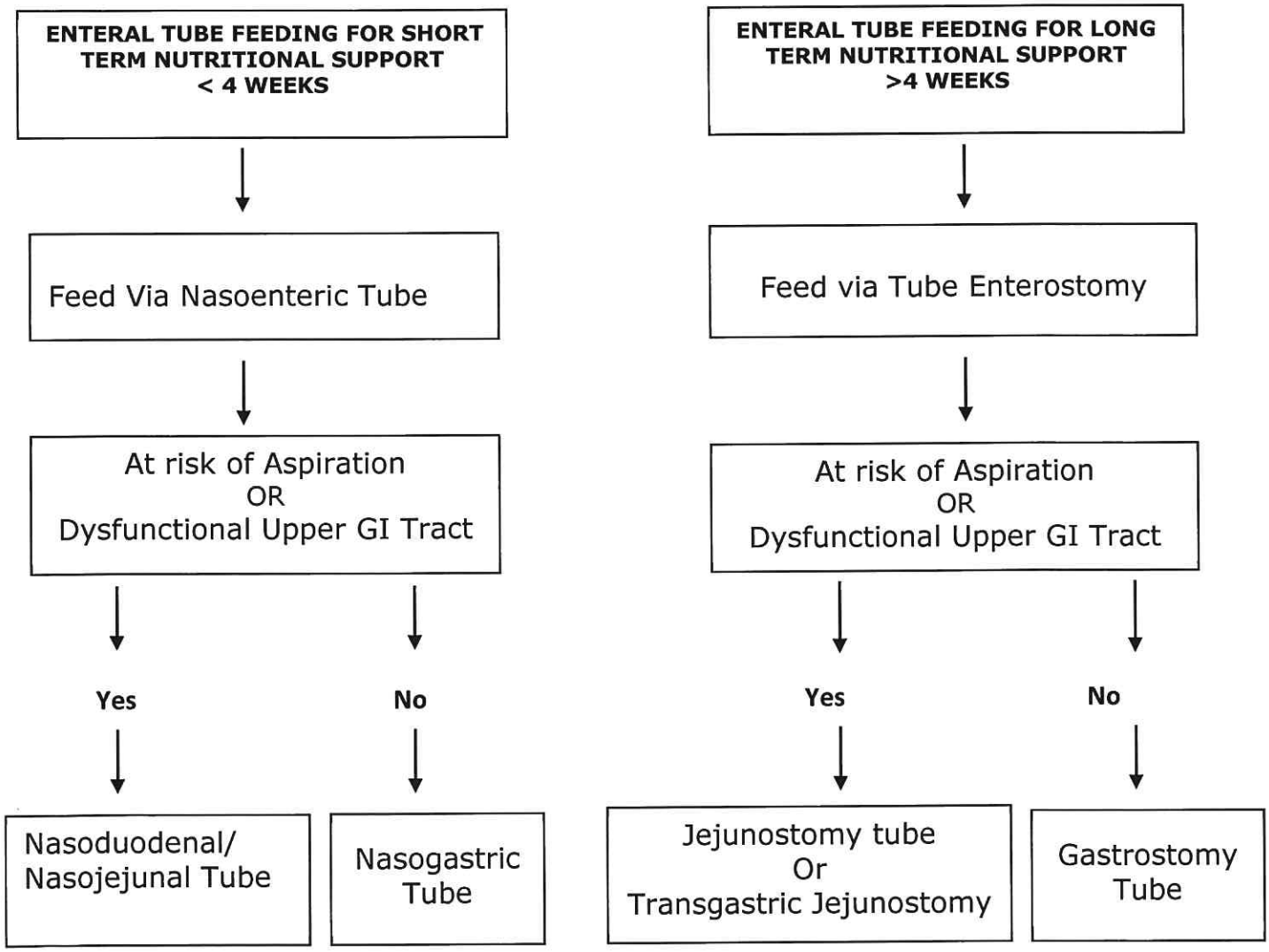
7.2 Possible Contraindications to Enteral Feeding:

Ileus, obstruction, intractable vomiting, short bowel syndrome, shock, sepsis, proximal fistula, anorexia nervosa, confusion, delirium, dementia, aggression, terminal illness.

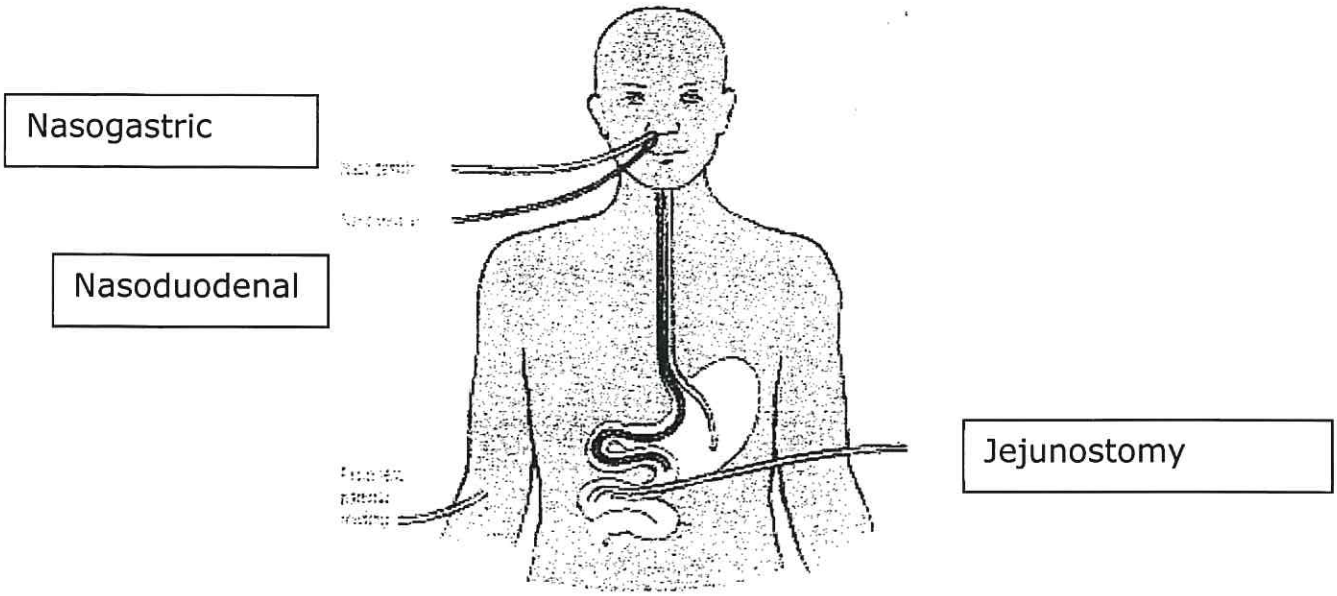
7.3 Routes of access for administration of Enteral Nutrition

The route-selected predominately depends upon:

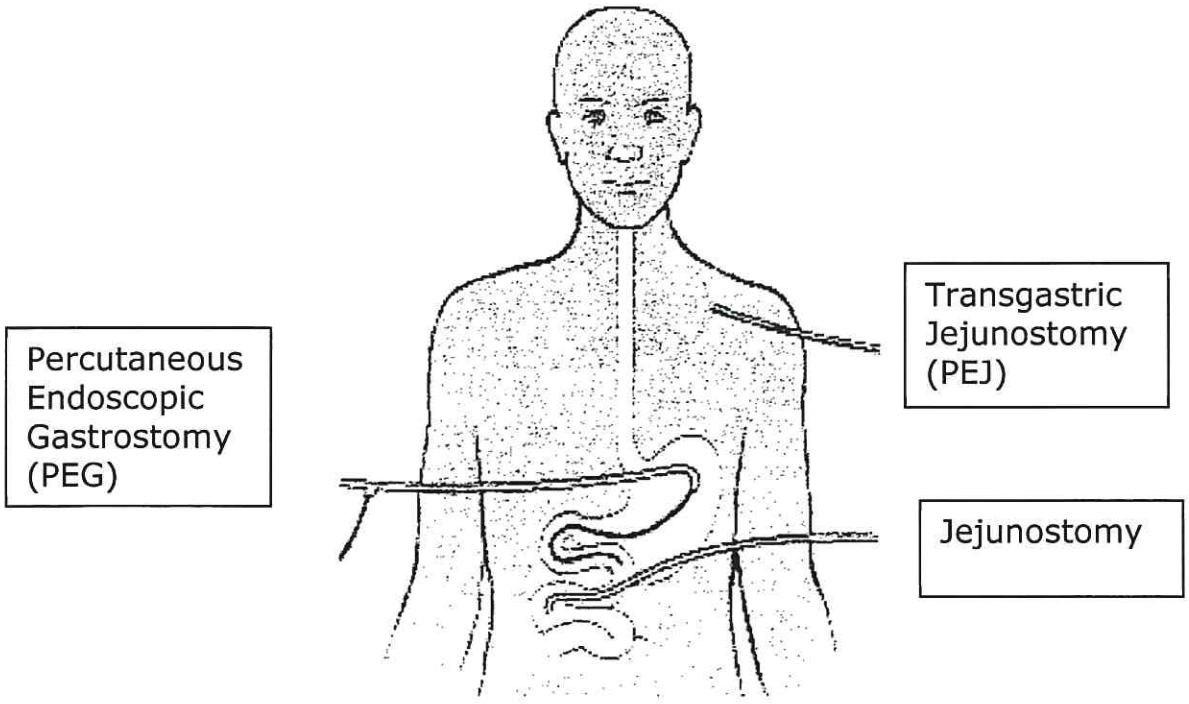
- The anticipated duration of feeding.
- The functional status of the GI tract
- The potential for aspiration



7.4 Routes of access for short term nutritional support



7.5 Routes of access for long-term nutritional support



7.6 Nasoenteric feeding tubes (Nasogastric/Nasoduodenal/Nasojejunal)

A nasoenteric feeding tube refers to any feeding tube that is placed nasally into the oesophagus and beyond.

7.6.1 Nasogastric tubes.

Nasogastric feeding tubes are the most commonly used enteral tube and are used for short term feeding. The tip of the tube is in the stomach.

Currently Corflo nasogastric feeding tubes are use.
They are either 6 French gauges (FR) (92cm or 36 in) or 8 Fr (92cm or 36in).

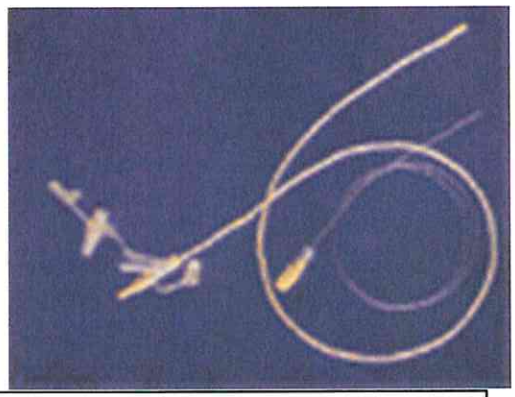


Fig 1: **Corflo Nasogastric tube**

7.6.2 Naso jejunal and naso duodenal tubes.

The tip of the tube is in the jejenum or the duodenum. Currently Corflo 8 Fr (109cm) tubes are used.

7.6.3 Percutaneous gastrostomy feeding tubes

A gastrostomy tube may be more appropriate than nasogastric tube where feeding is required or a period greater than four weeks. A gastrostomy feeding tubes is one, which has been inserted directly through the abdominal wall into the stomach using an endoscope.

Currently a Merck Corflo PEG 16 Fr or 20 Fr (Fig: 2) is originally inserted. This has a life span of 3-5 years after which time it can be replaced by a replacement Gastrostomy tube (Fig 3) or by a low profile gastrostomy device LPGD (Fig 4) also known as a button PEG i.e. Mic-Key (Halyard), Mini One (Techno-path)

Fig 4:
Mini One V Mic-Key

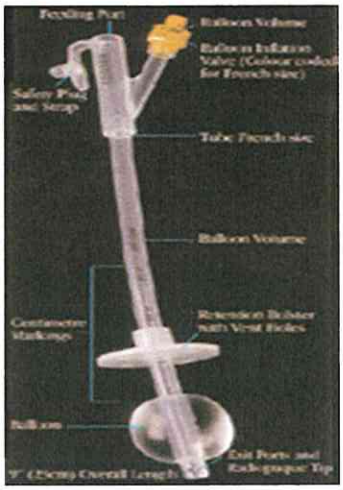


Fig 3:
Replacement Corflo gastrostomy Tube

Fig 2.
Corflo PEG

7.7 Insertion of Enteral Feeding tubes

7.7.1 Insertion of Naso-enteric feeding tubes

As nasogastric tubes are very soft and flexible, at initial insertion they usually contain a removable internal guidewire (sometimes referred to as a stylet), which although flexible, has enough rigidity to allow the tube to be passed. Nasogastric tubes are typically passed 'blind' as a bedside procedure by registered nurses. This means they can't see where the tube is going as it passes out of sight through the nose/throat, but the anatomy of the person supported usually directs it towards the gastrointestinal tract.

A nasogastric tube accidentally inserted into the respiratory tract will not usually cause any pain or direct harm (although direct harm is possible). However, harm would always result if this misplacement was not detected and liquids were introduced into the respiratory tract via the tube. This is why the alerts and this resource set, place great emphasis on the initial placement checks required to confirm that the nasogastric tube is correctly placed in the gastrointestinal tract before any liquids are put down the tube.

It may also be helpful to note that the person supported would not typically display the normal reflexes of choking or coughing if liquids were introduced into the respiratory tract via a misplaced nasogastric tube,

even if they were conscious and alert. These reflexes result from the sensation of fluids at the back of the throat, rather than fluids introduced directly to a lower level of the respiratory tract. It is not always obvious if liquids were being introduced into the lungs, as the decline in a person supported's condition is not always immediate and there may be no obvious symptoms for some hours in the person supported whose lung function was previously good.

Nasogastric tubes are usually secured to the skin around the nostrils with adhesive tape and may be removed by the person supported or accidentally dislodged during nursing care. Some supported people may therefore require repeated insertion of new nasogastric tubes.

Nasogastric feeding tubes can be inserted at the bedside by a competent medical practitioner/nurse/dietitian.

Naso duodenal and naso jejunal tubes are inserted by a competent medical practitioner by endoscopy/ERCP or in surgery.

7.7.2 Confirmation of nasogastric tube placement

This resource focuses on two main types of tests for nasogastric tube placement –pH strips and x-ray:
PH strips or pH paper is test strips that change colour in contact with acid or alkaline substances. They are used with aspirate drawn out of the nasogastric tube using a syringe. The test relates to the acidity of normal gastric secretions in contrast to secretions that are likely to be found in the respiratory tract. Sometimes no aspirate can be obtained or the aspirate drawn out with a syringe is not in the 'safe range' (particularly when the people supported are on medication intended to reduce gastric acidity).
If fluid in the 'safe range' of pH cannot be obtained, an x-ray would be required to confirm nasogastric tube placement and may be routinely used for some patients in specialist settings. Interpretation of the x-ray would typically be done by medical staff or by radiologists (see safety-critical requirements for the training of nursing and medical staff involved in checking nasogastric tube placement).
In practice, this means the first line test of pH can indicate either 'tube is in the gastrointestinal tract' or 'unclear where tube is placed', while the x-ray will indicate which of those in the 'unclear' group are in the gastrointestinal or respiratory tract.

7.7.3 Procedure for the Insertion of a Fine Bore Nasogastric feeding Tube (Refer to Appendix 1) – Only for Trained Individuals

- Nasogastric tubes must **not** be flushed, nor any liquid/ feed/medications introduced through the tube following initial placement, until the tube tip position is confirmed by pH indicator strips or X-ray to be in the stomach. (NPSA 2011)

- Record pH testing results for tube position on the Fine Bore Nasogastric Tube Insertion and Continuing Care Record (Refer to Appendix 2/3) before each feed.

- The Fine Bore Nasogastric Tube Insertion and Continuing Care Record should be used at all times for any person supported with a nasogastric tube in situ and completed daily (Refer to Appendix 2).

- Test pH measurement before a feed is connected. (Refer to Appendix 3 Decision tree for nasogastric tube placement checks in Adults.

- Do not administer feed, fluids or medicine to a person supported if the pH is above 5.5 –Refer to doctor.

- Confirmation of nasogastric tube position using pH indicator strips

- **PH testing is used as the first line test method, with pH between 1 and 5.5 as the safe range (NPSA 2011 Guideline PSA 002).** Refer to Appendix 3 Decision tree for nasogastric tube placement checks in Adults.

- Note that patients on Proton Pump Inhibitors and H_2 antagonists may have higher pH levels.

- PH less than 5.5 indicates gastric placement and correct positioning of the nasogastric feeding tube. Feed may be administered.

7.8 Care of Enteral feeding tubes

7.8.1 Infection prevention and control

Standard precautions should be adhered to at all times.

7.8.2 Care of Nasogastric tubes

The potential lifespan of a Corflo nasogastric tube is 3 months but this can vary according to the individual person supported. Consider for replacement based on functionality and person supported's condition.

7.8.3 Skin care

- Secure the tube with tape to the nose and/or face.
- Keep the skin clean and dry.
- Clean with soap and water daily.
- Observe for signs of local infection or irritation.
- Seek help if the skin becomes broken.
- Alternating nostrils may prevent nasal irritation.
- Observe daily for nasal erosion.

7.9 Care of Gastrostomy tubes

7.9.1 Tube stabilisation

- The external fixation device should lie snugly against the abdominal wall but should not be too loose or too tight. The tube should be able to move 1cm in the tract.
- The position of the external fixation device should be checked daily in relation to the above measurements and tightened to correct position if necessary.
- If the person supported gains weight the external fixation device should be released slightly to prevent pressure necrosis of the stoma site.
- Measuring devices should be used if there is any changes with the Low Profile Gastrostomy Device i.e. weight gain/loss.

7.9.2 Site care

Following the initial tube insertion, a channel of scar tissue forms (fistula), during wound healing, between the gastric wall and the abdominal wall. This process takes 10 -14 days. During this time there is a risk of cellulitis and peritonitis.

7.9.3 Early post-placement care (first 10 -12 days using aseptic non touch technique).

7.9.4 Equipment

Sterile procedure pack containing low linting gauze
Sterile 0.9% sodium chloride solution
Non sterile gloves

- Treat the entry site as a surgical wound for the **first 48 hours**. Aseptic non touch technique (ANTT) is required for all post placement care from 48 hours until days 10-12.
- Explain and discuss the procedure with the person supported
- Decontaminate dressing trolley and prepare equipment.
- Decontaminate hands before contacting the person supported using alcohol hand gel or soap and water for 15 seconds. Don disposable non sterile gloves.
- In advance of clean/aseptic procedures, decontaminate hands using alcohol hand gel for 30 seconds or chlorhexidine for 60 seconds. Don disposable non sterile gloves (if wound has to be changed within 48 hours- disposable sterile gloves must be worn).
- Remove post procedural dressing and observe peristomal skin and stoma site for signs of infection, irritation or excoriation.
- Clean stoma site with sterile 0.9% sodium chloride solution.
- Use low-linting gauze to dry the area thoroughly.
- After 48hrs, rotate the gastrostomy tube 360 degrees daily to facilitate to formation of the stoma tract.
- The external fixation device should lie snugly against the abdominal wall but should not be too loose or too tight (should be able to move 1cm in the tract).
- A thin dry sterile dressing should be replaced daily until the stoma site has no exudates. Do not replace the dressing with an occlusive type. Do not use bulky dressings, particularly under the external fixation device.
- Dispose of all waste appropriately and decontaminate hands in line with the 5 moments for hand hygiene.
- If the person supported displays signs of pain/ discomfort administer analgesia as prescribed.
- "Buried bumper" syndrome is a complication of peg tubes where the disc becomes buried in the stomach lining. Tube should be pushed in by 5mm and gently pulled back to prevent "buried bumper" syndrome.

7.9.5 Long-term site care

Once the stoma site has healed (approximately 10 -14 days post insertion), it is no longer necessary to perform an aseptic technique.

- Hand hygiene must be performed in line with the 5 moments for hand hygiene.
- Inspect site daily.
- Wash using soap and water and rinse daily, dry thoroughly with clean disposable towel.
- No dressings necessary unless there is an exudate.
- Do not use moisturising creams or talcum powder around the stoma.

7.9.6 Change of Gastrostomy tubes

The potential lifespan of Merck Corflo PEG tubes (Figure 2) is 3-5 years but this can vary with individual patients. Replacement Corflo PEG tubes (Figure 3) and LPGD's (Figure 1) both have a lifespan of 4-6 months. They can be replaced at the bedside by a competent health professional (Refer to Appendix 4 and 5 for the procedure for inserting PEG tubes).

If a competent health professional is not available the stoma site should be kept open with an Enplug.

7.9.7 General care

The person supported may have a shower or bed bath but refrain from a plunge bath until the tract has formed (3 weeks post insertion).

- Extension sets should be stored in an airtight container when not in use.

- Extension sets should be replaced fortnightly or if they become cracked, discoloured or otherwise non-functioning.

7.10 Oral hygiene

Oral Hygiene is an integral part of General Care.
Hand hygiene must be performed in line with five moments for hand hygiene.

- Follow daily oral hygiene routine, as plaque will build up quickly
- Brush teeth twice a day or more often if required.
- Give frequent mouth washes (4-6 hourly).
- Arrange for regular Dental Assessment where required
- Document care in Care Plan

- Refer to OT/SLT in relation to Mouth Care (Happy Mouths)

(Refer to Appendix 6 for oral hygiene guidelines).

7.11 Planning to feed

7.11.1 Dietitian consult

The dietitian should be contacted as soon as the decision is made to enteral feed.

The dietitian's role is to assess the person supported's nutritional requirements and prescribe a feeding regimen.

As part of their assessment the dietitian will

- Document a nutritional care plan in the person supported's medical chart.
- Complete an enteral feeding regimen (Refer to Appendix 9 for sample enteral feeding regimen).
- Ensure that a ready to use sterile solution is used where possible.
- Discuss the nutrition care plan and enteral feeding regimen with the all staff and if possible GP.
- Provide a feeding pump if necessary.

7.11.2 Pharmacy consult

The pharmacist should be contacted as soon as the decision is made to enteral feed. Pharmacist's role is to ensure that all medications to be given via the enteral tube are of a suitable format and to advise re potential medication feed interactions. The pharmacist will review the person supported's medication chart and discuss any necessary changes with other team members where necessary. Where possible the medications should be given orally or via an alternative route. Where drugs must be given via an enteral tube the most suitable format must be discussed with pharmacy.

7.11.3 All medications given via an enteral feeding tube must be given separately and the tube flushed with 10ml of water between each medication. **Tablets should not be routinely ground into a powder to administer via nasoenteric tubes, as this will block the nasoenteric tubes. This should only occur if essential and no alternative route is available, please contact the pharmacy for advice.**

7.12 Administration of feed

7.12.1 Hand Hygiene

Hand hygiene is the single most important intervention to prevent the transmission of infection. Decontaminate hands by either hand washing or using alcohol hand gel in line with the five moments of hand hygiene.

7.12.2 Sterile water

Sterile water/cooled boiled water must be used during enteral feeding e.g. for flushing the tube, reconstituting powder feeds, administering medication or hydration.

Write the expiry date and time on the bottle/jug when opening and discard any remaining after 24 hours.

7.13 Care of equipment and sundry items

7.13.1 Pumps and infusion stands

- Clean daily with a lightly moistened disposable cloth using a detergent and warm water solution or detergent wipe.
- If contaminated with blood or body fluids are used on a person supported in source isolation they should be cleaned and disinfected with a hypochlorite solution.
- Equipment requiring service or repair should be decontaminated and have the necessary document accompanying it prior to leaving the house.
- Enteral feeding pumps should be serviced annually.

7.13.2 Giving sets

Giving sets are single use only and must not be reprocessed and re-used under any circumstances even on the same person supported. They must be discarded after 24 hours.

7.13.3 Syringes

Single use syringes must not be reprocessed or re-used under any circumstances even on the same person supported. They must be discarded after each use.
Reusable syringes are washed with warm soapy water after each use, rinsed and left to air dry and sterilised in the steam sterilised every 24hrs. These are discarded after 1 week. Document appropriately.

7.13.4 Reusable sundry items – e.g. extension tubing, y connectors etc.

Reusable sundry items need to be changed every two weeks, or as necessary to keep functioning well. Lifespan depends on type of formula and medications used.

Re-usable sundry items are single use for a person supported.

Re-usable sundry items should be cleaned with soap and water and rinsed with clean water then stored in a clean dry lidded container.

7.14 Setting up a feed

7.14.1 Equipment

- Drip stand/Enteral transport bag
- Appropriate syringe
- Prescribed feed (at room temperature)
- Person supported enteral feeding regime
- Single person supported use bottle of sterile water/cooled boiled water for flushing tube
- Single folded paper towel
- Enteral feeding pump
- Giving set
- Kidney dish/tray
- pH indicator strips
- Non sterile gloves and apron

7.14.2 Preparation of Person Supported

- Ensure person supported's comfort and safety. Explain procedure to the person supported.
- Decontaminate hands in line with the five moments of hand hygiene.
- Ensure person supported's head and upper body elevated to at least 30 degree angle.
- In the case of NG tube, confirm position of NG tube. (Noting position of markers on tube once initial position has been confirmed by CXR). Ensure NG tube is securely taped to person supported's nose.

7.14.3 **Prepare feed**

- Check prescribed feed against enteral feeding regimen.
- Check the feed's expiry date and look for signs of damage to the container. Never use feeds that have expired or are in damaged containers.
- Feeds should be administered at room temperature.
- Connect the feed container to the giving set using a non-touch technique. This involves ensuring that no part of the equipment that comes into contact with the feed be allowed to touch the hands, skin or clothing.
- Prime the set and attach to pump.

7.14.4 **Hang feed**

- Flush the tube with the amount of sterile water recommended on the feeding regimen.
- Use appropriate syringes.
- Attach giving set to NG/PEG tube.
- Adjust the flow of pump to the prescribed rate.
- Do not add any water, medication or other substances directly to the feed unless prescribed for this purpose.
- Dispose of used equipment safely.
- Decontaminate hands in line with the five moments for hand hygiene.

7.14.5 **Documentation**

Document the details of the procedure in the person supporteds' notes. Document the time that feeding commenced, the name of the feed, and the rate of the feed on the fluid input and output chart. Also document here the time and quantity of all flushes administered, the hourly feeding rate including when the feeding rate is increased or decreased and when feeding is stopped and started.

7.14.6 **Flushing**

- Decontaminate hands in line with the five moments for hand hygiene.

- A newly opened bottle of sterile water/cooled boiled water should be used and dated and discarded after 24 hours. Always check the position of the tube prior to flushing.

- Use an appropriate syringe

- When to flush
  → Before feeding
  → At end of feeding
  → Before and after syringing each medication down the tube
  → If feeding is stopped for any reason
  → As per feeding regimen as extra flushes may be required to meet person supported's fluid requirements

7.14.7 Storage of feeds

Prior to use feeds should be stored in a clean dry environment; between 8-25 ◦C. Stocks should be rotated to ensure that older stock is used first.

7.14.8 Maximum Hanging Times

- The hanging time is the total time the opened feed is held at room temperature.

- The feed is labelled with the date and start time of the feed to ensure that the feed does not hang longer than maximum hanging time.

- The maximum hanging times are shown in Table 1. The hanging time should be reduced in high risk areas or with high risk people supported.

FEED TYPE	MAXIMUM HANGING TIME	MAXIMUM STORAGE TIME IN FRIDGE
Sterile, ready to use feeds if not decanted	24 hours	Not applicable
Sterile feeds decanted into a sterile reservoir using aseptic technique	24 hours	24 hours
Non-sterile feeds, e.g. Reconstituted powders, mixed feeds	4 hours	24 hours

Table 1

7.15 Bolus Feeds

Sterile feeds that have been opened aseptically for bolus feeding can be resealed and stored in a refrigerator at below 8 degrees C for up to 24 hours. After 24 hours it must be discarded. If the feed container cannot be resealed properly then the product must be discarded immediately. Feeds should be administered at room temperature so decant prescribed amount of feed 30 minutes prior to feed time.

7.16 Decanting

Sterile feeds should only be decanted when no suitable ready to use preparation is available. Sterile feeds should be decanted into a sterile container. Decant the volume required for a 24 hour period, do not top up the reservoir. Use a non-touch technique when decanting the feed. Prior to decanting disinfect the outside of the feed container with an alcohol wipe. Decanting should be undertaken in a clean environment.

7.17 Making up non-sterile feeds

- Follow manufacturer's or dietitian's instructions for making up the feed.
- Only sterile water/cooled boiled water when making up the feed. Decant only the amount of feed required using an aseptic technique. A new reservoir should be used each time feed is decanted.
- Unused feed can be stored in a fridge for up to 24 hours in a closed container, date and time the container. Decant next feed 30 minutes prior to using to allow feed to reach room temperature.
- Utensils, such as jugs should be washed in a dishwasher every 24hrs. These should not be washed with any other items.

7.18 Disconnecting feed during administration

Ideally feeds should not be interrupted once in progress. If it is necessary to disconnect use a no touch technique. The time during which the feed is disconnected counts as part of the hanging time.

7.19 Administration of medications via enteral tubes

Please refer to individuals SOP in relation to administration of medication via the PEG.

7.19.1 Review by pharmacist

All people supported who are to have medications administered via an enteral tube should have their medications reviewed by a pharmacist.

7.20 Monitoring of people supported on Enteral feeding

7.20.1 Initially prior to commencing Enteral feeding check the following:

- Person supported's weight
- U & Es (Urea, Creatinine, Sodium, Potassium, Magnesium, Phosphate)
- Albumin
- Blood glucose
- Fluid balance
- Temperature

7.20.2 Monitoring

Parameter	**Frequency**
Fluid balance charts	Daily.
Food intake charts	If any changes in person supported's oral intake.
Bowel chart	Daily. Use King's Stool chart.
Vomiting, nausea	Daily initially, reducing to twice weekly.
Actual volume	Daily initially, reducing to twice weekly when stable of feed delivered.
Blood glucose monitoring	Daily for diabetics and people supported with hyperglycaemia
Urea & Electrolytes	Monthly initially, reducing to quarterly while on enteral feeding or as medically indicated.
Weight	Daily if concerns regarding fluid balance, otherwise weekly reducing to monthly or more often as requested.

Enteral tube – Nasally inserted	
Parameter	**Frequency**
Gastric tube position – pH less than 5.5 using pH indicator strips Noting position of markers on tube	Before each feed begins Prior to the administration of medications Prior to administering a flush solution
Nasal erosion	Daily
Fixation	Daily
Is the tube working?	Daily

Gastrostomy /Jejunostomy	
Parameter	**Frequency**
Stoma site	Daily
Tube position	Daily
Tube rotation (360°)	Weekly

Do <u>not</u> rotate jejunostomy tubes

7.21 Problem solving

Please Refer to Appendix 10.

7.22 Progressing people supported from enteral nutrition to full oral intake

- People supported should be assessed by the speech and language therapist prior to commencing any oral intake.
- When a person supported starts to take food orally, food intake should be recorded on a food intake chart. A dietitian should calculate the number of calories from food and decrease feeds accordingly.
- Enteral feeding tubes shouldn't be removed until the person supported is managing to take more than 75% of their requirements orally. Always consult the dietitian before removing an enteral tube.

8 Implementation Plan

8.1 This guideline will be circulated in electronic format to all relevant stakeholders as coordinated by the Enteral Support and Training Group (ESTG).

8.2 It is the responsibility of House Managers to ensure that all staff within their area of responsibility is familiar with and adhere to this Guideline.

8.3 Ultimately it is the responsibility of each individual practitioner to read the guideline and sign off that they have read and understood its contents and agree to adhere to the document.

8.4 Ongoing in-service education and support will be made available to staff by the Enteral Support and Training Group (ESTG).

9 Evaluation and Audit

The content and structure of this guideline will be evaluated and audited two years from the date of approval by the Enteral Support and Training Group (ESTG).

10 Revision History

Date	Review Number	Section Number	
22/11/13	1		
23/06/18	2		

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Appendix 1: Procedure guidelines: Nasogastric insertion with pre inserted stylet tube

Prior to performing this procedure the patient's medical notes and nursing notes should be consulted to check for potential complications.

Equipment

- Clinically clean tray
- Fine-bore radio-opaque nasogastric tube
- Receiver
- Sterile water
- 10 ml syringe
- Hypoallergenic tape
- Adhesive patch if available
- Non-sterile gloves
- Personal protective equipment e.g. Clean disposable plastic apron/gown.
- Glass of water
- Lubricating jelly
- Indelible pen
- Tissues
- Paper towel

Procedure

Explain the procedure to the person supported and obtain consent

Check that both nostrils are patent by asking the person supported to sniff with one nostril closed. Repeat with the other nostril.

Decontaminate hands in line with 5 moments of hand hygiene.

Assist the person supported to sit in a semi-upright position in the bed or chair. Support the person supported's head with pillows. Note: The head should not be tilted backwards or forwards. Remove dentures from the person supported's mouth and place in suitable container if applicable.

Decontaminate hands in line with 5 moments of hand hygiene i.e. alcohol hand gel 30 seconds or chlorhexidine 60 seconds. Don non sterile gloves and if the risk of vomiting is high, the operator should consider face and eye protection as well as a plastic apron/gown. Assemble the equipment required.

Measure the length of the tube to be inserted to assure that the tip enters the gastric region by: externally on the patient, place the tip of the tube 10cm below the Xiphisternum. Extend the tube to the tip of the nose. Mark the tube clearly where the tube will exit the nose or use centimetre marks on the tube for reference.

Follow manufacturer's instructions to prepare the tube, for example injecting sterile water for injection down the tube and lubricate the proximal end of the tube with lubricating jelly or water.

Insert the rounded end of the tube into the clearer nostril and slide it backwards and inwards along the floor of the nose to the nasopharynx. If any obstruction is felt, withdraw the tube and try again in a slightly different direction or use the other nostril.

Advance the tube through the pharynx as the person supported swallows until the predetermined mark has been reached. If the person supported shows signs of distress, for example gasping or cyanosis, remove the tube immediately.

Check the position of the tube to confirm that it is in the stomach by taking an aspirate using a 50ml syringe and gentle suction. Test using pH indicator strips 0-9 (CE marked). A pH of 5.5 or below indicates gastric placement. See Appendix 4 Decision tree for nasogastric tube placement in adults.

If unable to obtain an aspirate or pH > 5.5, order X ray to check NGT placement.

Secure the tape to the nostril with adherent dressing tape.
A hypoallergenic tape should be used if an allergy is present.

Warning: Nasogastric Tube must <u>not</u> be flushed or any liquid/ feed/medications introduced through the tube until the tip position is confirmed by pH indicator strips or X-ray to be in the stomach.

Dispose of equipment safely in appropriate containers. Decontaminate tray in line with decontamination policy.

Decontaminate hands.

Document the reason for the tube insertion, type and size of tube and tip position in the relevant person supported's healthcare notes.

The following methods should not be used to test the position of a nasogastric tube:

- Auscultation (introducing air into the Nasogastric tube and checking for a bubbling sound via a stethoscope, also known as the 'whoosh test')

- Use of litmus paper. Litmus paper cannot distinguish between gastric acid (pH < 4) and bronchial/intestinal secretions (pH >6)

- Absence of respiratory distress

- These tests are not accurate or reliable as a method of checking the position of a nasogastric tube as they have been shown to give false positive results.

Appendix 2: Fine Bore Nasogastric Tube Insertion and Continuing Care Record

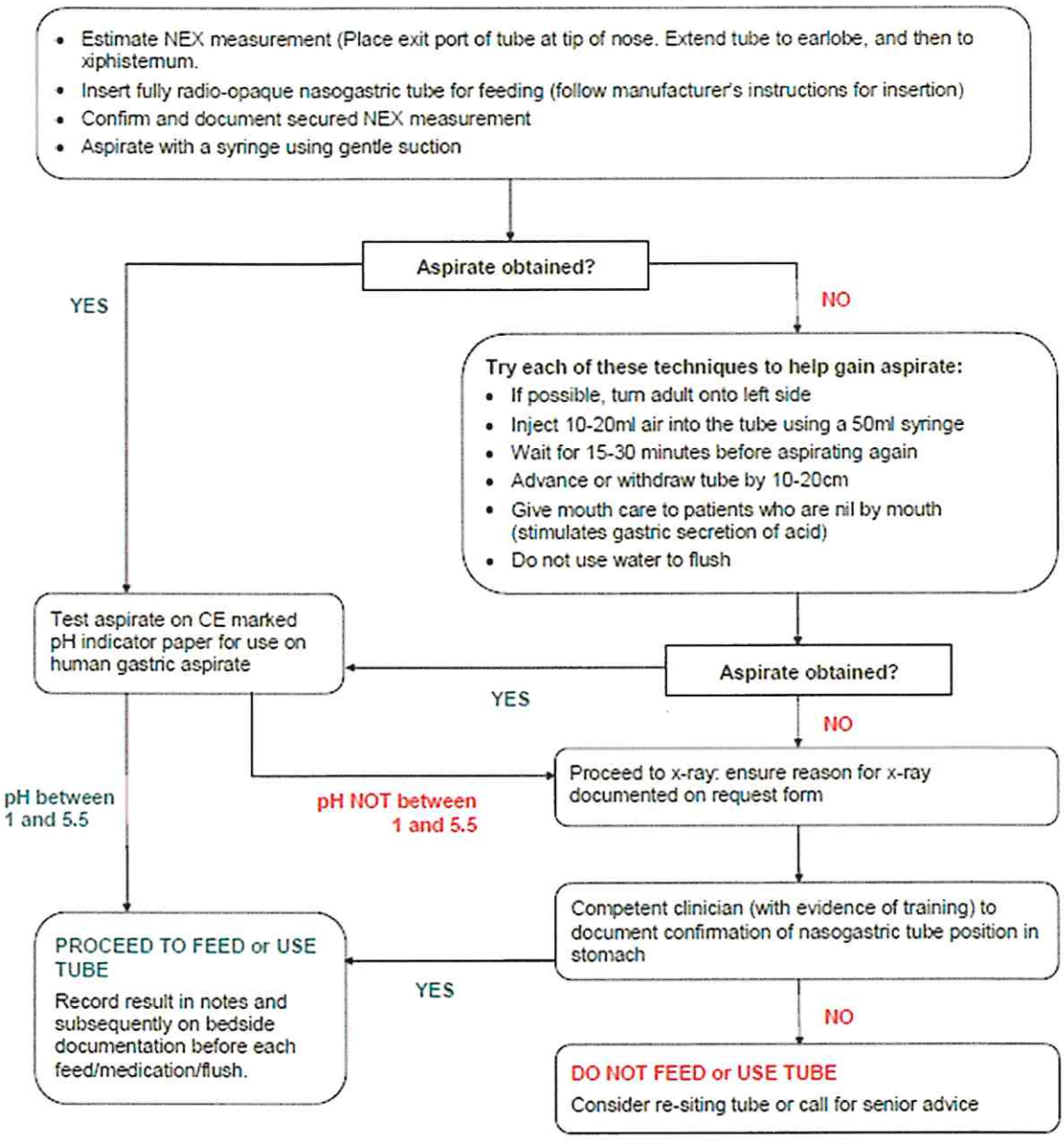
Please affix patient label here Labels should contain the following information: • Name • Address • Date of Birth • Healthcare Record Number	**Fine Bore Nasogastric Tube Insertion and Continuing Care Record in Adults** Ward/Area

Insertion Details: Date of Insertion: _____ Time:_____ Length :_____ Gauge:_____ Inserted by; _____	**Guide Wire Removed** Yes □ **Fixation Method** **Tape** Yes □ No □ **Nasal Bridle** Yes □ No □ Other:_____
Confirmation of correct tube placement on initial insertion by X-Ray Yes □ **Document in medical notes** Yes □ No □	**Nasogastric Tube Removed** Date of Removal: _____ Time: _____ Removed by : _____

Observation Care Element					
Date					
Time					
pH tested and result is between pH1 – pH 5.5. once tube position has been confirmed by x-ray on initial insertion; pH test must be performed prior to administration of feed, fluids and medicines	pH	pH	pH	pH	pH
Correct position marker on NG tube insertion .....cms	cms	cms	cms	cms	cms
Tube fixation clean and intact					
Nasal area checked for erosion					
Patient observations stable (Apyrexial /normal respiratory rate)					
Correct patient position maintained ≥ 30°					
Feed and flushes* (sterile water) administered as per dietitian enteral feeding regimen (Document amount on fluid balance chart).					
Flush prior, in-between and following administration of medications					
Oral Hygiene administered					
Fluid Balance Chart completed					
Record baseline weight and weigh ..... (frequency)					
Nurse's Signature					

Appendix 3: Decision tree for nasogastric tube placement checks in Adults

Decision tree for nasogastric tube placement checks in ADULTS



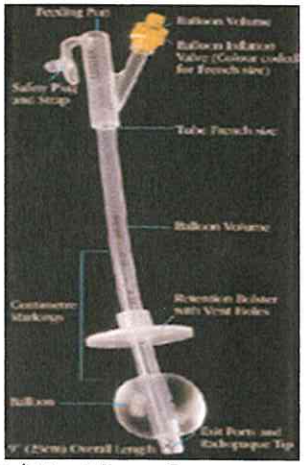
A pH of between 1 and 5.5 is reliable confirmation that the tube is not in the lung, however it does not confirm gastric placement as there is a small chance the tube tip may sit in the oesophagus where it carries a higher risk of aspiration. If this is any concern, the patient should proceed to x-ray in order to confirm tube position.

Where pH readings fall between 5 and 6 it is recommended that a second competent person checks the reading or retests.

Appendix 4: Procedure for inserting Corflo Replacement Gastrostomy tube – Trained Nurse Only

Equipment

- Replacement Corflo Gastrostomy tubes in various size
- Water soluble lubricating jelly
- Sterile water
- Dressing pack
- 0.05% chlorhexidine solution (Unisept)
- 10ml syringe
- pH indicator strips
- 50ml syringe (single use only)
- Clean disposable plastic apron
- Gloves (non-sterile)
- Paper towel



Procedure

1. Check date of insertion and size of original PEG tube in medical chart (Must be > 6 weeks for fistulisation).

2. Explain procedure and obtain consent from individual

3. Decontaminate hands in line with five moments for hand hygiene. Don disposable gloves, apron and other PPE as appropriate.

4. Open a dressing pack and set up on a clinically clean trolley.

5. Check expiration date and size of Replacement Gastrostomy Tube on the Replacement Gastrostomy pack.

6. Open gastrostomy set and check that the balloon inflates prior to inflation and move the bolster up and down the tube.

7. Coat tip of replacement tube with water soluble lubricated gel.

8. Soak gauze in 0.05% chlorhexidine solution/saline and clean area around stoma.

9. Protect the person supported with a paper towel.

10. Deflate Replacement Gastrostomy Tube by removing all water from the balloon using a 10 ml syringe, making sure the balloon is fully deflated prior to removal of the tube.

11. Remove the Replacement Gastrostomy Tube. Discard the tube in yellow bag. If gloved hands have become contaminated following removal of the Gastrostomy Tube, remove, decontaminate hands and don gloves (refer to HSE SE Aseptic Technique Policy).

12. Using non touch aseptic technique, clean around site using 0.05% chlorhexidine.

13. Insert the same size tube as the tube that has been removed. If this fails, try a smaller size tube.

14. Insert tube into stoma, up to the end of the writing on the tube (past the 6cm mark on the tube).

15. Check balloon volume. Inflate tube with the correct volume of sterile water.

16. Pull the replacement tube back so that balloon is resting inside stomach wall.

17. Slide retention bolster to stoma/skin surface.

18. Wipe off excess lubricating gel around the stoma site using gauze.

19. Aspirate Replacement Gastrostomy Tube. Check tube placement with pH indicator strips. If pH is less than 5.5 can feed immediately. If pH higher than 5.5, wait for 30 minutes and retest. If the person supported is on antacids or proton pump inhibitors, pH may be higher, wait for 30 minutes and assess time of medication administration, retest.

20. Place side clamp on tube.

21. Flush tube with 30ml of sterile water. **If the patient experiences any pain on flushing of the Replacement Gastrostomy Tube post PEG replacement, STOP, do not put any medications or feed down the tube. Repeat steps 10-20. An X-Ray is not required.**

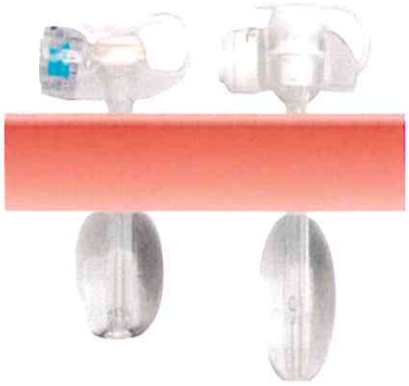
22. Close feeding port.

23. Dispose of waste into appropriate waste streams. Remove PPE and decontaminate hands.

24. Decontaminate reusable items of equipment.

25. Document procedure in clinical notes.

<u>Appendix 5:</u> Procedure for inserting MIC-KEY gastrostomy device/Mini One (Low Profile Gastrostomy Device LPGD) - Trained Nurses Only



AMT Mini ONE® Balloon Button

Kimberly-Clark Mic-Key® Balloon Button

Equipment

- LPGD's in various sizes
- LPGD Stoma measuring device
- Water soluble lubricating jelly
- 10mls Sterile water
- Dressing pack
- 0.05% chlorhexidine solution
- 10ml syringe
- Clean disposable plastic apron
- Gloves (non-sterile)
- Paper towel

Procedure

1. Check date of insertion and size of original PEG tube in medical chart. (Must be > 6 weeks for fistulisation).

2. Explain procedure and obtain consent from the person supported
3. Decontaminate hands in line with five moments for hand hygiene. Don disposable gloves, apron and other PPE as appropriate.

4. Deflate balloon in existing replacement gastrostomy tube or button by removing the water using 10 ml syringe.

5. Clean area surrounding the stoma, using non touch aseptic technique with 0.05% chlorhexidine solution.

6. Check balloon inflates with 5ml water on stoma measuring device.

7. Lubricate the tip of the measuring device with water soluble lubricant.

8. Gentle slide the tip of the measuring device through the stoma site into the stomach.

9. Use the Luer syringe provided to inflate the balloon with 5ml of water.

10. Place gentle traction on the measuring device until you feel resistance against the inside stomach wall.

11. Slide plastic disk down to stoma.

12. It is recommended to take two readings, one in the upright and one in the supine position. Take the average of the two readings for the desired length. Measurements are in 0.25 cm increments.

13. Record the appropriate length. It is important to select the appropriate length for the abdominal wall thickness. If measurement is between sizes, choose the next larger size.

14. **WARNING: Under sizing the LPGD may cause embedding with erosion into the gastric wall, tissue necrosis, infection, abscess, sepsis and associated sequelae.**

15. Deflate the balloon and remove the measuring device. If gloved hands have become contaminated following removal of the tube, remove, decontaminate hands and don new gloves (refer to HSE SE Aseptic Technique Policy).

16. Select the appropriate size LPGD. Check that the balloon inflates.

17. Using a non-touch aseptic technique, clean around site using 0.05% chlorhexidine.

18. Coat tip of replacement tube with water lubricated gel. Insert tube into stoma.

19. Hold firmly in place and inflate balloon with the 5mls of sterile water.

20. Aspirate Replacement Gastrostomy Tube. Check tube placement with pH indicator strips. If pH is less than 5.5 can feed immediately. If pH higher than 5.5, wait for 30 minutes and retest. If the person supported is on antacids or proton pump inhibitors, pH may be higher, wait for 30 minutes and assess time of medication administration, retest.

21. Flush tube with 30ml of sterile water. **If the person supported experiences any pain on flushing of the LPGD replacement, STOP, do not put any medications or feed down the tube. Remove LPGD and attempt reinsertion. If pain still exists refer to the GP/Caredoc**

22. Close feeding port.

23. Dispose of waste appropriately, remove PPE and decontaminate hands in line with the 5 moments for hand hygiene.

24. Educate carer on use of LPGD.

An X-Ray is not required.

Appendix 6: Oral hygiene procedure

1. Prepare equipment. Decontaminate hands in line with 5 moments for hand hygiene.

2. Position the person supported upright or semi upright with head supported and remove any dentures.

3. Ideally teeth brushing should be undertaken by 2 carers/staff.

4. Access and vision are improved when tooth brushing is undertaken by carers positioned in front of the person supported and by using a light source.

5. Use a dry medium textured toothbrush and a small smear of fluoride toothpaste so that foam production is minimized.

6. *Green foam sticks maybe used to swab mucosa but are of no use in the cleaning of teeth.

7. **Lemon and glycerine swabs should never be used.**

8. Clean all surfaces of the teeth, paying particular attention to the tooth gum margin.

9. Gently clean the tongue, palate and cheek mucosa with a soft toothbrush.

10. Where the person supported's gums are bleeding, continue tooth brushing and brush more often. If there is no improvement seek dental advice.

11. Where caries are present, seek dental advice.

12. All problems should be referred to the doctor or dentist for advice.

13. Dispose of waste appropriately and decontaminate hands in line with 5 moments for hand hygiene.

14. Document procedure in clinical notes

Appendix 7: Procedure for inserting Enfit enplug

Equipment:

- Enplug in various sizes
- Medical tape
- Gloves (non-sterile)
- Paper towel

Procedure:

- Enplug only to be used if tube/button is pulled or has fallen out and trained staff in PEG reinsertion are not on duty.
- Explain procedure to the person and obtain consent
- Wash hands for 15 seconds with soap and water and alcohol gel for a further 15 seconds , don apron and gloves
- Check best before date on pack
- Check the size of the tube that has come out
- Open the packet
- Select the correct size enplug for the individual.
- Gently insert the enplug into the stoma
- If it goes in easily, leave the enplug in place and secure with tape to cover the top
- If you cannot insert the size closest to the current tube or you feel resistance, attempt to inset the next smallest size e.g. use a 12fr instead of a 14fr
- Contact a trained person in peg reinsertion to insert a new tube/button
- If an enplug cannot be fitted, contact senior person on duty
- Document in the individuals notes

Appendix 8: Farrell Valves System

- Hang Farrell bag on the same stand as feeding container. The Farrell bag should be the same height as the feeding container
- Close both the white and blue clamps on the Farrell line
- Attach the giving set to the Farrell "Y" port. (Note, the feeding line is attached to the Farrell line)
- Open the white clamp and prime the giving set – note, with the pump in operation allow the feed to travel a short distance in the "up line" towards the Farrell bag
- Close the white clamp, open the blue clamp and continue to prime the giving set
- Flush the feeding tube before administering feed –note, if this is an NG tube, confirm the tube position before flushing
- Attach the Farrell line to the peg tube and position the Farrell "Y" port below the level of the person's stomach
- Ensure both the white and blue clamps on the Farrell line are open. The Farrell System is now ready to use
- When the pump is running feed will continuously move up and down in the Farrell line
- To discontinue Farrell Valve operation, close both the white and blue clamps on Farrell line
- Change the Farrell bag when the feed is changed. The maximum recommended use of Farrell bag is 24hours.

Appendix 9: Enteral Tube Feeding Regimen

Enteral Tube Feeding Regimen

NAME:	**DATE:**

FEEDS: _____ **ml** _____

_____ **Ml** _____

Regimen:

Target daily total additional water as flushes: _____

Suggested: ____ml x ___ e.g. **with** medications

Best practice: Flush with 30 mls sterile water before and after every feed and medication.

Nutritional Composition of Full Regime:

Feed Volume:	_____ml.	Protein	_____ g.
Total Volume:	_____ml.	Sodium	_____ mmol.
(Includes flushes)		Potassium	_____ mmol.
Available water	_____ml.	Fibre	_____ g.
Energy	_____ kcal		

Dietitian **Phone Number** **For Review On**

Please contact the Dietitian if regimen requires changing.

Please see reverse of page for General Instructions re: Enteral Feeding

Appendix 10: Problem Solving

Potential Problem	Possible Cause	Action
Constipation	Low residue feed	Discuss change to a fibre enriched feed with the dietitian
	Inadequate fluid intake	Check patient is receiving all feed and fluid prescribed Ensure accurate record kept on fluid balance chart Discuss fluid requirements with dietitian and doctor
	Side effect of medication	Discuss with doctor or pharmacist and consider use of laxatives Consider plain film of abdomen and PR exam
	Immobility	Encourage mobility
Diarrhoea Presence of 3 or more liquid stools a day	Pre-existing bowel disorder	Review past medical history and consider previous bowel pattern
	Impaction	Review previous bowel pattern, consider plain film of the abdomen and PR exam
	Side effect of medication	Discuss with doctor or pharmacist and consider alternative medication and/or use of anti-diarrheal
	Infection	Contact precautions and isolate immediately. Send specimen of faeces to Microbiology for culture and sensitivity and *Clostridium difficile* testing.
	Feed	Check feed rate. Discuss type of feed and rate of administration with dietitian
Nausea, Vomiting,	Feeding position of the patient	Ensure head and shoulders are raised to an angle of approximately 30° during feeding and at least one hour after feeding stops. Nurse referral re advice on same

After incidence of vomiting check the position of the tube	Intestinal obstruction	Observe the patients for signs of abdominal distension
	Hyperosmolar feed – rapid infusion rate	Ask dietitian to review feed and feeding regimen
	Delayed gastric emptying	Observe the patient for signs of abdominal discomfort or distension Refer to the doctor for monitoring of same and consideration of gut motility drugs If problem persists refer to gastroenterologist re: post pyloric feeding
	Side effect of medication	Review medication with doctor and/or pharmacist and consider alternative treatment and/or investigation
	Infection	If infectious cause is possible e.g. Norovirus, contact precautions and isolate immediately.
Aspiration	Dysphagia	Stop all oral intake. Refer to Speech and Language Therapist Ensure proper oral care (see Appendix 5)
	Position of the feeding tube	Check that the tip of the feeding tube is in the correct place see section 5
	Position of the patient	Ensure head and shoulders are raised to an angle of approximately 30o during feeding and at least one hour after feeding stops. Nurse referral re advice on same
	Delayed gastric emptying	Observe the patient for signs of abdominal discomfort or distension Refer to the doctor for monitoring of same and consideration of gut motility drugs Discuss change of regimen with dietitian If problem persists refer to gastroenterologist re post pyloric feeding

Nasal irritation/discomfort/ Localised pressure effects from tubes.	Large bore PVC tubes Incorrectly secured tubes	Use fine bore nasogastric tubes where possible. Swapping tube to the other nostril when tube needs replaced will also help prevent these problems. Nasogastric tubes should be anchored securely to the patient's cheek. Fixation tape should be checked and changed daily to ensure tube is secured correctly
Feeding Tube Blockage	Inadequate flushing Build-up of medication	Adherence to a meticulous flushing regimen, before and after the administration of each dose of each medication and feed Ensure correct method of administration of medication Pharmacist review of medications
Unblocking • Administer 50ml of warm water down the enteral tube and leave for 30 minutes. • Flush tube gently with 50 ml water. • If unsuccessful try to administer 50 ml fizzy water, e.g. soda water, via the enteral tube and leave for 30 minutes. Flush tube gently with 50 ml water. • If tube is still blocked consider the use of Clog Zapper (available from pharmacy). Follow manufacturer's instructions. If all of the above are unsuccessful then the enteral tube will need replacing. • Do not use an oral syringe smaller than a 50 ml. • Do not attempt to unblock the tube with guide-wire as it may perforate the side of the tube • Do not use pineapple juice, coca cola or other sugary fizzy drinks.		
Feed runs behind schedule	Feeding tube partially blocked Feeding equipment incorrectly attached Malfunctioning pump	Document delay in feed Check tube equipment and pump Contact dietitian Out of hours ring 1800 number at side of pump
Pump not working		Check manufacturers information Report pump faults to dietetic department. Out of hours ring 1800 number at side of pump

Accidental dislodgement of the NG tube	Vomiting or violent coughing Accidental removal by an agitated patient or by staff	Insert new NG tube as soon as possible Always confirm position of the tube before recommencing feed. Consider if suitable for nasal bridle.
Accidental dislodgement of the PEG tube		If tube is dislodged within the first 3 weeks, contact gastroenterologist. After 3 weeks, keep stoma open with displaced or other tube and arrange for a competent health professional to insert a replacement gastrostomy tube.
Leakage around site of PEG tube	Inadequate tube stabilisation. Gastrostomy tube may be too small for stoma tract. Delay in gastric emptying or possible abdominal obstruction	Check retention bolster at stoma/skin surface. External fixation device should be tightened so that tube may only move 1cm Check tube is in the correct position. Skin barrier creams should be avoided as they may cause the fixation device to loosen. Check the correct size of gastrostomy tube is in position. If necessary another tube of the correct size may need to be fitted by the appropriately trained personnel. Patient should be observed for abdominal discomfort or distension. Seek medical advice.
Infection or exudation around stoma site	Inadequate tube stabilization Poor standard of hygiene at the stoma site.	External fixation device should be tightened so that tube may only move 1 cm. Observe the site daily for signs of infection or skin breakdown and record finding in the relevant documentation. If infection is suspected a swab should be reserved and sent to Microbiology for culture and sensitivity. Administer the appropriate antibiotic therapy as prescribed by the doctor. Topical antibiotics are not recommended and should be avoided. Cleanse site at least twice daily with saline or 0.05% chlorhexidine solution. Povidone-iodine may be applied to the site for up to 7 days if necessary (Inadine

		gauze, Betadine spray).
		Creams or ointments should be avoided as these may loosen the external fixation device. Dressings should be avoided if possible. However, if leakage or exudation is excessive, a small dry dressing (e.g. Mepore dry dressing) may be applied and changed at least twice daily or as necessary. **(Wet Dressings increase the risk of infection)** Check the tube for leaking or cracks. Seek medical advice for replacement of the tube.
	Degeneration of the tube	
Over-granulation or hyperplasia at tube exit site (Proud Flesh)	External fixation device too loose.	Chronic presence of excess moisture at the tube site. The tube may be too loose or a poor standard of hygiene may be maintained at the tube site. **Creams/ointments may loosen external fixation device.**
	Poor hygiene at tube exit site	Ensure tube site is kept clean and dry. Refer to above section.
	External fixation device may be too tight	Check the external fixation device, and tighten/loosen if necessary. Ensure fixation device is able to move 1cm in the tract. Rotation of tube should be performed as per manufacturer's instructions, usually once a week. If over-granulation persists seek advice from doctor or dietitian. Occasional application of silver nitrate maybe required.
Leakage of feed at Y-adaptor	Y-adaptor maybe broken	Replace Y-adaptor. Ensure that the clamp is closed on the tube prior to changing the adaptor.

Enteral feed contamination		Check that feeds are stored correctly and if needed mixed correctly Check that hang times are adhered too.
Weight loss	Change in energy requirements	Check patient is receiving full feeds. Get the dietitian to reassess the patient.

Appendix 11: Training for Home Visit

EQUIPMENT / FEED FOR HOME VISIT CHECKLIST

PERSON SUPPORTED'S NAME: _____

PRODUCT	TYPE	AMOUNT	SIGNATURE
FEED Arrange for supply of feed at home either from house/pharmacist.			
SYRINGES (Enfit syringes, X 7days supply at home either from house or pharmacist.			
ADMINISTRATION SETS Arrange supply of feed at home either from the house/pharmacist.			
PUMP Person supported to bring his/her own pump home with him/her			
DRIP STAND			
DISCHARGE INFORMATION PACK			

Appendix 12: Assessment forms Setting up a Feed and Insertion of Enplug (HCAs/SCWs)

Assessment Form for Setting up Feed

Competency	Supervised Practice 1	Supervised Practice 2	Supervised Practice 3
Is knowledgeable on the indications for administration of feed			
Displays knowledge of the equipment needed			
Confirms person's identity			
Is knowledgeable on issues of consent, physical and psychological preparation of person as appropriate			
Sets up feed including priming giving set, turning on pump, setting dose, rate and volume and flushing			
Is knowledgeable of correct documentation and person to contact if any issues arise.			

- **On site supervision (5) should be given by nursing staff to non-nursing staff in relation to setting up feeds. Forms available from ESTG.**

Assessors Signature: _____ Trainees Signature: _____

Assessment Form for Insertion of Enplug for HCAs/SCWs

Name: _____ **Date:** _____

Competency	**Supervised Practice 1**	**Supervised Practice 2**	**Supervised Practice 3**
Is knowledgeable on the indications for insertion of the enplug and when it is indicated to refer an individual to a trained person			
Displays knowledge of the equipment needed (enplug)			
Confirms person's identity			
Is knowledgeable on issues of consent, physical and psychological preparation of person as appropriate			
Inserts Enplug correctly and in line with SOP			
Is knowledgeable of correct documentation and person to contact if any issues arise.			

Appendix 13: Assessment Form for Reinsertion of the PEG

Name of trainee: _____ Date: _____

Competency	Supervised Practice 1	Supervised Practice 2	Supervised Practice 3	Supervised Practice 4	Supervised Practice 5
Is knowledgeable on the indications for insertion of the replacement device, the acceptable timeframe for re-insertion and when it is indicated to refer patient/client directly to acute service provider					
Displays knowledge of equipment and replacement device required					
Confirms patient identity					
Is knowledgeable on issues of consent, physical and psychological preparation of patient as appropriate					
Reinserts replacement device in accordance with St. Luke's General Hospital guidelines					
Confirms correct placement of device with pH indicator strips					
Adheres to best practice in relation to infection control					
Is knowledgeable of correct documentation in clinical notes post PEG replacement.					

Assessors Signature: _____

Trainees Signature: _____

Appendix 14: Signature Sheets

I have read, understand and agree to adhere to the attached Policy, Procedure, Protocol or Guideline.

Print Name	Signature	Area of Work	Date

Signature Sheets

I have read, understand and agree to adhere to the attached Policy, Procedure, Protocol or Guideline.

Print Name	Signature	Area of Work	Date