



# CLINICAL GUIDELINE Paediatric Gastrostomy Care and Feeding

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Guideline Number	CLG051
Version:	V4
Purpose:	To implement the use of national guidelines and terminology for modified consistency diets and fluids for children with a gastrostomy tube
Consultation:	Children's Community Nursing Team, Community Training Nursing Team and Children's Complex Care Team.
Approved by:	Clinical Policy Group
Date approved:	13/03/2025
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Date issued:	11/04/2025
Review date:	01/04/2028
Audience:	Children Community Nursing Team, Children's Complex Care Team, Nurse Trainer and Community Nurse Trainer
Dissemination:	The guideline will be published on the GHC intranet, and its update will be listed on the Clinical Policy update bulletin. The document will also be shared with all services directly on publication.
Impact Assessments:	This Guideline has been subjected to an Equality Impact Assessment. This concluded that this guideline will not create any adverse effect or discrimination on any individual or particular group and will not negatively impact upon the quality of services provided by the Trust.

### **Version History**

Version	Date Issued	Reason for Change
V1	March 2013	New Guideline
V2	Sept 2018	Updated Guideline
V2.1	11/10/2019	Updated Guideline and Transferred to new Trust Template and updated Trust Name and details
V3	27/01/2021	Reviewed
V3.1	16/05/2024	Extended review date whilst GHT update their policy

V4	11/04/2025	Updated various teams' involvement in blended diet aspects of
		care due to service developments and agreed practice,
		updated practice – pH testing before and after gastrostomy
		button insertion, Updated team names that have changed

#### SUMMARY

This guideline outlines the management of paediatric gastrostomy care, including the use of blended diets as an alternative feeding method. While Gloucestershire Health and Care NHS Foundation Trust supports the administration of blended diets, additional training and support are required from the Home Enteral Feeding Team (HEFT) to facilitate its implementation across all care settings. Responsibilities are assigned to various teams. The Home Enteral Feeding Team conducts risk assessments, supports families, and provides annual staff training. The Children's Community Nursing Team focuses on training for safe administration of prescribed feeds and site care. The Children's Complex Care Team supports prescribed nutritional feeds, conducts risk assessments for manufactured blended feeds, and does not engage in patient-blended diets. Specialist and Community Training Nurses are responsible for training staff and carers, assessing risks, and participating in blended diet training.

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#### **ABBREVIATIONS**

Abbreviation	Full Description
CCN	Children's Community Nursing Team
CCT	Children's Complex Care Team
CTN	Community Training Nursing Team
ENNS	Enteral Nutrition Nurse Specialist
GHC	Gloucestershire Health and Care NHS Foundation Trust
HCAI	Health Care Associated Infection
HEFT	Home Enteral Feeding Team
MCS	Microscopy and Culture Wound Swab
PPE	Personal Protective Equipment
PPI	Proton Pump Inhibitor
SCTN	Specialist Clinical Training Nurse

#### 1. INTRODUCTION

- 1.1 A Gastrostomy is a small stoma created between the stomach and the skin of the abdomen to insert a feeding tube in children. Initially, a Percutaneous Endoscopic Gastrostomy (PEG) is inserted under general anaesthetic in one of the regional centres. The PEG may then be converted to a low-profile balloon tube (button) at a later date once a tract has formed between the anterior abdominal wall and the stomach. Suitability for a button device will depend on surgical opinion.
- 1.2 Children who have swallowing problems, which can lead to aspiration of food/fluid into their airway, require a gastrostomy to ensure that their nutritional needs are safely met. Children who are unable to eat an adequate amount of food and take sufficient fluids orally also require a gastrostomy tube to ensure that their nutritional needs are met.
- **1.3** The Gastrostomy tube will stay in place until it needs replacing, or until the child no longer requires nutritional support.
- 1.4 This guideline must be used in conjunction with the following organisational documents:

  Infection Prevention and Control Policy (CLP087)

  Consent to Examination or Treatment Policy (CLP213)

Health Records and Clinical Record Keeping Policy (CLP005)

### 2. PURPOSE

2.1 This guideline will clearly define the clinical procedures which all staff employed within the Children's Community Nursing Team (CCN), Children's Complex Care Team (CCT), Community Training Nursing Team (CTN) and Specialist Clinical Training Nurse need to follow when caring for a child with a gastrostomy.

### 3. SCOPE

**3.1** Children's Community Nursing Team, Children's Complex Care Team, Community Training Nursing Team, and Specialist Clinical Training Nurse.

#### 4. DUTIES

### 4.1 General Roles, Responsibilities and Accountability

Gloucestershire Health and Care NHS Foundation Trust (GHC) aims to take all reasonable steps to ensure the safety and independence of its patients and service users to make their own decisions about their care and treatment.

In addition, GHC will ensure that:

- All employees have access to up-to-date evidence-based policy documents.
- Appropriate training and updates are provided.
- Access to appropriate equipment that complies with safety and maintenance requirements is provided.

### Managers and Heads of Service will ensure that:

- All staff are aware of and have access to policy documents.
- All staff access training and development as appropriate to individual employee needs
- All staff participate in the appraisal process, including the review of competencies.

### Employees (including bank, agency, and locum staff) must ensure that they:

- Practice within their level of competency and within the scope of their professional bodies where appropriate.
- Read and adhere to GHC policy
- Identify any areas for skill update or training required.
- · Participate in the appraisal process.
- Ensure that all care and consent complies with the Mental Capacity Act (2005) see section on MCA Compliance below.

#### 5. MENTAL CAPACITY ACT COMPLIANCE

- **5.1** Where parts of this document relate to decisions about providing any form of care treatment or accommodation, staff using the document must do the following: -
  - Establish if the person is able to consent to the care, treatment or accommodation that is proposed? (Consider the 5 principles of the Mental Capacity Act 2005 as outlined in section 1 of the Act. In particular principles 1,2 and 3) Mental Capacity Act 2005 (legislation.gov.uk).
  - Where there are concerns that the person may not have mental capacity to make the specific decision, complete and record a formal mental capacity assessment.
  - Where it has been evidenced that a person lacks the mental capacity to make the

- specific decision, complete and record a formal best interest decision making process using the best interest checklist as outlined in section 4 of the Mental Capacity Act 2005 Mental Capacity Act 2005 (legislation.gov.uk).
- Establish if there is an attorney under a relevant and registered Lasting Power of Attorney (LPA) or a deputy appointed by the Court of Protection to make specific decisions on behalf of the person (N.B. they will be the decision maker where a relevant best interest decision is required. The validity of an LPA or a court order can be checked with the Office of the Public Guardian) Office of the Public Guardian - GOV.UK (www.gov.uk).
- If a person lacks mental capacity, it is important to establish if there is a valid and applicable Advance Decision before medical treatment is given. The Advance Decision is legally binding if it complies with the MCA, is valid and applies to the specific situation. If these principles are met it takes precedence over decisions made in the person's best interests by other people. To be legally binding the person must have been over 18 when the Advance Decision was signed and had capacity to make, understand and communicate the decision. It must specifically state which medical treatments, and in which circumstances the person refuses and only these must be considered. If a patient is detained under the Mental Health Act 1983 treatment can be given for a psychiatric disorder.
- Where the decision relates to a child under the age of 16, the MCA does not apply. In these cases, the competence of the child must be considered under Gillick competence. If the child is deemed not to have the competence to make the decision, then those who hold Parental Responsibility will make the decision, assuming it falls within the Zone of Parental control. Where the decision relates to treatment which is life sustaining, or which will prevent significant long-term damage to a child under 18 their refusal to consent can be overridden even if they have capacity or competence to consent.

#### 6. GUIDELINE DETAIL

All guidance on Paediatric Gastrostomy and Feeding is in <u>appendices 1 to 14</u> and the additional information section of this guideline document.

#### 6.1 Blended Diet

A blended diet is an alternative approach to nourishing a child who is tube fed. A meal is prepared then blended in a food blender to create a smooth meal which can be given through a feeding tube, into the stomach.

A parent/carer prepared blended feed is a feed that has had the food blended by a parent or carer for administration.

A manufactured blended feed is a feed that had the food blended by a company and either brought or delivered to the patient for administration.

Gloucestershire Health and Care NHS Foundation Trust (GHC) support the practice of administering blended food via enteral feeding tubes. GHC staff are limited in their scope of being able to deliver the parent/carer prepared blended feeds. Additional support and guidance are required by Gloucestershire Hospital Foundation Trust colleagues working in the Home Enteral Feeding Team on how to facilitate the implementation of blended diet across all care settings attended by patients supports by services. There has been support

put in place for the education settings and therefore some services are able to support in this area.

All services will report any incidents associated with blended diets through established routes i.e. Datix.

### **6.2** The Home Enteral feeding team are expected to:

- Undertake a risk assessment for a blended diet being delivered to a patient.
- Support families by offering guidance to enable them to make appropriate lifestyle and dietary choices i.e. ensuring that nutritional needs are met through whatever nutritional method is chosen.
- Support the Community Training Nursing Team and Specialist Clinical Training Nurse to maintain knowledge and skills on blended diet by hosting an annual training session.

### **6.3** The Children's Community Nursing team are expected to:

- GHC registered colleagues are not expected to take part in administration of parent/carer blended diets; parents/carers must administer these diets themselves.
- Provide training only on the safe administration of a prescribed bolus feed (not for administering blended diet).
- Provide training on tube and stoma site care.
- Review patients' tubes and stoma sites as required.

### **6.4** The Children's Complex Care Team are expected to:

- Support children fed on prescribed nutritional feeds (not parent/carer blended feeds).
- Not take part in the storage, preparation or delivery of parent/carer blended diets.
- Take a risk-based approach with regards to delivering manufactured blended feeds to patients. Individual risk assessed will be completed for the patient and the specific manufactured blended feed being administered.
- Continue to update families of this position or any changes as appropriate, except where the child has the mental capacity or competence to make a decision about information sharing and has decided not to share information with family members.

### **6.5** Specialist Clinical Training Nurse is expected to:

- Support GHC staff and Family Link carers to be competent to deliver prescribed nutritional feeds and manufactured blended feeds (not parent/carer prepared blended diets).
- GHC registered colleagues are not expected to take part in administration of parent/carer blended diets; parents/carers must administer these diets themselves.
- Take a risk-based approach with regards to delivering manufactured blended feeds to patients. Individual risk assessed will be completed for the patient and the specific manufactured blended feed being administered.
- Continue to update families of this position or any changes as appropriate (see exception above).
- Attend annual training session on blended diets delivered by HEFT.

### **6.6** Community Training Nursing Team is expected to:

• Support education of GHC staff to be competent to deliver prescribed nutritional feeds

- (not parent/carer blended diets).
- GHC registered colleagues are not expected to take part in administration of parent/carer blended diets; parents/carers must administer these diets themselves.
- Support training of education setting staff to be competent to deliver all prescribed nutritional feeds (including all blended diets).
- Attend annual training session on blended diets delivered by HEFT.

A risk-based approach with regards to delivering blended diet care will continue to be monitored and assessed. The Trust guideline will also be reviewed as required.

### 8. PROCESS FOR MONITORING COMPLIANCE

Are the systems or processes in this document monitored in line with national, regional, trust or local requirements?		YES
Monitoring Requirements and Methodology Frequency Further Actions		
Staff are trained annually on the use of gastrostomy devices. Staff compliance will be monitored monthly at the Specialist Services (Nursing) Governance and Development Meeting.	Monthly	If there are issues with staff compliance, then this will be reported via the service monthly finance and performance report.

## 10. INCIDENT AND NEAR MISS REPORTING AND REGULATION 20 DUTY OF CANDOUR REQUIREMENTS

10.1 To support monitoring and learning from harm, staff should utilise the Trust's Incident Reporting System, DATIX. For further guidance, staff and managers should reference the Incident Reporting Policy. For moderate and severe harm, or deaths, related to patient safety incidents, Regulation 20 Duty of Candour must be considered and guidance for staff can be found in the <u>Duty of Candour Policy</u> and Intranet resources. Professional Duty of Candour and the overarching principle of 'being open' should apply to all incidents.

### 11. TRAINING

**11.1** All new members of staff joining the CCN, CCT, Community Training Nursing Team and Specialist Clinical Training Nurse role will complete an orientation and induction programme. As part of this programme, staff required to give this care will be supported and trained in the care of a gastrostomy.

Those acting as trainers / assessors in clinical practice must be certified as competent in the procedure themselves. Additionally, the person completing the final competence sign off must be a registered practitioner.

### 12. REFERENCES

Bristol Children's Hospital (2015) Gastrostomy Tube Feeding: A Guide and Competency Pack for Patients Parents and Carers

British Association for Parenteral and Enteral Nutrition (BAPEN) (2004) Administering Drugs via Enteral Feeding Tubes. A Practical Guide

GBUK Enteral. Caring for a Mini Compact Balloon Button. Available at

<u>www.gbukenteral.com</u> (last accessed 30.12.20)

Gloucestershire Hospitals NHS Foundation Trust Gastrostomy Feeding (Including Jejunostomy Feeding) Policy (2018)

Gloucestershire NHS Health Community and Gloucestershire County Council (2018) Joint Position Statement - Use of blended food with enteral feeding tubes

Guidelines and Audit Implementation Network (2015). Guidelines for caring for an infant child or young person who required enteral feeding. Available at Regulation and Quality Improvement Authority - Regulation and Quality Improvement Authority - Health & Social Care Services Northern Ireland (rgia.org.uk) (last accessed 30.12.2020)

NNNG Guidelines (2016). Changing of a Balloon Gastrostomy Tube (BGT) into the stomach for Adults and Children (3rd Edition). Available at <a href="www.nnng.org.uk">www.nnng.org.uk</a> (last accessed 30.12.2020)

Nutricia Flocare Infinity Pump Instructions. Available at <a href="https://www.nutriciaflocare.com/infinity">https://www.nutriciaflocare.com/infinity</a> pump.php (last accessed 30.12.2020)

Vygon (2017) MIC-KEY Low Profile Gastrostomy Feeding Tube Patient and User Guide

Appendix 1 - Post Insertion Care of a PEG or Balloon Gastrostomy Tube

Action	Rationale
Collect all equipment required and prepare child and carers for the procedure.	To ensure that the correct equipment is in place and consent is gained.
PPE must be worn to be in line with current local and national guidance e.g. during a pandemic.	To reduce risk of Health Care Associated Infection (HCAI)
Wash hands in accordance with hand decontamination policy.	
During the first 7days post insertion of PEG or BGT, clean the stoma site <b>daily</b> with cooled boiled water or sterile saline and gauze using a non- touch technique and dry thoroughly. It may need to be cleaned more often if there is oozing onto the skin.	To prevent infection
The stoma should not be immersed in water until the site has healed. Follow managing Surgical Team advice as to when showers or baths can take place. Swimming can take place after 4 weeks if stoma site has healed (or at the discretion of the managing Surgical Team). A waterproof dressing may be used for swimming.	
After 7 days or once stoma site has healed (not painful, red or leaking), the tube and surrounding skin should be cleaned daily with mild soapy water and dried.	To prevent infection
<b>PEG 4 weeks</b> after tube placement undo and clean the fixation device. Advance the tube (approximately 3 -4 cm) and rotate 360 degrees. Gently pull back to the original position until resistance is felt. This needs to be done no more than daily but no less than weekly.	To allow stoma site to heal and the tract to form
Do not use excessive force if unable to advance and rotate, seek advice from the managing Surgical Team.	
Balloon Gastrostomy Tube Seek advice from the managing Surgical Team regarding specific tube care.	To ensure patient safety.
Dispose of all rubbish into household waste	To reduce risk of Infection

after tube care has taken place.	
Wash hands effectively	To reduce risk of Infection
Document care in patient notes.	To follow record keeping policy and to ensure
	patient safety.

### Appendix 2 - Changing Y-Adapter of Corflo PEG

Action	Rationale
<ul> <li>Collect all equipment required:</li> <li>1 pack containing Corflo Y- adaptor and gauze</li> <li>Gloves</li> <li>Apron</li> <li>Sterile scissors</li> <li>Sharps bin</li> </ul>	To ensure all available before starting procedure
PPE may need to be worn to be in line with current local and national guidance e.g. during a pandemic.	
Wash hands in accordance with hand decontamination policy	To reduce risk of Health Care Associated Infection (HCAI)
Prepare clean surface to work on	To reduce risk of HCAI
Prepare the child and parents for change of Y- adaptor	To ensure child and parent/s are prepared for change of Y-adaptor and consent is gained.
Close clamp on PEG tube and ensure Y-adaptor caps are closed.	To prevent leakage of fluids form PEG tube
Cut the tube approximately 1 cm below the old adaptor.	To ensure correct removal of existing yadaptor and avoid overstretching the PEG tube.
Untwist the threaded skirt from the new adaptor.	
Put the PEG through the skirt.	This skirt is vital for the functioning of both the PEG tube and the Corflo Y-adaptor.
Insert the Corflo Y-adaptor into the tube and screw the skirt into the Corflo Y-adaptor.	To ensure secure fit of new Y-adaptor
Ensure y-adaptor caps are closed on new Y-adaptor	To prevent leaking of fluids from the PEG tube
Dispose of all rubbish into household waste after tube care has taken place	Ensure rubbish is appropriately disposed of in normal household waste
Wash hands effectively	To reduce risk of HCAI
Document care in patients notes.	In line with record keeping policy and to ensure patient safety

### Appendix 3 - Attaching a Freka PEG Connector

Action	Rationale
Collect all equipment required: <ul> <li>1 Freka PEG adaptor</li> <li>Gloves</li> <li>Apron</li> <li>Sterile scissors</li> <li>Sharps bin</li> </ul>	To ensure all available before starting procedure
Wash hands in accordance with hand decontamination policy	To reduce risk of Health Care Associated Infection (HCAI)
Prepare clean surface to work on	To reduce risk of HCAI
Prepare the child and carers for change of adaptor	To ensure child and parent/s are prepared for change of adaptor and consent is gained.
Close clamp on PEG tube	To prevent leakage of fluids form PEG tube
Unscrew and remove the existing connector	
If the tube appears stretched, trim approximately 1cm off the tube end.	To allow the connector to fit correctly
Slide the round fixation screw on to the PEG tube	
Attach the adaptor with pin into the tube and screw onto fixation screw.	
Close the connector cap. Remove the white fixation screw cuff.	To prevent leaking of fluids from the PEG tube
Dispose of all rubbish into household waste after tube care has taken place	Ensure rubbish is appropriately disposed of in normal household waste
Wash hands effectively	To reduce risk of HCAI
Document care in patients notes.	In line with record keeping policy and to ensure patient safety.

### Appendix 4 - Cleaning and Care of Gastrostomy Button

Action	Rationale
Collect all equipment required	To ensure all available before starting procedure
Wash hands in accordance with hand decontamination policy	To reduce risk of Health Care Associated
Prepare child and carers for the procedure	To ensure child and carers are prepared for the care of the gastrostomy button and consent is gained
Clean the stoma daily in mild soapy water and dry thoroughly	To prevent infection
Rotate the tube 360 degrees daily	To prevent over granulation of tissue around stoma site
Check stoma site daily for any redness, swelling or tenderness daily	To check for signs of infection at stoma site
Once a week, remove water from balloon and instil manufacturers recommended volume of sterile water. See <a href="Appendix 5">Appendix 5</a> .	To check problem/over leakage from balloon
Change balloon gastrostomy button every 3 months or as per manufacturer's guidance.	To follow manufacturer's guidance.
Dispose of all rubbish into household waste after tube care has taken place	Ensure rubbish is appropriately disposed of in normal household waste
Wash hands effectively	To reduce risk of HCAI
Document care in patients notes.	A per record keeping policy and to ensure patient safety.

### **Appendix 5 - Changing water in Gastrostomy Balloon**

Action	Rationale
<ul> <li>Collect all equipment required:</li> <li>Gloves</li> <li>Apron</li> <li>2 x 5ml luer slip syringes</li> <li>Sterile water to inflate balloon</li> </ul>	To ensure all available before starting Procedure
Wash hands in accordance with hand decontamination policy	To reduce risk of Health Care Associated Infection (HCAI)
Prepare clean surface to work on	To reduce risk of HCAI
Prepare the child and parents for change of water in the balloon	To ensure child and parent/s are prepared for change of water in the balloon and consent is gained
Using a sterile syringe, draw up the manufacturer's recommended volume of sterile water	To ensure that the recommended volume of water is ready to inflate the balloon
Whilst holding the button firmly, use empty syringe to remove water from button: attach syringe to inflation valve of button and gently draw back plunger until no more water comes out of the balloon. Remove syringe	To ensure button is safely held in place whilst removing water from balloon
Whilst firmly holding the button, attach prefilled syringe of sterile water to inflation valve of button and inflate balloon. Remove syringe	To ensure button is safely held in place
Gently pull the button back until there is slight resistance	Ensure the balloon is inflated
Dispose of all rubbish into household waste after tube care has taken place	Ensure rubbish is appropriately disposed of in normal household waste.
Wash hands effectively	To reduce risk of HCAI
Document visit in child's home notes	Confirm change of water in balloon

### Appendix 6 - Changing a Gastrostomy Button

Action	Rationale
Collect all equipment required:	To ensure all available before starting
Gastrostomy button	procedure
Gloves and Apron	·
2 x 5ml syringes	
1 x 60ml enteral syringe	
CE marked pH test paper	
Sterile water to inflate balloon	
Gauze	
Introducer if required	
Lubricating gel	
In preparation for the procedure ensure the	To ensure a period of time required to ensure
child has been nil by gastrostomy/nil by	gastric pH within normal range and reduce
mouth for two hours before gastrostomy	the risk of reflux.
button change.	the lisk of fellux.
batton onango.	To minimise the risk of gastric leakage
	obscuring the gastrostomy site and causing
	damage to the surrounding skin on removal
	of the gastrostomy tube.
Medication:	To allow the pH of gastric secretions to fall to
Essential medication should not be omitted	enable confirmation of placement with gastric
pre- procedure without the support of the	pH 5.5 or below.
prescribing clinician. However, it may be	
advisable to omit medication that may affect	
the pH value of gastric aspirate, for example,	
proton pump inhibitors (PPIs), before	
undertaking a balloon gastrostomy tube	
change.	
Wash hands in accordance with hand	To reduce risk of Health Care Associated
decontamination policy	Infection (HCAI)
Prepare clean surface to work on	To reduce risk of HCAI
Attach extension set, and aspirate 1-2mls	To ensure tube is in the stomach
using a 60ml syringe and check the pH using	
CE marked pH paper. Ensure that the pH is	
5.5 or below. Remove extension set.	
Check that the button is the correct size and	To check correct button is inserted
make, check expiry date. Prepare new	
button: Install manufacturers recommended	To check that balloon inflates equally on both
volume of sterile water into inflation valve of	sides and that there are no leaks
button using first syringe and then remove	
water.	
Using the same syringe, draw up the	To ensure that the recommended volume of
manufacturer's recommended volume of	water is ready to inflate the balloon
sterile water	T 131 1 1
Prepare the child and parent/s for insertion of	To ensure child and parent/s are prepared for
button	insertion of button and consent is gained.
Examine stoma site and fit of old button.	To check for signs of infection at stoma site

Clean site if necessary.	and that button fits correctly.
	To remove any potential debris around the
	stoma.
Using 5ml syringe, remove water from old	To ensure button is fully deflated
button: attach syringe to inflation valve of	
button and gently draw back plunger until no	
more water comes out of the balloon.	
Place gauze under old button and gently pull- out button.	To safely remove button
Clean skin around stoma and dry thoroughly.	To remove excess fluid or blood and prevent
	risk of infection
Lubricate end of new button and insert new	To ease insertion of button
Button into stoma site.	
An AMT Introducer for a Mini Button can be	
used if required (see Appendix 7).	
Inflate new balloon with recommended	To ensure button is safely held in place
amount of sterile water.	
Attach extension set, and aspirate 1-2mls	To ensure tube is in the stomach
using a 60ml syringe and check the pH using	
CE marked pH paper. Ensure that the pH is	
5.5 or below. Remove extension set.	T 1 11 11 11 11 11 11 11 11 11 11 11 11
Check normal flush volumes for child. Prime	To clean the tube after aspirating and prevent
extension set and flush the tube with the	blockage.
correct amount of water. Ensure that cool	
boiled water is used for children under 12	
months of age or who are	
immunocompromised.	Ensure the balloon is inflated. To ensure
Gently pull the button back until there is slight	button can turn 360 degrees.
Resistance, and turn button.  Dispose of all rubbish into household waste	button can turn 500 degrees.
after tube care has taken place	
Wash hands effectively	To reduce risk of HCAI
Document procedure in notes including date,	Confirm change of button Provide
pH level, LOT number and expiry date of	information to colleagues and ensure patient
button, as well as plan for next tube change.	safety
button, as well as plan for heat tube change.	Saicty

### Appendix 7 - AMT Introducer Instructions

Action		Rationale
An AMT Introducer can be used with a Mini Button if the stoma tract is:  Long Tight Not Straight  The AMT Introducer comes in two parts: a clamp and a soft plastic stiffening stylet. Use only the AMT Introducer to stiffen the Mini Button. No other object should be placed into the Mini-Button to aid insertion.		
Please use this guide with Appendix 6		
	rounded tip of the clamp into the Button feeding port.	
	stiffener through the clamp until to just before the end of the on shaft.	
the AMT	stiffener in place by squeezing Introducer Clamp shut. Verify the s locked in after clamping.	To ensure that the stiffener does not slip
4. Insert the normal. It of the Mir	Mini Button into the stoma as may be useful to hold the shaft ni-Button close to the tip to try into the stoma.	
5. Once the	Mini Button is fully inserted, the AMT Introducer Clamp and	IMPORTANT: To avoid damage to the Mini- Button's internal valve, always remove the stylet before the AMT Introducer Clamp.
while hold	move the AMT Introducer Clamp ding the Mini Button's external gainst the patient.	To prevent inadvertent feeding device removal.
	retention balloon to the volume	

### Appendix 8 - Measurement of Stoma

Action	Rationale
Collect equipment required:	To ensure all available before starting
Measuring device	procedure
Gloves and Apron	'
5ml syringe	
CE marked pH paper or strip	
Gastrostomy Button and sterile water	
Wash hands in accordance with hand	To reduce risk of Health Care Associated
decontamination policy	Infection (HCAI)
Prepare clean surface to work on	To reduce risk of HCAI
Inspect measuring device, check expiry date	To ensure that there is no damage.
Prepare the child and parents for measuring	To ensure child and parent/s are prepared for
gastrostomy stoma and ensure child is in	gastrostomy stoma measurement and
semi-prone position	consent is gained.
Remove existing button (Refer to Appendix 5)	To enable measurement of stoma site
Clean and check stoma site	To check for signs of infection at stoma site
Lubricate end of measuring device and insert	To ease insertion
tip of device into the stoma	
'	To ensure measuring device is safely held in
Inflate balloon valve with 5mls air and then	place
remove syringe. Gently pull the measuring	
device upwards until it stops and then slide	
the measuring disc until it rests on the outside	
of the abdomen.	
MIC-KEY Button – Read above the disc for	To ensure correct measurement of stoma site
shaft length in both the lying and sitting	
positions. Take an average of the two	
measurements or use the longer	
measurement if appropriate.	
Mini Dutton Take a reading in hoth hing	
Mini Button - Take a reading in both lying	
and sitting positions. Take an average of the	
two measurements or use the longer measurement if appropriate. Read the	
measurement under the disk (side closest to	
the balloon) to determine stoma tract length.	
This may be easier to do once the AMT	
stoma measuring device is removed	
(taking care not to move the measuring	
disc).	
Remove air from the balloon	To ensure balloon in measuring device is fully
Release clamp and withdraw the measuring	deflated
device	
Insert appropriately sized button	
(Refer to Appendix 5)	
Dispose of all rubbish into household waste	Ensure rubbish is appropriately disposed of in
after tube care has taken place	normal household waste
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Document visit in child's notes	To confirm that stoma measurement.
Wash hands effectively	To reduce risk of HCAI

Appendix 9 - Changing a Balloon Gastrostomy Tube (BGT)

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To ensure that the recommended volume of water is ready to inflate the balloon
To ensure child and parent/s are prepared for insertion of balloon gastrostomy tube and consent is gained.  To ensure patient comfort and safe and clear examination of the balloon gastrostomy site.
To check for signs of infection at stoma site. To remove any potential debris around the stoma.
As a reference for inserting new tube.
To ensure balloon is fully deflated
To ensure tube is in the stomach
To safely remove balloon gastrostomy tube To remove excess fluid or blood and prevent risk of infection.
To minimise trauma to the stoma site and aid safe passage of the gastrostomy tube into the stomach.
To minimise accidental tube removal until the balloon in the gastrostomy tube is inflated.
To minimise complications  To ensure tube is safely inserted into the

syringe and test pH of fluid using CE marked	stomach.
pH paper or strips.	
Aspirate level needs to be 5.5 or below.	
Gently pull the balloon gastrostomy tube	Ensure the balloon is inflated.
back until there is slight resistance	
Turn balloon gastrostomy tube.	To ensure tube can turn 360 degrees.
Dispose of all rubbish into household waste	Ensure rubbish is appropriately disposed of in
after tube care has taken place.	normal household waste.
Wash hands effectively	To reduce risk of HCAI
Document procedure in child's notes	Confirm change of balloon gastrostomy tube
(including pH level, LOT number and expiry	Provide information to colleagues and ensure
date of balloon gastrostomy tube as well as	patient safety.
plan for next change).	

### Appendix 10 - Gastrostomy Bolus Feed

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### Appendix 11 - Gastrostomy Pump Feed

Action	Rationale
Collect all equipment and documentation	To ensure all available before starting
required:	procedure
Gloves and Apron	
Water to flush tube and 60ml enteral syringe	To ensure feed is in date range and fit for use
Giving set and feeding pump	
Extension set if a button	
<ul> <li>Prescribed feed – check the feed and expiry date, check that feed was correctly stored as per manufacturer's instructions.</li> <li>Refer to the child's up to date dietetic feeding plan for the correct amount of feed and flush to administer.</li> </ul>	
Wash hands in accordance with hand decontamination policy	To reduce risk of Health Care Associated Infection (HCAI)
Prepare clean surface to work on	To reduce risk of HCAI
Prepare the child and carers prior to feed.	To ensure that consent is gained.
Check stoma site for any redness, swelling or tenderness	To check for signs of infection at stoma site.
Try to sit child in upright position at an angle	To ensure patient is comfortable during feed
of at least 30 degrees	and reduce risk of vomiting/aspiration
Check general condition of the pump/lead	To ensure pump is safe to use and within
and plug. Check service date.	service date
Program pump	To ensure pump is safely programmed
	according to operating manual
Prime giving set of pump.	To prevent pump giving set sticking to
Do not prime the feed right to the end of the	gastrostomy tube/extension set.
giving set - stop 1 inch from the end before	
connecting gastrostomy tube/extension set.	
Do not screw too tight	
If feed given via a button, prime extension set with water, clamp extension set and attach extension set to button	
Attach 60ml syringe to extension set/gastrostomy tube and clamp	To enable flush to be given
Add required amount of water to 60ml	To establish patency of the tube and prevent
syringe, unclamp extension set/gastrostomy	tube blockage
tube and flush with water and clamp	
Attach primed pump giving set to extension	To check for signs of distress during feed and
set/gastrostomy tube	take appropriate action
Administer feed – watch child for any distress during feed	
When feed completed, stop pump and	To establish patency of the tube and prevent
disconnect giving set from patient's	tube blockage

gastrostomy tube/extension set. Flush gastrostomy tube/ extension set with water as above	
Disconnect extension set if feed given via gastrostomy button	
Wash extension set in warm soapy water and rinse, then leave to air dry on a clean surface	To ensure extension set is clean and to reduce risk of HCAI
Remove gloves and apron and dispose of all rubbish into household waste after tube care has taken place	Ensure rubbish is appropriately disposed of in normal household waste. To reduce risk of HCAI
Document procedure in child's notes	Confirm administration of feed Provide information to colleagues

### Appendix 12 - Venting a Gastrostomy

Action	Rationale
If a child is experiencing discomfort and	
bloating, liaise with managing Dietitian to see	
if venting would be beneficial	
Collect equipment required:	To ensure all available before starting
Gloves and apron	procedure
60ml syringe	
Paper towels	
Wash hands in accordance with hand	To reduce risk of Health Care Associated
decontamination policy	Infection (HCAI)
Prepare clean surface to work on	To reduce risk of Infection
Prepare the child and parents for venting	To ensure child and parent/s are prepared for
gastrostomy	venting gastrostomy and consent is gained.
Remove plunger from 60 ml syringe Attach	Remove air to improve patient comfort during
60 ml syringe to PEG/extension tube and	and after feed
raise above stomach	
Unclamp tube	
Bubbles might rise up the extension tube	
A small amount of fluid might also bubble up	
into the syringe. When procedure has	
finished, remove extension set and clean as	
necessary.	English withhigh is appropriately discovered of in
Dispose of all rubbish into household waste	Ensure rubbish is appropriately disposed of in
after tube care has taken place	normal household waste
Wash hands effectively	To reduce risk of HCAI

### Appendix 13 - Problem Solving

Problem	Action
N.B. Fizzy drinks and fruit juices should not be used to unblock feeding tubes due to the acid and sugar content. If a balloon gastrostomy is blocked and unable to unblock it, replace the tube.	<ul> <li>Advance the tube into the stoma (if appropriate) to check that the problem is not positional.</li> <li>Rub tube between fingers to get rid of any visible blockage.</li> <li>With a 60ml syringe, flush tube with warm water using a pulsing motion for at least 30 minutes.</li> <li>If that is not successful, with a 60ml syringe, flush the tube with 60mls of unflavoured sparkling water using a pulsing motion for at least 30 minutes.</li> <li>Contact ENNS for advice if unable to unblock a non- balloon tube</li> <li>Child may require admission to hospital if the tube cannot be unblocked and patient requires medication and fluids.</li> </ul>
Leakage from Stoma Site	<ul> <li>Check external fixator is correctly positioned. See manufacturer's guidelines.</li> <li>Check correct size tube is fitted. For buttons, check correct shaft length and that balloon is inflated correctly.</li> <li>If no obvious reasons for leakage, keep stoma site clean and dry. Use appropriate barrier film/cream. ONLY use if no signs of infection present.</li> <li>Contact ENNS for advice.</li> </ul>
Over granulation Tissue at Stoma Site  Possible causes:  Trauma from friction around the tube Poorly fitting tube. Excess moisture Infection Reaction to foreign body e.g. allergy or hypersensitivity to enteral device	<ul> <li>Identify cause.</li> <li>Ensure the external fixator is positioned correctly</li> <li>If low profile device is used, ensure that the device fits correctly in the stoma tract and has minimal movement.</li> <li>If a PEG or Balloon Gastrostomy Tube is used, ensure that the tubing is secured safely to avoid excessive movement.</li> <li>If the over granulation tissue is exudation and there are signs of infection, obtain swab for M, C and S as well as fungal.</li> <li>Dressings or topical cream can be used if indicated as per local wound care formulary.</li> <li>Contact ENNS or Tissue Viability Nurse for further advice.</li> </ul>
Suspected Infection	Follow wound infection guidelines as per

Wound infection is defined as the occurrence of bacteria or other organisms leading to a host response. A host response can present with one or a combination of the following local and systemic **clinical indicators**:

- Local indicators: Redness (erythema or cellulitis) around the wound and increased amounts of exudate. Changes in the discharge, colour or odour. Localised heat or pain. Delayed healing or wound breakdown.
- **Systemic indicators**: Increased systemic temperature, general malaise.

**DO NOT USE** BARRIER FILMS OR STEROID PRODUCTS IF INFECTION IS SUSPECTED

- local formulary.
- For patients with a host response consider a Microscopy and Culture Wound Swab (MCS). If child is unwell due to the infection, consider a medical review. Once swab result is obtained, seek medical advice as systemic antibiotic treatment may be necessary.
- If swab is obtained to identify fungal infection, this must be documented on Microbiology form.
- Review stoma after two weeks of treatment.
- Contact the ENNS or the Tissue Viability Team if further advice is needed.
- If concerned about child's condition see medical advice.

### **Split PEG Tubes**

- Assess where the split is on the tube.
- If split is less than 6 inches from stoma site, the tube may need replacing. Contact Enteral Nutrition Nurse Specialist for advice.
- If split is greater than 6 inches from stoma site, cut below split and follow the same procedure for broken connector on PEG tubes.
- N.B if other type of gastrostomy tube splits or connectors are damaged, the whole tube will need replacing.

### Oesophageal Regurgitation

- Ensure child is correctly positioned in an upright/ 30-degree position during feeding and up to an hour after feed has completed.
- Check child is not constipated.
- If patient is constipated, seek appropriate bowel care advice and monitor overall fluid intake.
- If regurgitation continues, DO NOT STOP FEED. Reduce the rate but ensure full volume required is given in a 24-hour period.
- Seek advice from the Dietitian if necessary.
- If concerned that child is dehydrated, or condition worsens seek medical advice.

### Diarrhoea

 Ensure correct handling and storage of feed and ancillaries.

	<ul> <li>Check the feed is being given at the prescribed rate and method, contact Dietitian if there are any queries regarding this.</li> <li>Assess any changes to medication.</li> <li>If diarrhoea occurs after a new type of feed is commenced, liaise with the child's dietitian.</li> <li>Obtain a stool sample if an infection is suspected.</li> <li>Liaise with GP or the Paediatric Assessment Unit if child requires a medical review due to dehydration or condition worsens.</li> </ul>
Constipation	<ul> <li>Check the prescribed feed/fluid requirement is being given.</li> <li>Assess any changes to medication.</li> <li>Ensure bowel care is given as appropriate.</li> <li>Seek advice from dietitian if problem persists or child's GP.</li> </ul>
Suspected Buried Bumper  Signs:  Leakage from stoma Stoma Infection Inability to advance bumper and rotate device 360 degrees Tube resistant to flush.	<ul> <li>Check aspirate of stomach contents using CE marked pH paper.</li> <li>If unable to advance tube into stoma tract, a referral to the Regional Centre where the gastrostomy surgery took place may be needed.</li> <li>Contact ENNS if further advice is needed.</li> </ul>
Tube is accidentally removed/pulled and stoma is less than 8 weeks	DO NOT REPLACE THE TUBE IF THE STOMA IS LESS THAN 8 WEEKS OLD. SEEK URGENT ADVICE FROM THE SURGICAL TEAM THAT INSERTED THE TUBE
Tube is accidentally removed/pulled out and stoma is more than 8 weeks old.  NB Always follow discharging hospital's policy with regards to when it is deemed safe to insert an emergency device or a new gastrostomy tube into a newly formed stoma.	PEG  SEEK URGENT ADVICE FROM THE CHILD'S SURGICAL TEAM IF THERE ARE ANY SIGNS OF TRAUMA. Insert the correct size Balloon Gastrostomy Tube (see Appendix 9) if deemed safe to do so.
If the stoma is not kept open by means of a replacement tube, it can close within a short period of time (on average 2 hours).  NB: DO NOT USE FORCE TO INSERT A REPLACEMENT DEVICE	<ul> <li>Gastrostomy Button</li> <li>Replace with spare button. (See Appendix 6 for guidance).</li> <li>Balloon Gastrostomy Tube</li> </ul>

	<ul> <li>Replace with spare Balloon Gastrostomy Tube (See Appendix 9 for guidance).</li> <li>NB: SEEK URGENT SURGICAL ADVICE IF:         <ul> <li>THE STOMA HAS CLOSED OR THERE IS DIFFICULTY INSERTING A REPLACEMENT DEVICE.</li> <li>UNABLE TO CONFIRM TUBE POSITION USING PH PAPER (DO NOT USE TUBE FOR FLUSHING OR FEEDING IF UNABLE TO CONFIRM POSITON)</li> </ul> </li> <li>THERE ARE ANY CONCERNS FOLLOWING TUBE PLACEMENT (e.g. PAIN, LEAKING, BLEEDING)</li> </ul>
Pump giving set cannot be disconnected from feeding Tube	<ul> <li>Dissolve feed debris in tube by soaking end of feeding tube in warm water.</li> <li>Undo cross threaded connections using gloves/forceps.</li> <li>If unable to disconnect, replace feeding adaptor of PEG tube or replace extension tube if a button</li> <li>N.B. To prevent this do not prime the feed right to the end of the giving set, stop 1 inch from the end before connecting feeding tube. Do not screw too tight.</li> </ul>

### Appendix 14

### **Additional Information**

In the community, for children under 12 months and babies/children who are immunosuppressed, tubes should be flushed with cooled boiled water. For children who are over 12 months old and are not immunosuppressed, flush the gastrostomy tube with freshly drawn tap water. Children who are under 12 months old or immunocompromised will have single use enteral feeding syringes. Children over 12 months old will be provided with reusable syringes.

For feed and flush volumes please discuss with the child's Dietitian or check child's up to date feeding plan. NB: During hot weather, the patient may need extra water flushes, please discuss this with the child's Dietitian.

### Cleaning and maintenance of enteral tube feeding equipment

Always follow manufacturer's guidance on the correct method of cleaning as well as maintenance of enteral tube feeding equipment (this includes the feeding pump; gastrostomy tube extension sets and reusable enteral syringes).

### **Hanging Times of Feeds**

Sterile packs of feed should be used within 24 hours of breaking the seal. The feed should be stored in the fridge if there is a break in feeding and used within a maximum 24 hours (check the feed container for exact time period. Feed should be removed from the fridge 30 minutes before use. Decanted feed (including water) should be used within 4 hours.

### Medication via an enteral feeding tube

- Ensure hand hygiene is carried out prior to the administration of medication.
- Medicines prescribed for administration via the gastrostomy tube route should be in a suitable formulation e.g. liquids or soluble tablets. If a medicine is not available in a liquid or soluble form, it may be necessary to crush a tablet or open a capsule. Refer to a Pharmacist for guidance on suitable formulations and suitability of crushing tablets or opening capsules.
- Always refer to the Pharmacist if there is a query about the correct administration and timing of medication for a child who is having enteral tube feeds.
- Always flush the tube with water (cool boiled for children less than 12 months old and children who are immunocompromised) in between each medication to prevent any adverse reaction from taking place. Ensure that the gastrostomy tube is flushed before and after administration of a medication to prevent tube blockage.

#### Oral Hygiene

- Mouth care should be recommended.
- Tooth brushing should be performed at least twice daily.
- If the child is not allowed oral fluids additional oral hygiene maybe required to keep the mouth moist to prevent gum disease and stimulate saliva and gastric secretions.
- The child should be registered with a Dentist. Advice should be sort from dentist regarding appropriate mouth care.

### **Nutrition Support**

The Paediatric Home Enteral Feeding Team (HEFT) based in GRH support children and young people with tube feeding needs up to the age of 18 years old or until they have been discharged from their Paediatrician. The initial visit from HEFT takes place with 15 days of discharge and subsequent visits will depend on the child's needs. Between visits telephone/email support also takes place. The HEFT liaises closely with Paediatricians, Health Visitors, GCCNT, Speech and Language therapists as well as the wider team involved in the child's care.

### **Deliveries and Supplies**

Children discharged from hospital should go home with a minimum of 7 days' worth of equipment (syringes, spare tubes, giving sets and feed). If needed, a feeding pump and pump stand will also be arranged prior to discharge from hospital. Further supplies and equipment are delivered to the child's home address (or other location if specified) every 28 days by Nutricia who currently hold the enteral feeding contract. If the child has been discharged from Gloucestershire Royal Hospital, the acute Paediatric Dietitians will initially register the child on Nutricia and organize the first delivery of supplies. The Paediatric Home Enteral Feeding Team, will then be responsible for managing the child's Nutricia deliveries. GCCNT supply medication syringes if required. Dressings and tapes for enteral feeding tubes will be prescribed by the child's GP on request.

### **Blended Diet**

Gloucestershire Health and Care <u>does support</u> the practice of administering blended food via enteral feeding tubes. However, are not able to fully implement staff delivering these feeds. Additional support and guidance are required by Gloucestershire Hospital Foundation Trust colleagues working in the Home Enteral Feeding Team on how to facilitate the implementation of blended diet across all care settings attended by patients supports by services. There has been support put in place for the education settings and therefore some services are able to support in this area. The Trust policy will also be reviewed as required.

Community Children's Nurses and other staff are expected to:

- Provide training only on the safe administration of a prescribed bolus feed (not for administering blended diet)
- Provide training on tube and stoma site care
- Review patients' tubes and stoma sites as required
- Report any incidents associated with blended diets through established routes i.e. Datix.

Continue to update families of this position or any changes as appropriate

### **Appendix 15 – Competencies and Theory Documents:**

### **Gastrostomy Care in Children**

<u>Assessment of Competence for Registered and Unregistered Healthcare Professionals:</u> Clinical Skill: Gastrostomy Care in Children

Theory: Awareness of Anatomy of where Gastrostomy Device is Positioned

### Low-Profile Balloon Retained Gastrostomy Button in Children

<u>Assessment of Competence for Registered and Unregistered Healthcare Professionals:</u>
Clinical Skill: Insertion of a Low-Profile Balloon Retained Gastrostomy Button in Children

Theory: Awareness of Anatomy of where Gastrostomy Device is Positioned

# <u>Feeding, Administering Medication and Giving Water Flushes Via a Gastrostomy in Children</u>

<u>Assessment of Competence for Registered and Unregistered Healthcare Professional:</u>
<u>Clinical Skill: Feeding, Administering Medication and Giving Water Flushes Via a Gastrostomy in Children</u>

Theory: Awareness of Anatomy of where Gastrostomy Device is Positioned