Notice to staff using a paper copy of this guidance

The policies and procedures page of Healthnet holds the most recent and approved version of this guidance. Staff must ensure they are using the most recent guidance.

Authors/Editor: Paula Murphy and Vicky Chudleigh

Access ID Number: 313
## Reader Information and Asset Registration

<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Adult Nasogastric and Gastrostomy Tube Feeding Guidelines v1:6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information Asset Register Number</strong></td>
<td>313</td>
</tr>
<tr>
<td><strong>Rights of Access</strong></td>
<td>Public</td>
</tr>
<tr>
<td><strong>Type of Formal Paper</strong></td>
<td>Practical Guidance</td>
</tr>
<tr>
<td><strong>Category</strong></td>
<td>Clinical</td>
</tr>
<tr>
<td><strong>Format</strong></td>
<td>Word Document</td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td>English</td>
</tr>
<tr>
<td><strong>Subject</strong></td>
<td>Enteral Feeding Guidelines</td>
</tr>
<tr>
<td><strong>Document Purpose and Description</strong></td>
<td>To provide concise evidence based guidance for all staff in enteral feeding to minimise potential risks of infection and hazards.</td>
</tr>
<tr>
<td><strong>Author(s)/Editor(s)</strong></td>
<td>Dr. Paula Murphy and Vicky Chudleigh-Emson</td>
</tr>
<tr>
<td><strong>Publication Date</strong></td>
<td>23/04/2012</td>
</tr>
<tr>
<td><strong>Review Date and Frequency of Review</strong></td>
<td>23/04/2014</td>
</tr>
<tr>
<td><strong>Disposal Date</strong></td>
<td>The policy ratification group will retain an e signed copy for the database in accordance with the Retention and Disposal Schedule, all previous copies will be destroyed.</td>
</tr>
<tr>
<td><strong>Job Title of Person Responsible for Review</strong></td>
<td>Specialist Nutrition Support and Home Enteral Feeding Dieticians.</td>
</tr>
<tr>
<td><strong>Target Audience</strong></td>
<td>Registered and non-registered health and social care workers. Identified health care professionals who support service users with enteral feeding.</td>
</tr>
<tr>
<td><strong>Circulation List</strong></td>
<td>Electronic: Via Healthnet  Via PCH website (subject to Freedom of information exemptions) Written: Upon request to the Policy Ratification Secretary on 01752 435104.</td>
</tr>
<tr>
<td><strong>Consultation Process</strong></td>
<td>Evaluated and circulated to: Narrie Pitts Nurse Endoscopist (PHNT), Sr. Tessa Casey Radiology Sister (PHNT), Julie Morley Nutrition Nurse Specialist (PHNT), Jenny Williams Infection Control Nurse (PHNT), Helen Foster Education and Development lead (PCH), Sue Goodman Practice</td>
</tr>
</tbody>
</table>
Facilitator (PCH), Linda O Neill District Nurse Lead (PCH), Jackie Scullion District Nurse Val Radmore Infection Control Liaison Practitioner (PCH), Dr. S.J. Lewis Consultant Gastroenterologist (PHNT). Steve Cooke Pharmacy Manager (PCH).

<table>
<thead>
<tr>
<th>Equality Impact Assessment</th>
<th>Yes</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>References/Source</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Supersedes Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version 1.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Author Contact Details</th>
</tr>
</thead>
</table>
| Dr. Paula Murphy  
Nutrition Support Specialist Dietitian  
Derriford Hospital  
Plymouth 01752 792266  
Vicky Chudleigh-Emson  
Home Enteral Feeding Specialist Dietitian  
Estover Health Centre  
Plymouth 01752 314925 |

| Publisher: (for externally produced information) |
| N/A |
### Document Version Control

<table>
<thead>
<tr>
<th>Version Number</th>
<th>Details e.g. Updated or full review</th>
<th>Date</th>
<th>Author of Change</th>
<th>Description of Changes and reason for change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>New document</td>
<td>September 2007</td>
<td>Dr Paula Murphy &amp; Vicky Chudleigh</td>
<td>New document.</td>
</tr>
<tr>
<td>1:1</td>
<td>Updated</td>
<td>November 2007</td>
<td>Lisa Stanton</td>
<td>Minor amendments following comments from Committee.</td>
</tr>
<tr>
<td>1:2</td>
<td>Updated</td>
<td>January 2008</td>
<td>Jade Brelsford</td>
<td>Minor amendments made following comments by Steve Cooke, Pharmacy Manager, Provider Services, PCH. Updated to corporate template for publishing.</td>
</tr>
<tr>
<td>1.3</td>
<td>Updated</td>
<td>1 April 2008</td>
<td>S Edmunds</td>
<td>Adjustments made to assist with the needs of visually impaired readers and prepared for publication</td>
</tr>
<tr>
<td>1.4</td>
<td>Updated</td>
<td>September 2009</td>
<td>Paula Murphy and Julie Morley</td>
<td>Adjustments made in line with recent changes to NG tube position checking</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Paula Murphy, Dr Flanagan and Alex Baggott</td>
<td>Adjustment made to guidelines for the management of people with diabetes requiring tube feeding</td>
</tr>
<tr>
<td>1.5</td>
<td>Updated</td>
<td>February 2010</td>
<td>Paula Murphy and Vicky Chudleigh-Emson</td>
<td>Minor amendments made following comments by Vicky Chudleigh-Emson on tube types and training responsibilities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Alteration to syringe use for enteral feeding at home. Risk assessment added as new appendix</td>
</tr>
</tbody>
</table>
This document has been produced by
Dr. Paula Murphy and Vicky Chudleigh-Emson, Specialist Dieticians, Plymouth Hospitals
NHS Trust
with contributions from Healthcare Professionals acknowledged below

Acknowledgements

Julie Morley Nutrition Nurse Specialist (PHNT)
Emma Tyler Nutrition Nurse Specialist (PHNT)
Narrie Pitts Nurse Endoscopist (PHNT)
Sr. Tessa Casey Radiology Sister (PHNT)
Jenny Williams Infection Control Nurse (PHNT)
Helen Foster Education and Development lead (PCH)
Sue Goodman Practice Facilitator (PCH)
Linda O Neill District Nurse Lead (PCH)
Val Radmore Infection Control Liaison Practitioner (PCH)
Steve Cooke Pharmacy Manager (Provider Services)(PCH)
Dr. S.J. Lewis Consultant Gastroenterologist (PHNT)
<table>
<thead>
<tr>
<th>Section</th>
<th>Content</th>
<th>Page No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Document Aims</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Achieving Safe and Effective Enteral Feeding</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>Enteral Tube Feeding</td>
<td>9</td>
</tr>
<tr>
<td>3.1</td>
<td>Indications for Enteral Tube Feeding</td>
<td>9</td>
</tr>
<tr>
<td>3.2</td>
<td>(Nasogastric and Gastrostomy)</td>
<td></td>
</tr>
<tr>
<td>3.3</td>
<td>Choice of Feeding Route</td>
<td>9</td>
</tr>
<tr>
<td>3.3</td>
<td>Enteral Feeding Equipment</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>Infection Control and Enteral Tube Feeding</td>
<td>12</td>
</tr>
<tr>
<td>4.1</td>
<td>Procedures for Infection Control in Enteral Tube</td>
<td>12</td>
</tr>
<tr>
<td>4.2</td>
<td>Feeding</td>
<td></td>
</tr>
<tr>
<td>4.2</td>
<td>Preventing the Spread of Infection</td>
<td>13</td>
</tr>
<tr>
<td>5</td>
<td>Adult Nasogastric Tube Insertion Procedure</td>
<td>14</td>
</tr>
<tr>
<td>5.0</td>
<td>Procedure for insertion of Nasogastric Tube for the</td>
<td>18</td>
</tr>
<tr>
<td>5.0</td>
<td>Adult</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Gastrostomy Feeding</td>
<td>28</td>
</tr>
<tr>
<td>6.1</td>
<td>Placement of a Gastrostomy Feeding Tube</td>
<td>27</td>
</tr>
<tr>
<td>6.2</td>
<td>Procedure for care for a Percutaneous</td>
<td>28</td>
</tr>
<tr>
<td>6.2</td>
<td>Endoscopic Gastrostomy (PEG)</td>
<td></td>
</tr>
<tr>
<td>6.3</td>
<td>Procedure for care for a Balloon Gastrostomy Tube</td>
<td>29</td>
</tr>
<tr>
<td>6.4</td>
<td>Procedure for care for a Low Profile</td>
<td>31</td>
</tr>
<tr>
<td>6.4</td>
<td>Gastrostomy Device (LPGD)</td>
<td></td>
</tr>
<tr>
<td>6.5</td>
<td>Procedure for care of Infection and</td>
<td>32</td>
</tr>
<tr>
<td>6.5</td>
<td>Overgranulation of a Gastrostomy exit site</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Commencing Enteral Feeding</td>
<td>33</td>
</tr>
<tr>
<td>7.1</td>
<td>Administration of Enteral Feeds</td>
<td>33</td>
</tr>
<tr>
<td>7.2</td>
<td>Administration of Water</td>
<td>33</td>
</tr>
<tr>
<td>7.3</td>
<td>Procedure for Administering Continuous Enteral</td>
<td>34</td>
</tr>
<tr>
<td>7.3</td>
<td>Feeding</td>
<td></td>
</tr>
<tr>
<td>7.4</td>
<td>Procedure for Administering a Bolus Feed</td>
<td>34</td>
</tr>
<tr>
<td>8</td>
<td>Administration of Medicines via an Enteral Feeding</td>
<td>35</td>
</tr>
<tr>
<td>9</td>
<td>Trouble Shooting Guidelines</td>
<td>39</td>
</tr>
<tr>
<td>9.1</td>
<td>Enteral Feeding Tube Blockage: Causes and Prevention</td>
<td>39</td>
</tr>
<tr>
<td>9.2</td>
<td>Procedure for Irrigating a Blocked Enteral Feeding</td>
<td>39</td>
</tr>
<tr>
<td>Section</td>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>9.3</td>
<td>Feeding Tube</td>
<td>40</td>
</tr>
<tr>
<td>9.4</td>
<td>Nausea, Vomiting and Abdominal Distension</td>
<td>41</td>
</tr>
<tr>
<td>10</td>
<td><strong>Guidelines for Management of Enterally Fed Adult Patients with Diabetes</strong></td>
<td>42</td>
</tr>
<tr>
<td>10.1</td>
<td>Treatment of Enterally Fed Patients when blood sugar is less than 4.0mmol/l</td>
<td>43</td>
</tr>
<tr>
<td>11</td>
<td><strong>Home Enteral Feeding</strong></td>
<td>44</td>
</tr>
<tr>
<td>11.1</td>
<td>Discharge Procedure for Patients Requiring Home Enteral Tube Feeding (HETF) (Dietitian checklist)</td>
<td>44</td>
</tr>
<tr>
<td>11.2</td>
<td>Ward Checklist for Teaching Patients on Home Enteral Tube Feeding (Nasogastric (NG), Gastrostomy and Jejunal Tubes)</td>
<td>46</td>
</tr>
<tr>
<td>11.3</td>
<td>Ward Checklist for Home Enteral Feeding (Discharge Equipment)</td>
<td>48</td>
</tr>
<tr>
<td>11.4</td>
<td>Follow Up at Home</td>
<td>49</td>
</tr>
<tr>
<td>12</td>
<td><strong>Useful Contact Numbers</strong></td>
<td>49</td>
</tr>
<tr>
<td>Appendices:</td>
<td>Pathway for Percutaneous Endoscopic Gastrostomy Tube Placement in Derriford Hospital (inpatients)</td>
<td>51</td>
</tr>
<tr>
<td>1</td>
<td>Pathway for Percutaneous Endoscopic Gastrostomy Tube Placement in Derriford Hospital (outpatients)</td>
<td>52</td>
</tr>
<tr>
<td>2</td>
<td>Pathway for Radiological Inserted Gastrostomy Tube Placement in Derriford Hospital (patient not requiring enteral feeding)</td>
<td>53</td>
</tr>
<tr>
<td>3</td>
<td>Pathway for Radiological Inserted Gastrostomy Tube Placement in Derriford Hospital (patient requiring enteral feeding)</td>
<td>54</td>
</tr>
<tr>
<td>4</td>
<td>Risk assessment for syringe choice for patients with enteral feeding tubes in primary care.</td>
<td>55</td>
</tr>
</tbody>
</table>

Adult Nasogastric and Gastrostomy Tube Feeding Guidelines v1:6
Adult Nasogastric and Gastrostomy Tube Feeding Guidelines v 1.6

1. Document Aims

- To provide comprehensive guidance for evidence based practice regarding nasogastric and gastrostomy tube feeding in adults to Healthcare staff caring for adult patients who require nasogastric or gastrostomy feeding, so that safe and effective feeding can be provided according to their clinical need.

- To facilitate and improve the organisation and quality of care for adult patients requiring nasogastric and gastrostomy feeding across Plymouth Hospitals NHS Trust (PHNT) and Plymouth Community Healthcare (CIC).

- To clearly outline the role of each Healthcare Professional in supporting patients receiving nasogastric and gastrostomy feeding.

It has been produced by Dieticians and Healthcare Professionals in Plymouth Hospitals NHS Trust and Plymouth Community Healthcare (CIC) to assist in successful enteral tube feeding in Derriford Hospital, Community Hospitals and at home including nursing and residential homes. This document does not negate the need for dietetic assessment of each individual patient requiring nasogastric and gastrostomy feeding but should be used as a reference guide by all members of the Healthcare Team.

2. Achieving Safe and Effective Enteral Feeding

1. All relevant Healthcare staff involved in the provision of enteral nutrition support should be trained in its provision, in the care of the enteral feeding tube and the stoma site.

2. All patients requiring enteral tube feeding should be referred to a Dietitian who will plan, monitor and evaluate their treatment.

3. All patients should receive the prescribed feed and correct volume of feed.

4. All patients requiring home enteral feeding and/or carers should be trained in the provision of enteral tube feeding, care of the enteral feeding tube and stoma site.
3. **Enteral Tube Feeding**

**Definition:** Enteral tube feeding refers to the delivery of a tube feed into the gut via a tube. It should be considered in people who are malnourished or at risk of malnutrition and have unsafe or inadequate oral intake and a functional accessible gastrointestinal tract (NICE 2006).

3.1 **Indications for Enteral Tube Feeding**

- Unconscious
- Neuromuscular swallowing disorder
- Physiological anorexia e.g. cancer, sepsis, HIV
- Upper GI obstruction
- GI dysfunction or malabsorption
- Increased nutritional requirements e.g. cystic fibrosis
- Psychological problems e.g. anorexia nervosa
- Mental Health e.g. dementia (NICE 2006)

3.2 **Choice of Feeding Route**

The routes used for enteral tube feeding are:

- Nasogastric, Nasojejunal
- Gastrostomy (including Percutaneous Endoscopic Gastrostomy (PEG), Radiological Inserted Gastrostomy (RIG), Replacement Devices – Low Profile Gastrostomy Tubes (LPGT) and Balloon Gastrostomy Tubes (BGT))
- Jejunostomy (including Percutaneous Endoscopic Gastrojejunostomy and surgical jejunostomy)

The expected duration of feeding, clinical condition and opinion of the patient /carer all need to be considered when deciding which route to use.

**Note:** Gastric feeding only is covered in this document.

3.3 **Enteral Feeding Equipment**

The equipment required for feeding may include:

- Feeding tube
- Replacement tubes (Balloon Gastrostomy Tubes and Low Profile Gastrostomy Devices)
- Extension sets
- Giving sets
- Feed
Pump
Syringes
Sterile feed container
pH indicator strips
Tape

The type of tube that has been inserted should always be indicated in the patients’ medical/discharge notes. If this information is not included, the discharging/Endoscopy unit should be contacted.

Table 1: Enteral Feeding Equipment

<table>
<thead>
<tr>
<th>Where to Obtain</th>
<th>Name of Product</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nasogastric Feeding Tubes (NOT Ryles tubes)</td>
<td>Derriford Hospital - Order from Materials Management. HEF (Home Enteral Feeding) – Hospital to Home Delivery Service</td>
<td>Corflo (Merck) fine bore feeding tube</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fine bore tubes (&lt;12fr) should be used in preference to wider bore tubes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Change as soon as possible for a fine bore NG feeding tube</td>
</tr>
<tr>
<td>Giving sets* NPSA Compliant</td>
<td>Hospital - order from SDU PCT inpatients order from SDU HEF – Homecare Delivery Service</td>
<td>Applix pump set Easybag 7752053 (with med port) Applix pump set Easybag (no med port 7752316) Applix pump set Varioline for use with rigid containers e.g Nepro 7751694</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Need to be changed every 24 hours and the old one discarded</td>
</tr>
<tr>
<td>pH indicator strips</td>
<td>Derriford Hospital and PCT inpatients- order from ward supplies (Materials management) HEF – Homecare Delivery Service</td>
<td>Merck pH 0-6 CE Marked.</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Syringes*</td>
<td>Derriford Hospital and PCT inpatients-order from E Proc. HEF – Homecare Delivery Service or district Nurses (Cornwall) Easybag Bolus Adaptor</td>
<td>Enteral syringe (purple) (Medicina)</td>
</tr>
<tr>
<td>Ancillary Item</td>
<td></td>
<td>For bolus feeding 7755691</td>
</tr>
<tr>
<td>Sterile feed containers*</td>
<td>All hospital inpatients-order from SDU HEF – Homecare Delivery Service</td>
<td>Applix Pump Set Bag Reservoir 7751714 Applix Pump Set Hydrobag 7751101</td>
</tr>
<tr>
<td>Feed *</td>
<td>All hospital inpatients - order from Pharmacy HEF - Homecare Delivery Service (Monthly delivery)</td>
<td></td>
</tr>
<tr>
<td>Pump and Drip Stand*</td>
<td>Medical Equipment Management Services (MEMS)</td>
<td>Applix® smart pump and drip stand</td>
</tr>
</tbody>
</table>

*Further details in ward nutrition file
4. Infection Control and Enteral Tube Feeding

4.1 Procedures for Infection Control in Enteral Tube Feeding

- Wash hands before and after handling feeding equipment, non-sterile gloves and apron should be worn.

- Pre-packaged sterile feeds which are ready-to-hang should be used wherever possible. Feed can be hung for a maximum of 24 hours provided a clean technique is used to ensure no microorganisms are introduced when the feeding system is assembled. A non-touch technique should be used when opening and decanting feeds.

- Label feed and administration set with start time and date.

- Ready-to-use feeds should be stored in a clean dry environment protected from extremes of temperature. Stock should be rotated to avoid feeds exceeding their best before date.

- Enteral syringes are deemed to be single use items; discard after each use (PHNT and NHS Plymouth policy 2007). This does not include reusable syringes i.e. Baxa reusable syringes. These may be used in the home setting. Enteral syringes that cannot be connected to intravenous catheters or ports only should be used for administering drugs or water.

**Water:**

- The first water bolus through a newly placed gastrostomy tube should be sterile.

- Freshly drawn tap water may be used for all subsequent boluses/tube flushes.

- Sterile water should be used for all for immuno-compromised patients. Cooled boiled water may be used at home.

**Decanting feeds:**

Avoid decanting whenever possible but if necessary follow the guidelines below.

- **Sterile feeds** e.g. EO28 liquid feed, decant the total feed volume into the reservoir at the start of the 24-hour feeding period. A clean technique is essential to ensure no microorganisms are introduced when the feeding system is assembled.
• **Non-sterile feeds** e.g. reconstituted EO28 powder, 24 hours feed may be mixed and stored covered in the refrigerator at less than 4 degrees Centigrade for 24 hours. Feed should be mixed using cooled boiled water or freshly opened sterile water and a no touch technique. Hanging non-sterile feed at room temperature for more than 4 hours should be avoided. Feed reservoir administration sets should be changed every 4 hours.

4.2 **Preventing the Spread of Infection**
Refer to the Essential steps to safe clean care: Preventing the spread of infection (NHS).
5 Adult Nasogastric Tube Insertion Procedure & Management Policy

Please Refer to the Full Adult Nasogastric Tube Insertion Procedure and Management Policy available on the Intranet PHNT Trust Documents No TRW.CLI.POL.395.2

1.0 Introduction

The NPSA has published a list of ‘never events’ which are specific serious untoward incidents that can cause serious harm but should be avoidable if national guidance is followed. One Never Event relates to: ‘Naso tubes placed in the respiratory tract rather than the gastrointestinal tract and not detected prior to commencement of feeding or other use’.

This policy has been written to comply with the latest guidance from the National Patient Safety Agency.

The insertion of a nasogastric (NGT) tube is defined as the passage of a nasogastric tube via the nostril into the stomach.

This policy and procedure gives information and instruction regarding safe and effective placement and confirmation of tube placement to reduce risk in line with current Clinical Governance. The document has been developed to support staff in the ongoing management of nasogastric tubes once a tube has been inserted.

This policy is intended for use in the adult patient (aged over 16 years).

2.0 Policy Statement

Plymouth Hospitals NHS Trust aims to deliver safe and effective care to all its patients.

The insertion, tube position check and subsequent management of nasogastric tubes will be safe, effective and comfortable for the patient.

Staff engaged in the process of inserting, checking and managing the use of nasogastric tubes are expected to be competent to do so and comply with this policy.

2.1 Purpose

The procedures described below are intended to support staff in complying with the stated Trust policy and to ensure care is safe and effective.

The purpose of a nasogastric tube is to:

a) allow drainage of the contents of the stomach when indicated
b) allow removal of air from the stomach when indicated
c) Provide a safe access route to the gastrointestinal tract for the administration of fluids, medicines and or nutrients
Fig 1. Examples of Indications for use of a Nasogastric Tube

<table>
<thead>
<tr>
<th>INDICATION</th>
<th>ACTION</th>
<th>RATIONALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paralytic Ileus</td>
<td>Leave tube on free drainage</td>
<td>To allow drainage of accumulated gastric contents and facilitate gastric motility</td>
</tr>
<tr>
<td>Gastrointestinal disease</td>
<td>Aspirate as indicated or requested</td>
<td>To avoid aspiration of gastric contents</td>
</tr>
<tr>
<td>Gastrointestinal surgery</td>
<td>Check tube position</td>
<td>To confirm the correct placement of the tube in order to avoid aspiration of gastric contents and subsequent complications</td>
</tr>
<tr>
<td>To provide nutrition for the patient</td>
<td>Check tube position before the introduction of any substance into the tube</td>
<td>To confirm the correct placement of the tube in order to avoid aspiration of gastric contents and subsequent complications</td>
</tr>
<tr>
<td>To hydrate the patient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To administer medication</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.2 Accountability, Authorisation and Responsibility

Staff should only undertake this procedure if they are appropriately trained (by completing the ‘Insertion and Care of Nasogastric Tubes Competency Assessment Process’). (See section 6.0 and 7.0 in the full policy document available on the Intranet PHNT Trust Documents No TRW.CLI.POL.395.2), and must be either:

Registered Adult Nurses, Midwives and Health Visitors
Registered Children’s Nurse
Registered Medical Staff
Nurses/Medical staff in training supervised by one of the above

- All practitioners are personally responsible for updating their practice to maintain competencies and skills.
- It is recommended that this is done 12 monthly if not undertaking procedure regularly.
- Accept accountability for their practice.
- Informal carers i.e. those individuals who have undertaken daily care regimes for the patient on a routine basis and have been appropriately trained by a practitioner named above.

2.3 Consent
Consent for the procedure should be sought under the guidance of the Policy for Consent to Examination and Treatment (available on the intranet under PHNT Trust documents TRW.CG.W.POL.216.6)

2.4 Risk Assessment & Contra-indications

An individual risk assessment should be conducted and documented by a competent person that balances the risks and difficulties of nasogastric tube insertion. The following group of patients are at a high risk of incorrect tube positioning, dislodgement and aspiration and appropriate specialist advice should be taken if the patient has:

- Maxillo-facial disorders, surgery or trauma
- Skull fractures – confirmed or suspected
- Laryngectomy
- Recent radiotherapy to head and neck
- Any disorder of the oesophagus e.g. varices, stricture.
- Oro-pharyngeal tumours or oro-pharyngeal surgery
- Unstable Cervical Spinal Injuries
- Nasal C.P.A.P.

Oro-gastric positioning may be indicated following head injury or neuro-surgery.

High Risk also includes patients who: -

- Are comatose/semi-comatose
- Are ventilated/sedated
- Have a swallow dysfunction
- Have recurrent retching/vomiting
- Need to be nursed prone

3.0 Nasogastric Tube Selection – Adult patients
There are two types of nasogastric tubes available. These have been chosen to due to their radio-opaqueness, should X-ray be needed.

- Polyvinyl Chloride (PVC) – for short term use up to 30 days (e.g. Ryles tubes) usually used within PHNT for gastric drainage (and for feeding in the Critical Care setting only)

- Polyurethane (PUR) – Fine bore tubes used within PHNT for the administration of nasogastric feed and medications.

The nasogastric tube should be selected that is appropriate for its purpose.

Various lengths and lumen diameters are available for adult patients.

**Patients with nasogastric tubes inserted under direct vision.**

Most patients who are unconscious or sedated have nasogastric tubes inserted routinely for drainage of gastric aspirate and/or feeding. The patient is usually sedated or anaesthetised or has an altered conscious level. They will have an endotracheal tube in situ and have the nasogastric tube placed under direct vision into the oesophagus. The tube is then advanced until green/yellow/brown contents are freely aspirated.

If a tube is inserted under direct vision (as outlined above), the tube can be confirmed to be in the stomach at the time of insertion. Documentation of the insertion should be completed in the perioperative pathway and completion of the Record of insertion of nasogastric tube sticker (available on the Intranet PHNT Trust Documents No TRW.CLI.POL.395.2

**Subsequent checks of the tube position must follow the Decision Tree for nasogastric tube placement checks in adults** (available on the Intranet PHNT Trust Documents No TRW.CLI.POL.395.2 unless repeat direct visualisation of the tube position in the stomach is carried out.)
5.0 Procedure for the Insertion of a Nasogastric Tube for the Adult

Equipment required:

1. Clinically clean tray
2. Fully Radio-opaque Nasogastric tube which is appropriate for its designated use
3. Topical Gauze
4. Tape to secure E.g. Nasofix
5. 60ml purple enteral syringe
6. pH indicator strips (CE marked for human aspirate)
7. Disposable receiver
8. Spigot/Drainage Bag (if necessary)
9. Glass of water, straw (only if able to swallow)
10. Mouth sponges
11. Non sterile gloves and apron
12. Record of Insertion of Nasogastric Tube Sticker
13. Nasogastric Tube Position Record Form and Care Plan
14. A pen

<table>
<thead>
<tr>
<th>ACTION</th>
<th>RATIONALE</th>
<th>EVIDENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Before a decision is made to insert a nasogastric tube, an assessment is undertaken to identify the reason for the nasogastric tube insertion:</td>
<td>To ensure that the nasogastric tube insertion is necessary, avoiding putting the patient through an unnecessary procedure and potential complications.</td>
</tr>
<tr>
<td></td>
<td>a) for drainage only</td>
<td>NPSA (2011)</td>
</tr>
<tr>
<td></td>
<td>b) for drainage and possible feeding (Critical Care ONLY)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) for feeding and medication</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The rationale for any decisions are recorded in the patient’s medical notes, including purpose and type of nasogastric tube to be inserted.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Check patient ID and explain the procedure to the patient.</td>
<td>To obtain the patient’s consent and co-operation.</td>
</tr>
<tr>
<td></td>
<td>Ensure patient is in agreement with the procedure and that verbal/informed consent is gained and documented.</td>
<td>To be able to document consent. If patient is unable to consent then capacity must be established and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Price (2009)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DOH (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mensforth and Nightingale (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mallett and Dougherty</td>
</tr>
<tr>
<td>3</td>
<td>The patient should be monitored closely throughout the procedure by nursing staff.</td>
<td>Early detection of cyanosis or bradycardia will prevent further deterioration of the patient’s condition throughout the procedure.</td>
</tr>
</tbody>
</table>
| 4 | Assist the adult patient to sit in a supported upright position, ensuring the patient’s head and shoulders are well supported by pillows. If the patient is unconscious or semi-conscious, place into a safe position by laying the patient on their side. | To allow for easy passage of the tube. This position allows easy swallowing and ensures the epiglottis is not obstructing the oesophagus. To ensure correct passage and position of the NG tube. | Miller et al (1985)  
McConnell (1997)  
Mallett and Dougherty (2000) |
| 5 | Wash hands with soap and water, rinse and dry well. Put on gloves/apron. Assemble the equipment required. | To minimise cross infection. | Anderton (1995)  
Pratt (2001)  
NICE (2006) |
| 6 | Select the appropriate length to be passed by measuring the distance placing the tip of the tube from the nose, extend tube to the patient’s earlobe and then to the xiphisternum (NEX measurement | To ensure the appropriate length of tube is passed into the stomach. | Price (1989)  
Mallett and Dougherty (2000)  
NPSA (2011) |
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>7</strong></td>
<td>If the nasogastric tube of choice has a guidewire, pull the wire out 5cms and replace.</td>
<td>To ensure easy withdrawal of the guidewire.</td>
</tr>
<tr>
<td><strong>8</strong></td>
<td>Check that the nostrils are patent. If appropriate, ask the patient to blow nose first. If patients are unable to swallow carry out mouth care prior to inserting the tube.</td>
<td>To identify any obstructions liable to prevent insertion.</td>
</tr>
<tr>
<td><strong>9</strong></td>
<td>Lubricate proximal end of tube with water. (N.B. Do not use aqueous jelly as a lubricant)</td>
<td>To assist passage through the nasopharynx. Aqueous jelly dries and can block nasal passages irritating the patient.</td>
</tr>
<tr>
<td><strong>10</strong></td>
<td>Insert the rounded end of the tube into the clearest 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.</td>
<td>To facilitate the passage of the tube by following the natural anatomy of the nose.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>11</td>
<td>As the tube passes down into the nasopharynx ask the patient to swallow water via a straw. <strong>(If there is doubt of a patients’ ability to swallow safely a Speech and Language assessment may be necessary).</strong></td>
<td>A swallowing action closes the glottis enabling the tube to pass into the oesophagus.</td>
</tr>
<tr>
<td>12</td>
<td>Advance the tube through the pharynx as the patient swallows until the predetermined mark on the tube has been reached. If the patient shows signs of distress e.g. gasping, coughing or cyanosis, remove the tube immediately. If respiratory distress does not resolve with removal of the tube at this point, abandon the procedure and inform medical staff. If the patient complains of sudden onset ear pain the tube should be removed immediately and inform medical staff.</td>
<td>Distress or ear pain may indicate the incorrect placing of nasogastric tube into the trachea. Signs of respiratory distress may be absent in patients with a poor gag reflex.</td>
</tr>
<tr>
<td>13</td>
<td><strong>pH testing is used as the first line test method, with pH between 0 and 5.5 as the safe range – see Section 13a-13d, and that each test and test result is documented on the Nasogastric Tube Position record and care plan (Appendix 5), which is kept at the patient’s bedside.</strong> Nasogastric tubes are NOT flushed, nor any liquid/feed introduced through the tube following initial placement, until the tube tip is confirmed by pH testing or x-ray, to be in the stomach.</td>
<td>To ensure that the tube is in the stomach before any fluid is administered.</td>
</tr>
<tr>
<td>13a</td>
<td>Aspirate a sample of fluid using a 60ml purple enteral syringe with gentle suction aspirating 2-5mls</td>
<td></td>
</tr>
</tbody>
</table>
(5mls Critical Care) of fluid.
Place the aspirate onto pH paper (CE marked for human aspirate) and check the reading.

N.B. If it is not possible to obtain an aspirate from the nasogastric tube, please see section 13b.

**A pH of 0-5.5 indicates a reading deemed to be within a safe range.**

If pH 0-5.5 complete Record of Insertion of Nasogastric Tube sticker (Appendix 4) and file in patients medical notes.

If the aspirate gives a result of a pH greater than 5.5 note medication (see warning below) and retry after 20-60 minutes.

**Warning**

Patients receiving the following drugs may have a high gastric pH:

- H2 Antagonists e.g. ranitidine
- Proton pump inhibitors e.g. omeprazole

The gastric aspirate obtained from these patients therefore, may be > 6. If patient’s swallow is intact and not NBM, give acidic drink e.g. Pineapple or Blackcurrant. Retry after 20 minutes. These patients therefore may require repeat aspirate tests observing times of drug administration. If pH still >6 an initial chest x-ray may be appropriate to confirm gastric

Stomach contents are acidic and have a pH around 3-4. However the National Patient Safety Agency state that a pH reading of 5.5 or below is acceptable

Bronchial secretions read greater than pH 6.

Prokinetics can affect the ability to gain an aspirate due to their effect of increasing in stomach emptying. PPI’s inhibit gastric acid secretion.

NPSA (2011)
<table>
<thead>
<tr>
<th></th>
<th>If it is not possible to obtain an aspirate try the following:</th>
</tr>
</thead>
<tbody>
<tr>
<td>13b</td>
<td>(i) Give mouth care to patients who are nil by mouth.</td>
</tr>
<tr>
<td></td>
<td>(ii) If the patient is able to swallow ask them to drink a small amount of water.</td>
</tr>
<tr>
<td></td>
<td>(iii) Flush the tube with 10-20mls of air.</td>
</tr>
<tr>
<td></td>
<td>(iv) Turn the patient on their left side and retry aspiration after 20 – 60 minutes.</td>
</tr>
</tbody>
</table>

- Stimulates gastric secretion.
- Adds fluid to the stomach.
- Acts in moving the tube away from the stomach wall to aid aspiration.
- Improves position of stomach contents.
- Pulling R (1992)
- Colagiovanni L (1999)
- Mensforth and Dougherty (2001)

| 13c | ‘Whoosh’ tests, acid/alkaline tests using litmus paper, or interpretation of the appearance of aspirate ARE NEVER USED to confirm nasogastric tube position. |
|     | Use of these methods are unreliable.                        |
|     | NPSA (2011)                                                  |

| 13d | If still unable to gain aspirate or aspirate is still above 5.5 then DO NOT USE THE TUBE and consult medical staff. Document the medical decision and strategy for that individual patient in the medical notes. Document all techniques that have been used to try to obtain aspirate before a request for chest X-ray is made. |
|     | Complete Record of Insertion of Nasogastric Tube sticker (Appendix 4) and file in patients medical notes. |
|     | If the decision is to proceed to a Chest X-ray please see section 14 below. |

| 14 | X-ray is used only as a second line test when: |
|    | Warning:                                      |
|    | NPSA (2011)                                    |
• a gastric aspirate is unobtainable after placement following the instructions in section 13b and in Appendix 3 Decision Tree for nasogastric tube placement checks in adults.

Or
• a gastric aspirate is obtainable and has a pH of 6 or greater and cannot drink an acidic drink.

This should ideally be done in daytime working hours to ensure that sufficient knowledge/expertise is available to interpret chest x-ray and position of the nasogastric tube, unless clinically urgent. The rationale for any decisions made is recorded in the patient’s medical notes.

X-ray request forms clearly state that the purpose of the x-ray is to establish the position of the nasogastric tube, stating the purpose for feeding or drainage.

The chest x-ray should be reviewed by a competent practitioner, in most cases this will be a medical practitioner who has been assessed through theoretical and practical learning.

Documentation of the tube placement checking process should include:
• any x-ray viewed was the
most current x-ray for the correct patient.

- how placement was interpreted.
- clear instructions as to required actions.

The above should be recorded in the patient’s medical notes.

**Any tubes identified to be in the lung are removed immediately, whether in the x-ray department or clinical area.**

| 14 | Only when the correct position is confirmed and if a guide-wire is present, the guide-wire will need to be removed. Flush the guidewire port of the tube with 10 mls of freshly drawn tap water and the guide-wire can be gently rotated and withdrawn from the tube. | To be aware that the tube can be misplaced by rapid withdrawal of the guidewire and requires flushing with water to activate water soluble lubricant. | Rollins (1997) |
| 15 | Consider cleaning the nose/cheek with an alcohol swab prior to securing the tube. | Cleaning with an alcohol swab will remove grease from the skin, increasing the chance of the tube being successfully secured. | Della Faille al (1996) |

Secure the tube to the nostril and cheek with appropriate tape and/or fixation device.

If nasogastric tube for drainage purpose, apply drainage bag or spigot.

If nasogastric tube for feeding, follow dietetic instruction/starter regime.

Cleaning with an alcohol swab will remove grease from the skin, increasing the chance of the tube being successfully secured.

To maintain the tube in place.

To allow drainage of gastric contents.

To commence safe enteral feeding.
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td><strong>Document insertion procedure by completing the ‘record of insertion of a nasogastric tube’ sticker available on the Intranet PHNT Trust Documents No TRW.CLI.POL.395.2 and place in patient’s medical notes.</strong></td>
<td>To minimise cross infection risk.</td>
</tr>
<tr>
<td></td>
<td>To provide a record of care. To identify that safe procedures have been carried out.</td>
<td>NMC 2002a</td>
</tr>
<tr>
<td>18</td>
<td><strong>Post insertion and management of a nasogastric tube.</strong> Available on the Intranet PHNT Trust Documents No TRW.CLI.POL.395.2</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td><strong>A full multidisciplinary supported risk assessment is made and documented before a patient with a nasogastric tube is discharged from acute care to the community. (See section 11 of the Adult Enteral tube Feeding Guidelines)</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>To remove the tube</strong></td>
<td>To reduce anxiety.</td>
</tr>
<tr>
<td></td>
<td>Explain the procedure to the patient and obtain their informed verbal consent.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provide tissues for the patient to clean or blow their nose after removal of the tube.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Wash hands and put on gloves and apron.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Take off the fixation tape and gently withdraw through the nostril.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ensure the tube is intact and document removal.</td>
<td>To ensure that the tube has been removed intact.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MDA (2001)</td>
</tr>
</tbody>
</table>
5.0 Post insertion care and management of Nasogastric Tubes once insitu

Serious adverse effects on the patient's condition may be associated with the incorrect use of the tube once inserted. The patient must be observed for adverse signs and symptoms which may indicate tube misplacement or dislodgement.

See Appendices 1-6 in the full policy document: Ongoing Post-Insertion Care and Management of Nasogastric Tubes available on the Intranet PHNT Trust Documents No TRW.CLI.POL.395.2
6. Gastrostomy Feeding

6.1 Placement of a Gastrostomy Feeding Tube

The decision to place a gastrostomy tube needs to be multidisciplinary, involving the Consultant /General Practitioner, patient /family members and other Healthcare Professionals directly concerned with the care of the patient e.g. Dietitian, Speech and Language Therapist, Nursing staff.

Gastrostomy tubes

Percutaneous Endoscopic Gastrostomy (PEG)
These tubes are inserted via Endoscopy with appropriate sedation and local anaesthesia. The most commonly used PEG within the Trust is the Fresenius Kabi Freka. This can be removed when no longer required using an endoscope. They should only be changed if they become problematic or damaged. Occasionally, a Merck Corflo PEG is inserted. This tube is traction removable and can be removed at the bedside.

Following PEG placement, patients may be discharged home from the Endoscopy department if not already an existing inpatient (see PEG pathway Appendix 1).

Radiologically Inserted Gastrostomy (RIG)
This tube is placed under radiological guidance directly into the stomach. It is used usually for patients who are unable to have an endoscopy.
For RIG placement, admission to Derriford Hospital is required as a day case (see RIG pathway Appendix 2).

Balloon Retained Gastrostomy
This tube is held in place by a balloon that is inflated with 5-20 ml of water and requires replacement approximately every 4 months or as clinically appropriate. They can be replaced at the bedside through an established tract.

6.2 Procedure for Care for a Percutaneous Endoscopic Gastrostomy (PEG)

Tube Types
Freka (Fresenius Kabi) or Corflo (Merck)

A PEG tube may stay in place for up to 2-3 years or as long as it is comfortable and continues to work well.

Daily Care (10 days post placement)
• Follow the guidelines for infection control (section 4.0).
• Clean the skin around the tube, Unclip the external fixation plate and move up the tube, away from the skin.
Clean the skin around the stoma gently with soap and water using a soft washcloth. Dry the skin well.

Inspect the site for signs of redness or irritation. If any signs of redness or irritation are present follow ‘Simple skin protection guidelines’ (section 6.5). Do not use dressings unless clinically indicated.

Correctly re-tension the gastrostomy tube by gently pulling on the tube until there is a gentle resistance. Push the external fixation plate back down the tube until it is 1cm from the skin. Reclamp.

Mouth Care and oral hygiene. Teeth should be cleaned twice daily. Follow local protocol (Mouthcare policy PCH 2007).

The patient may shower. After 4 weeks the patient may take a bath or swim.

**Weekly Care**

- To prevent buried bumper once weekly – unclip the external fixation plate, and move up the tube, away from the skin.
- Clean the PEG tube with a mild soap and water
- Push the tube 5cm inwards through the stoma tract and then retract approximately 4cm.
- Rotate the tube through 360°. Clean the tube.
- Correctly re-tension the gastrostomy tube by gently pulling the tube until there is a gentle resistance. Push the external fixation plate back down the tube until it is 1cm from the skin. Reclamp.

### 6.3 Procedure for Care for a Balloon Gastrostomy Tube

**Tube Types**
- Corflo (Merck)
- Mic G (Vygon)

A balloon gastrostomy tube should be replaced every 4 months or as clinically appropriate

**Stay Suture Information**

- Stay sutures are used to hold the stomach wall against the abdominal wall until the gastrostomy tube tract has formed.
- This prevents peritonitis secondary to leakage of feed or gastric contents into the peritoneal cavity.
- It takes approximately 10-14 days for the gastrostomy tube tract to mature.
- Stay sutures should be cut, level with the skin surface 10-14 days post RIG placement, or should dissolve if using dissolving stitches.
- Balloon retained gastrostomy tubes should be changed 4 monthly or as clinically appropriate by a Radiologist, Radiology Registrar or Specialist Home Enteral Feeding Dietitian

**Daily Care**
- Follow the guidelines for infection control (section 4.0).
- Clean the skin around the tube, lift the edges of the retention bolster and clean the skin around the stoma gently with soap and water using a soft wash cloth.
- Dry the skin well.
- Rotate the tube 360°, to prevent adhesions forming.
- Inspect the site for cleanliness and check the site for signs of redness or irritation. If any signs of redness or irritation are present follow ‘Simple skin protection guidelines’, (section 6.5). Do not use dressings unless clinically indicated.
- If the retention bolster has moved gently pull on the tube until you feel a resistance, then slide the retention bolster towards the skin surface leaving a gap of 2-3 mm.
- The tube should be flushed before and after each administration of feed and medication. Refer to patients feeding regime.
- The extension set should be cleaned in warm water with mild detergent, rinsed thoroughly and left to air dry. Extension sets are single patient use. Sets should be replaced every 2-4 weeks dependent on integrity and functionality.
- Oral hygiene. Teeth should be cleaned twice daily

**Weekly Care**

**Clinical Equipment List**

<table>
<thead>
<tr>
<th>2 x 5ml luer slip syringes</th>
<th>5ml water</th>
<th>Gloves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apron</td>
<td>Waste bag</td>
<td></td>
</tr>
</tbody>
</table>

**Method**

- The volume of water in the internal retention balloon should be checked and changed weekly.
- Follow guidelines for infection control (Section 4.0).
- If necessary stop the feed and flush the tube.
- Advance the tube inwards through the stoma tract 2-3cm. Throughout the procedure hold the tube securely to prevent tube displacement.
- Attach the empty 5ml luer slip syringe to the inflation valve. Gently draw back on the syringe until the water is drawn off from the balloon.
- Detach the 5ml luer slip syringe from the inflation port, note the volume of water and then discard. Repeat the process again to ensure the internal retention balloon is completely empty.
- Re-inflate the balloon with exactly 5mls of freshly drawn tap water using the inflation port.
- Retension the tube as per daily care
6.4 Procedure for care of a Low Profile Gastrostomy Device (LPGD)

**Tube Types**
- Mic-Key (Vygon)
- CuBBY (Merck)

LPGD should be replaced every 4 months

**Daily Care**
- Follow the guidelines for infection control (section 4.0).
- Clean the skin around the tube, lift the edges of the external retention bolster and clean the skin around the stoma gently with soap and water using a soft cloth.
- Dry the skin well.
- Rotate the tube 360°, to prevent adhesions forming.
- Inspect the site for cleanliness and check the site for signs of redness or irritation. If any signs of redness or irritation are present follow Simple Skin Protection guidelines, (section 6.5). Do not use dressings unless clinically indicated.
- Clean the feeding port of the LPGD using a clean damp cloth.
- The LPGD and extension set should be flushed before and after each administration of feed and medication. Refer to patients feeding regime.
- Extension sets should be cleaned in warm water with mild detergent, rinsed thoroughly and left to air dry.
- Extension sets are classified as single patient use. Sets should be replaced every 2-4 weeks dependent on integrity and functionality.

**Weekly Care**

**Clinical Equipment List**
- 2 x 5ml luer slip syringes
- Gloves
- Waste bag
- 5ml water
- Apron

**Method**
- The volume of water in the internal retention balloon should be checked and changed weekly.
- Follow guidelines for infection control (Section 4.0).
- Ask the patient to lie down on their back. If necessary stop the feed and flush the tube.
- Throughout the procedure hold the tube securely to prevent tube displacement.
- Attach the empty 5ml luer tip syringe to the inflation valve. Gently draw back on the syringe until the water is drawn off from the balloon.
- Detach the 5ml luer slip syringe from the inflation port, note the volume of water and then discard. Repeat the process again to ensure the internal retention balloon is completely empty.
- Re-inflate the balloon with exactly 5mls of freshly drawn tap water using the inflation port ensuring the tube is fully advanced through the stoma tract.
6.5 Procedure for Care of Infection and Overgranulation of a Gastrostomy Exit Site

Simple Skin Protection
- Apply Cavilon Barrier Film to the cleaned site. Allow to dry.
- Renew Cavilon every 2-3 days or as necessary.

Sore excoriated site resulting from gastric exudates.
- Apply Cavilon Barrier Film as first line treatment.
- If extra protection / absorption needed, use a protective or absorptive dressing such as Biatain Non-Adhesive or Tegaderm dressing over dried Cavilon Barrier Film. Hold the dressing firmly in place under the tube flange with hypoallergenic tape.
- Replace the dressing after 24 hours.

Suspected Infected site
- Send a wound swab to microbiology. It is important to identify the cause of the infection and what it is sensitive to. Systemic antibiotics may be required, discuss with the patients caring medical team or GP.

Wound swab or clinical examination shows clinical infection
- Apply topical antimicrobial dressing e.g. Aquacel AG
- Fold the dressing in such a way as to ensure contact between the exit site and the dressing without displacing the tube or exerting undue pressure under the flange.
- The dressing may be cut if required.
- Hold firmly in place against the skin or a simple adhesive dressing and pressure from the tube flange.
- Change the dressing daily.
- Do not use ointment under the dressing.

Overgranulation of the gastrostomy exit site.
- Overgranulation is identified as a red / pink mound at the border of the stoma, which extends above the surrounding skin; may bleed easily and is often associated with low-grade infection.
- 1st Line: Apply topical antimicrobial dressing e.g. Aquacel AG, use as above. Trial for 2-4 weeks.
- 2nd Line: Hydrocortisone 1%. For overgranulation unresponsive to silver dressings. Apply to clean, dry stoma site twice daily for up to 10 days.
- 3rd Line: Refer to Medical Practitioner or the Tissue Viability Specialist Nurse.
7. **Commencing Enteral Feeding**

- All patients requiring enteral feeding should be referred to the Dietitian to establish the patients’ nutritional requirements and to obtain an accurate prescription of enteral feed e.g. feed type, volume.
- If it is not possible for a Dietitian to assess patient requirements prior to feeding, guidelines for commencing nasogastric and gastrostomy feeding are available in the ward nutrition file (Derriford Hospital) and on the Nutrition Support Team and Nutrition and Dietetics webpage on Plymouth HealthNET.

**Nasogastric Feeding**
Feeding can commence once correct position of the tube has been confirmed and results recorded on relevant documents and appropriate feeding regime in place.

**Gastrostomy Feeding**
The feeding tube should not be used for 4 hours after placement to allow recovery from sedation. Usually feeding is commenced following flushing the tube with sterile water.

All patients will require nursing care and educational input following tube placement to ensure that the gastrostomy tube is working correctly and that the patient or carer is familiar with the equipment and feed administration.

7.1 **Administration of Enteral Feeds**
The majority of enteral tube feeds are delivered using enteral feeding pumps. The feed may be administered continuously (over 24 hours) or may be given intermittently for between 8 and 20 hours during a 24-hour period. If the patient is conscious and mobile intermittent feeding is usually the preferred method as this allows the patient to have a break from feeding.

Bolus feeding is a perfectly acceptable delivery method either in the short term if problems arise with the pump, or longer term as a preferred method by some patients.

7.2 **Administration of Water**
Water may be administered via an enteral feeding tube for
- Hydration
- Prevention of tube blockages
- Prevention of drug-nutrient or drug-drug interactions

The type of water depends on the patients’ clinical condition and the route of administration. Patients with nasogastric or gastrostomy tubes can be given freshly drawn drinking tap water. Immunocompromised patients should receive sterile water in hospital and be advised to use cooled boiled water at home.
7.3 Procedure for Administering Continuous Enteral Feeding

Clinical Equipment List

- Non-sterile gloves and apron
- Enteral feeding pump and stand
- Prescribed enteral tube feed
- Giving Set
- 60ml Enteral syringe (purple)

For Nasogastric feeding:
- pH indicator strips Merck CE mark 0-6
- Fine bore nasogastric tube (labelled for enteral use)

Method
Follow the guidelines for infection control (section 4.0).

- For nasogastric tubes, check the pH of the gastric aspirate. Document result (Appendix 1). Do not feed if result is above 5.5
- Check the feed is in date. Gently invert the bag to mix any settled contents.
- Close the clamp on the giving set and spike the giving set into the Easybag.
- Place the clamped section of giving set into its housing in the pump and prime the giving set.
- Open the clamp on the feeding tube (not NG). Flush the tube with water as per the feeding regime. Close the clamp.
- Remove the adapter or adapter cover and connect the administration set to the feeding tube (depending on which port is used).
- Set the pump rate and dose and set the pump to run.
- When the feed is complete, flush the tube immediately with water as per the feeding regime.
- Re-clamp (not NG) and re-cap the tube.
- Discard used equipment.

7.4 Procedure for Administering a Bolus Feed

Clinical Equipment List

- 1 x 60ml Enteral Syringe (purple)
- Bolus Adaptor easybag
- Easybag/bottle of feed
- Freshly drawn drinking tap water
- Non-Sterile Gloves and Apron

For Nasogastric tubes you will also need:
- pH indicator strips Merck CE 0-6

Method
1. Patient must be supported in a sitting position of a minimum of 45°.
2. Patient must be supervised at all times.
3. Follow the guidelines for infection control (section 4.0).
4. For nasogastric tubes, check the pH of the gastric aspirate. Record result on all relevant NGT documentation. Do not feed if result is above 5.5.
5. Using the enteral syringe (with plunger) flush the feeding tube with water as per the feeding regime. Close clip on feeding tube and remove the syringe.
6. Remove the plunger from the enteral syringe and reconnect the barrel of the syringe to the feeding tube.
7. Attach Easybag bolus adaptor to the Easybag of feed. Open the end of the bolus adaptor.
8. Pour the amount of feed required into the syringe. Do not attempt to rush the feed, administer no faster than 50mls of feed every 3 minutes.
9. If the feed is running too slowly either lift the syringe higher or put the plunger back into the syringe and push the feed down the tube slowly.
10. When the prescribed amount of feed has been administered flush the tube with water as per the feeding regime then re-clamp and recap the tube end.

8. **Administration of Medicines via an Enteral Feeding Tube.**

- Crushing tablets, opening capsules or giving any medicine down an enteral feeding tube are generally unlicensed routes of administration. Practitioners prescribing, advising or administering medicines in this way would be held responsible for any adverse effects that may occur because of this. However, only a prescriber (Doctor or Dentist) can authorise the use of medicines via this route. Therefore other practitioners (including pharmacists giving advice and nurses administering the medicine) in order to demonstrate they have acted professionally and competently, must ensure that:

  - They obtain the consent of the patient
  - The prescriber is aware of and has sanctioned the unlicensed route of administration. Written authorisation should be provided by the prescriber on the hospital/community prescription chart
  - That the proposed method of administration is based on the most up to date evidence available and is justifiable in terms of the potential clinical benefits and risks. Nurses should seek the advice of a pharmacist and / or medicines information department to assure themselves on this point
  - All actions and instructions must be recorded in patient record

  - A pharmacist should review the patient’s prescription when a feeding tube is placed.
• Information may be obtained from clinical pharmacists at Derriford or the Plymouth Teaching Primary Care Trust as appropriate, or from Medicines Information, Pharmacy, Derriford. Direct line 01752 763405/Internal 53405/Bleep 349

• Medications given through a feeding tube should be given using a 60ml enteral syringe. The enteral syringe may be connected directly to the feeding tube or to the side port of an NPSA compliant giving set. Only syringes which are oral or enteral and clearly labelled should be used to give medicines via enteral feeding tubes or the side port of an NPSA compliant giving set. Never use syringes that allow connection to intravenous (or other parenteral) catheters or ports. Avoid the use of catheter tip syringes for measuring small volumes as dosing errors may occur. Smaller syringes may be used if dose measurement is critical. Solutions should be prepared and administered immediately to maintain stability and quality of the solution, and minimise the risk of inadvertent administration by other routes.

• All oral or enteral syringes containing oral liquid medicines must be labelled (by the person who prepared the syringe) with the name and strength of the medicine, the patient’s name and the date and time it was prepared, UNLESS the preparation and administration is one uninterrupted process and the unlabelled syringe does not leave the hands of the person who has prepared it. Only one unlabelled syringe should be handled at any one time.

• Medication should not be added while the feed is running. Stop the feed, give a minimum of 30ml water flush using a 60ml enteral syringe and then give the drug(s) as below. Give a final flush of water (Minimum of 30mls) before re-starting the feed.

Choice of formulation

• Where patients are not nil by mouth and are able to swallow their medication, avoid using the feeding tube as a route of administration. Any medication given orally to patients should only be in consistencies recommended by the Speech and Language Therapist. Administration of medicines in this way should also be checked with the pharmacist.

• Any unnecessary medicines should be stopped.

• Wherever possible, appropriate liquid formulations should be used. If liquids are very viscous, they can be diluted with tap water* (at room temperature) immediately before administration.

• Solutions (rather than suspensions) or soluble tablets (not dispersible / effervescent) are the formulations of choice
• Do not assume liquid formulations will be suitable- check with a pharmacist before use. This warning also applies to dilution with tap water*, as in a few cases this isn’t appropriate

• Alternative formulations should be considered – e.g. patches, sublingual tablets. In some case a similar drug may be available in a more suitable formulation.

• Dispersible/effervescent formulations may not always be appropriate as they can contain significant amounts of sodium, and often require large volumes of water.

• Changes in formulation may require a change in dose or frequency. A change to a liquid formulation or crushing / opening tablets or capsules may also lead to differences in the dose the patient absorbs, so dose adjustments may be needed. The patient should be monitored for the expected clinical effect of the medicines.

• If the end of the tube is in the jejunum, it may be necessary to consider the site of drug absorption and adjust the dose or drug accordingly.

• If alternative formulations are not suitable, the pharmacist should advise about crushing tablets or opening capsules. **Do not crush tablets or open capsules without consulting a pharmacist.**

• If used tablets must be crushed using a pestle and mortar or a ‘crushing syringe’ which is designed for the purpose. Other implements may be incompatible with some medications. The pestle and mortar should be washed with warm water after each use.

• In general, enteric-coated tablets/capsules are unsuitable for crushing/opening, and most modified release preparations are unsuitable. Cytotoxic preparations and hormones should not be crushed/opened.

**Preparing the medicine for administration**

• Many tablets will disperse in water after a few minutes, even if they are not labelled as ‘soluble’ or ‘dispersible’. 10 – 15ml of tap water is sufficient for this. A similar amount of water should be used if the tablet needs to be crushed. The container used should be rinsed with more water and the rinsings also given to the patient. Consult a pharmacist.

• Tablets which disperse in water can be prepared for administration using just an enteral syringe – put the tablet in the barrel of the syringe, replace the plunger, draw 10ml water into the syringe, allow the tablet to disperse, shaking if needed, and then give the dose. Draw another 10ml of water into the syringe and give that as well.
Administration of medicines

- Medication should not be added while the feed is running. Stop the feed, give a 30ml flush with water and then give the drug(s) as below. Give another 30ml flush before re-starting the feed.

- Tablets may be prepared in tap water at room temperature. There is no advantage in using warm water and the drug may not be stable in this.

- If the tube is in the jejunum, sterile water should be used for dilution and flushes.

- Do not mix medicines to be given at the same time; prepare each one separately. This avoids reactions between the medicines and reduces the risk of tube blockage. If more than one drug is to be given, at least 10ml water should be used to flush between each.

- Volumes used to flush tubes may need to be reduced if patients are fluid restricted. Flushes must also be used when liquid medicines are given.

- Volumes used for flushing may need to be documented on fluid charts.

- If medicines need to be given on an empty stomach, the feed should be stopped 1 hour before the dose is given, and re-started an hour after the dose. Please advise the dietitian, who will establish a feeding regimen to accommodate this.

- Drug-feed interactions. Some drugs, including phenytoin, interact with enteral feeds, and a longer feed-free period will be needed. The pharmacist and dietitian should determine the best feed regimen for the patient.

Discharge from hospital

- If the patient is discharged from hospital with the tube in place, the nurse/pharmacist should ensure that the patient or carer is familiar with the administration of the medicines and flushes, and that any changes in medicines have been discussed with the GP, community pharmacist and any other appropriate healthcare staff.

- When patients or carers need to administer oral liquid medicines (or dissolved tablets) with a syringe, ensure they are supplied with only oral or enteral syringes.

- See BAPEN website for further information on Administering Drugs via Enteral Feeding Tubes. BAPEN | Resources | Drug administration via enteral feeding tube. Please also see PCT Single Use Policy
9. Trouble Shooting Guidelines

9.1 Enteral Feeding Tube Blockage: Causes and Prevention

Causes:

1. Feed clotting in the tube.
2. Extended rest period.
3. Not flushing tube after bottle is completed or temporarily stopped.
4. Medications.
5. Feed rate of administration less than 50mls/hr.
6. Highly viscous feeds e.g. high energy or specialist feeds can block the tube.
7. Failing feeding tube

Prevention:

1. The tube should be flushed with a minimum of 30mls freshly drawn tap water after each bottle of feed, after each rest period and before and after giving any medication (water flushes will vary depending on patients fluid requirements (usually 30 – 150mls). Check the Dietitian’ recommendation. Regularly massage tube between fingers to help cleanse build-up of feed on inner lumen of the tube.
2. If pump rate is less than 50mls / hour feed can easily clot in the tube, so extra flushes of water should be given e.g. 50-150mls water 4 hourly.
3. Crushed medications should not be given down the tube (see section 7.0).

9.2 Procedure for Irrigating a Blocked Enteral Feeding Tube

If the blockage is in the giving set – replace.

Otherwise:

1. Massage the tube between fingers to mechanically dislodge debris. Flush tube with 50mls warm water using a 60ml enteral syringe applying consistent pressure.

2. If blockage remains (hospital only):
   - Mix two teaspoons of sodium bicarbonate powder with 10mls of water.
   - “Flush” into feeding tube as able.
   - Leave for 15 minutes.
   - Flush with 50mls water.

3. If blockage remains obtain “Clog zapper®” from The Endoscopy Department or Nutrition Nurse Specialist Derriford Hospital.
   - Follow the manufacturer’s instructions
Avoid irrigation with ‘Coke’ or lemonade (acid), which may curdle feed residue and damage the tube.

3. Contact Dietitian or Nutrition Specialist Nurse if blockage remains (Derriford Hospital). Nursing homes to consider using Clog Zapper. Patients at home to contact District Nurse/Dietitian/Endoscopy Department Derriford Hospital.

NB Consider reason for blockage; take action to avoid further problems.

9.3 Nausea, Vomiting and Abdominal Distension (Derriford Hospital Guidelines)

Causes:
Gastric reflux.
Poor gastric emptying.
Gastrointestinal dysfunction and constipation.

Action:

1. Preventative measures – Aspirate from enteral feeding tube 4 hourly. If residual volume is > 200mls return 200ml of aspirate and discard remainder. (e.g. Aspirate = 250mls, return 200mls, discard 50mls.)

2. If aspirate > 200mls on 3 consecutive occasions contact doctors to request commencing prokinetic agent e.g. Metoclopramide

3. If aspirate remains > 200mls after commencing the prokinetic agent reduce rate of feed by 30mls / hr until tolerated. Maintain at minimum rate of 30ml /hr until reviewed by Dietitian.

4. If practical and patient able, sit patient slightly upright.

5. Consider whether the patient could be constipated – if bowels not open for >3 days commence laxatives or glycerine suppositories unless contraindicated. If necessary request further investigation.

6. If nausea and/or vomiting persist even with use of prokinetic agent consider jejunal feeding.

7. If actions are taken and symptoms continue contact the Dietitian to review feeding regimen and inform the patients caring medical team.

Note: HEF patients experiencing nausea, vomiting and abdominal distension contact HEF Dieticians or GP if out of office hours.
9.4 Diarrhoea

Diarrhoea is classified as an increase in stool weight to greater than 300g per day accompanied by increased stool frequency e.g. > 3 stools per day. Diarrhoea is a complication in 10-25% of enteraly fed patients. It is not an indication to stop feeding unless severe.

Common Causes
- Medications – antibiotics, magnesium containing antacids, electrolyte elixirs, digoxin, methyl-dopa.
- Bolus feeding or rapid delivery of feed.
- Infection or microbial contamination.

Treatment
- Commence stool chart.
- Review medication
- Take stool specimens for microbiology to confirm that infective agent is not the cause. Request test for Clostridium difficile toxin.
- If stool sample is positive, treat. DO NOT STOP THE FEED.
- If stool samples are negative, contact the medical team or GP to commence hypomotility agents such as loperamide or codeine phosphate if appropriate.
- Contact the medical team or GP or Pharmacist to review prescriptions and stop any medications where possible that may exacerbate diarrhoea.
- Contact the Dietitian to review the feeding regime as soon as possible.
10. **Guidelines for Management of Enterally Fed Adult Patients with Diabetes**

Every attempt should be made to prevent or minimize hypoglycaemia and hyperglycaemia in patients with diabetes who are being enterally fed. Warning signs of hypoglycaemia are not easily identified in patients who are unwell or unable to communicate.

A normal blood glucose level may be too narrow a margin for control in patients outside the critical care setting (where insulin adjustments can be made hourly) and could be instrumental in hypoglycaemia.

All patients (Derriford Hospital) with diabetes receiving artificial feeding should be referred to the dietitian and diabetes specialist nurse.

**Aims:**
To understand how enterally fed adult patients with diabetes should be managed.

**Objectives:**
- To understand the importance of maintaining the prescribed feed regimen and rate of delivery in order to meet the patients nutritional requirements.
- To be aware of timing and appropriate administration of diabetes medication in relation to the feeding regimen and rest period, and the consequences of not doing so.
- To identify other factors which may contribute to a hypoglycaemic event.
- To regularly monitor patients blood glucose
- To understand actions to take for the immediate treatment and medium term treatment of an identified hypoglycaemic event.
- To understand how to prevent further episodes

**Nutrition Support for People with Diabetes**

- When providing nutritional support to patients with diabetes the main treatment aim should be to avoid the extremes of hyperglycaemia and hypoglycaemia.
- Blood glucose should be monitored at least four times per day. More frequent monitoring may be necessary in less stable patients.
- Blood glucose should be maintained at a target agreed by caring medical practitioner taking into account individual patient circumstances.
- Warning signs are not easily identified in patients who are unwell or unable to communicate therefore frequency of monitoring is essential.
Risks for Hypoglycaemia:
- Inappropriate use of diabetic medication.
- Interruption of nutrition support e.g. tube displacement.
- Vomiting of patient on insulin or sulphonylureas.
- Diabetic gastroparesis.
- Resolution of severe stress.
- Reduction in drugs that induce hyperglycaemia.
- Deterioration in renal function
- Severe hepatitis.

10.1 Treatment of Enterally Fed Patients when Blood Glucose is less than 4mmol/l

- If a patient is able to swallow safely and has a functioning gut:
  - 10 –20g refined carbohydrate immediately e.g.
  - 2 –4 heaped teaspoons sugar
  - 20-30mls Polycal (Nutricia).

If a patient is ‘Nil By Mouth’ and an enteral feeding tube in place, give 20-30mls Polycal via gastrostomy or NG tube. For home enterally fed patients a sugar solution may be used.

- Restart feed at the prescribed rate.

- Re-test blood glucose after 10 minutes, if < 4.0mmol/l repeat 10-20g carbohydrate. Continue to retest blood glucose at 10 minute intervals retreating (as above) if necessary until blood glucose is within the agreed target range. Repeat up to 3 times if needed. If still <4mmol/L after 3 times, start IV dextrose @ 100ml/hour (acute unit)

- Complete the infusion of feed.

If the enteral feed is stopped for any reason (acute unit) eg. investigation or if the feeding tube is displaced, 1000ml of 5% dextrose should be prescribed on the IV prescription chart and infused via a volumetric pump over 6 hours.
Consider setting up IV insulin and fluids sliding scale (blue form ‘Fasting patients, not eating and drinking’). For patients at home contact GP

- Acute Unit: Contact the medical team if blood glucose level decreases further or cannot be increased.
- Community: Contact the GP if blood glucose level decreases further or cannot be increased.
11. Home Enteral Feeding

It is essential that patients/carers/community staff nurses be adequately trained to administer enteral feeds and care for the feeding tube prior to discharge. They must also be familiar with the practical aspects of ongoing feed and equipment supply. Training is carried out on the ward prior to discharge by the nurses who are responsible for completing and signing a checklist provided by the dietitian. Safe discharge of patients requires good communication between ward staff, acute and home enteral feeding dietitian and discharge coordinator. Patients in whom tubes are placed in the outpatient setting are trained to administer feeds and trained in the care of the tube by the Home Enteral Tube Feeding Dietitian.

11.1 Discharge Procedure for Patients Requiring Home Enteral Tube Feeding (HETF) (Dietitian checklist)

1. Anticipate discharge and plan ahead.

2. Establish the patient on a suitable regimen for HETF.

3. Check location of planned discharge e.g. own home, within Plymouth PCT or out of area. NOTE: If out of area establish dietetic department covering this area. Contact the dietetic department by telephone to establish patient needs for feed and equipment on discharge.

4. Check if District Nurse is needed.

5. Inform Discharge coordinator of patients pending discharge.

6. Provide ward nurse with ‘Ward Checklist for Home Enteral Tube Feeding (Discharge Equipment)’. This form must be completed for all patients discharged on HETF by the nursing staff. It must be signed and dated for each stage and then filed in the patient’s medical record.

7. Provide ward with ‘Checklist for Teaching Patients on Home Enteral Tube Feeding’ . This form must be completed for all patients discharged on HETF by the nursing staff. It must be signed and dated for each stage and then filed in the patient’s medical record.

8. Confirm with nursing staff that patient or carer is able to carry out feeding and aftercare procedure.

9. Provide patient/carer with:
   - Enteral feeding pump (note type and serial number)
   - Drip stand
   - Instructions for Home Enteral Tube Feeding
   - Feeding pump instruction booklet
10. Contact Home Enteral Feeding Dietitian to inform of transfer (x 41925).

11. Complete and send (via post or via AC Dietetics drive) transfer letter to the Home Enteral Feeding Dietitian or GP as appropriate.

**Note:** Any patient transferred to the following hospitals will be accompanied by their medical notes which should have a complete dietetic assessment and summary included and so do not require additional written transfer information: Mount Gould Hospital, Liskeard Hospital, Tavistock Hospital
11.2 Ward Checklist for Teaching Patients on Home Enteral Tube Feeding (Nasogastric (NG), Gastrostomy and Jejunal Tubes)

The following checklist should be completed by the RGN prior to discharge:
Nurse signature and date when actioned or state N/A

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Inform your ward Dietitian or contact the Department of Nutrition &amp; Dietetics (Ext 52266) of the patients discharge.</td>
</tr>
<tr>
<td>2.</td>
<td>Patient/carer understands why enteral feeding is required.</td>
</tr>
<tr>
<td>3.</td>
<td>Patient/carer demonstrates ability to set up the feeding system correctly.</td>
</tr>
<tr>
<td>4.</td>
<td>Patient/carer demonstrates ability to use the feeding pump.</td>
</tr>
<tr>
<td>5.</td>
<td>Patient/carer has been instructed on bolus feeding if required.</td>
</tr>
<tr>
<td>6.</td>
<td>Medication administered via tube discussed with pharmacist re suitability</td>
</tr>
<tr>
<td>7.</td>
<td>Patient/carer demonstrates ability to flush the tube and administer drugs if needed correctly.</td>
</tr>
<tr>
<td>8.</td>
<td>Patient/carer demonstrates understanding of hygiene during feed delivery &amp; storage.</td>
</tr>
<tr>
<td>9.</td>
<td>Patient/carer has been instructed on what to do in the event of tube blockage.</td>
</tr>
<tr>
<td>10.</td>
<td>Patient/carer understands the importance of patient positioning during feeding.</td>
</tr>
<tr>
<td>11.</td>
<td>Patient/carer knows how and who to contact if problems should arise.</td>
</tr>
<tr>
<td>12.</td>
<td>Patient/carer understands the need for follow up appointment if required.</td>
</tr>
<tr>
<td>13.</td>
<td>Patient/carer has been given information on home delivery service for feed and equipment, or how to get feed and equipment.</td>
</tr>
</tbody>
</table>
For patients receiving NG feeding only:
Patients should only be discharged home on NG feeding following MDT discussion and documentation of agreement

1. Patient/carer is able to confirm position of NG tube by demonstrating ability to aspirate from tube and testing aspirate with pH sensitive paper (Merck CE 0-6). He/She understands why it is essential to check tube position prior to each feed period.

2. Patient/carer has been given written information on checking position of NG tube (NPSA document – in ward nutrition folder).

For patients receiving Gastrostomy feeding only:

1. Patient/carer is competent to:
   (i) Correctly advance, rotate and tension the tube if it has been in place for >10 days OR change the water in a balloon gastrostomy tube
   (ii) Clean the stoma site

2. Patient/carer has been provided with appropriate written aftercare information by Endoscopy/Radiology/Dietetic department.

Discharging Nurse Signature:
Print name:
Date:
11.3 Ward Checklist for Home Enteral Feeding (Discharge Equipment)

The following checklist should be completed by the RGN prior to discharge.
- Please ensure the ‘Ward checklist for teaching patients on Home Enteral Feeding’ is also completed.
- Please keep a copy of both lists with the nursing documentation.
- Discharge requires at least 1 working day for all departments.

1. Contact Department Nutrition & Dietetics Ext: 52266
   Nurse Signature_____________ (State: Ward, Patient name, Discharge destination)

2. Contact District Nurse/Onward care team
   For follow up of stoma site and arrangement of syringes for medication.
   Ext: 32011 (Cornwall), Ext 31180 or 31179 (Devon), Ext. 32004 or 31040 (Plymouth)
   Nurse Signature_____________

3. Order from Pharmacy Ext: 53421:
   14 days_________ feed on TTA’s (____ x 500ml Easybags)
   Date ordered_________ Signed_________________
   Date received_________ Signed_________________

4. Order from SDU Ext: 53809 or 52031 (enquires):
   14 x Applix pump set easybag (with/without med port 7752053/7752055)
   14 x Applix pump set bag resevior 7751714 or Applix pump set Hydrobag 7751101 if required.
   Date ordered _______________Signed______________
   Date received______________Signed______________

5. Order from E proc or obtain from ward supplies
   _______ x 60ml enteral syringes (purple) Order No. FTA 047
   Dressing packs if required for gastrostomy or jejunostomy tubes
   Date ordered _______________Signed______________
   Date received______________Signed______________

   NG tubes only
   1 x Packet pH indicator strips
   Date ordered _______________Signed______________
   Date received______________Signed______________

   Dietitian to organise:
   1 x Applix Smart pump at discharge (Ensure power cable is attached to pump)
   1 x Pump stand at discharge
   Signed Dietitian_________________Date__________________

   Patient / carer competency confirmed Nurse Signature_____________

   Above checklist completed and filed with patients nursing documents
11.4 Follow up at Home

Follow up at home is via GP, District Nurse (as appropriate) and Home Enteral Feeding Dietitian. All patients should be telephoned within two working days of their discharge from hospital or transfer by HEF dietitian. The HEF Dietitian should visit the patient at home within 10 working days. Patients or carers should contact the HEF Dietitian if feed related problems arise at home. All patients should be reviewed by the HEF dietitian every 3-6 months unless requested otherwise. Contact with GP and other Health Care Professional if appropriate at least once per year by standard review letter, more frequently if changes to treatment occur. The annual review letter should summarise all of the contacts for that year even if changes to treatment have not occurred.

12. Useful Contact Numbers

- Home Enteral Feeding (HEF) Dieticians, Estover Health Centre, Tel: 01752 314925
- Nutrition and Dietetic Department, Derriford Hospital, Tel 01752 792266
- Pharmacy Information, Tel 01752 763404
- Endoscopy Nurse Specialist, Derriford Hospital, Tel. 01752 517814
- Medical Imaging Sister, Derriford Hospital, Tel. 01752 792487
- Community Diabetes Specialist Nurse, Tel. 01752 792962

Healthcare Staff are available to advise and support staff and patients with both routine care and complex enteral feeding needs (Monday -Friday 8.30-4.30pm). Out of hours contact GP or Derriford Hospital Switchboard, Tel: 08451 558155

Appendices:

The appendices are up to date according to the date of the Nasogastric and Gastrostomy Feeding Guidelines for Adults. Always check review date and contact the relevant Hospital for current information, if outside of review date.
Appendix 1
Pathway for PEG Placement in Derriford Hospital (Inpatient)

Patient requires endoscopically placed gastrostomy tube (PEG)

PEG referral form sent to Endoscopy Dept (MS)

Consider referral to Radiology Dept. for RIG placement if further nutritional intervention is considered appropriate (MS)

Patient assessed for PEG suitability (NE)

PEG Appropriate

YES

NO

1. Patient consent obtained (if able) and date set for PEG placement (NE)
2. Ward informed and instructions for preparation given (NE)
3. Medical staff request for relevant blood tests and consent (if pt. unable) (NE)
4. Acute Dietitian informed (NE)

PEG Placed (ED)

1. PEG aftercare instructions are given to ward staff, timing of tube rotation discussed (NE)
2. Acute Dietitian referral for PEG feeding regime (WNS)
3. Feeding regime provided (AD) and feeding commenced (WNS)

Preparation for discharge

1. Home enteral tube feeding equipment pack for discharge and feeding pump given to patient (AD)
2. Patient or carer trained on feed delivery using checklist in Ward Nutrition Folder or provided by Acute Dietitian and trained on care of tube (WNS)

Discharge date decided (MS)

1. Acute Dietitian informed (WNS)
2. Feed (14 days supply) ordered from Pharmacy Dept. (WNS)
3. Pharmacist referral to review medication and suitability for feeding route (WNS)
4. Home Enteral Feeding Dietitian informed and transfer letter sent (AD)

Patient contacted at home within 2 working days of discharge and visited at home or Nursing Home within 10 days of discharge. GP informed of visit and follow up arrangements (HEFD)

1. Available from Nutrition Support Team webpage on Plymouth HealthNET
Appendix 2
Pathway for PEG Placement in Derriford Hospital (Outpatient)

Patient requires endoscopically placed gastrostomy tube (PEG)

PEG referral form\(^1\) sent to Endoscopy Dept. (MS)

Patient contacted to arrange a date for assessment for PEG suitability

PEG appropriate?
- YES
- NO

Consider referral to Radiology Dept. for RIG placement if further nutritional intervention is considered appropriate (MS)

1. Patient advised on PEG aftercare, given written information and advised on blood tests required prior to procedure (NE)
2. Patient consent obtained (if able) and date set for PEG placement (NE)
3. GP informed, request for relevant blood tests and consent (if pt. unable) (NE)
4. Home Enteral Feeding Dietitian informed (NE)

Patient visited at home (HEFD)
- 1. Tube care, feeding and equipment needs discussed
- 2. Patient registered on Homecare delivery service

PEG Placed (ED)

1. PEG aftercare instructions given to patient, tube rotation discussed and first water flush given (NE)
2. District Nurse referral (as appropriate) (NE)

Patient contacted at home within 2 working days of discharge and visited at home or Nursing Home within 10 days of discharge. GP informed of visit and follow up arrangements (HEFD)

Note: Further information on all aspects of Enteral Feeding is available on the Nutrition Support Team web page on Plymouth HealthNET

1. Available from Nutriton Support Team web page on Plymouth HealthNET

\(^1\) Available from Nutrition Support Team web page on Plymouth HealthNET
Appendix 3
Pathway for Radiologically Inserted Gastrostomy Tube (RIG) Placement in Derriford Hospital
(patient not requiring enteral feeding)

Patient requires gastrostomy tube but failed or inappropriate for endoscopically placed tube

X Ray form requesting RIG sent to Radiology Dept (MS)

Existing Inpatient

Outpatient

Date set for RIG placement (RS)

1. Hospital bed booked (if outpatient) (MS)
2. Medical staff request for relevant blood tests (RS)
3. Acute Dietitian informed (RS)
4. Home Enteral Feeding Dietitian informed (AD)

RIG placed with consent (RD)

1. RIG aftercare discussed with patient and arrangements for stay sutures to be removed, equipment for tube care 1 and written information given (RS)
2. Acute Dietitian informed and first tube flush given (RS and WNS)
3. Patient advised on tube flushing (AD)

Discharge date decided (MS)

1. Acute Dietitian informed (WNS)
2. Radiology Sister informed (WNS)
3. Home Enteral Feeding Dietitian informed (AD and RS)
4. Patient registered on Hospital to Home delivery service (HEFD)

Patient contacted at home within 2 working days of discharge and visited at home or Nursing Home within 10 days of discharge2 (HEFD) GP informed of visit and follow up arrangements (HEFD)

Note: Further information on all aspects of Enteral Feeding is available on the Nutrition Support Team web page on Plymouth HealthNET

1.1x 14 F Foley catheter, spigot for Foley catheter, 5ml luer slip syringe, 1x catheter tip syringe
2. Oncology patients who are discharged home without being seen by the radiology sister will be visited at home within a day of discharge by the HEFD
Pathway for Radiologically Inserted Gastrostomy Tube (RIG) Placement in Derriford Hospital
(patient requiring enteral feeding)

Patient requires gastrostomy tube but failed or inappropriate for endoscopically placed tube.

X Ray form requesting RIG sent to Radiology Dept (MS)

Existing Inpatient
Date set for RIG placement (RS)
Outpatient

1. Hospital bed booked (if outpatient) (MS)
2. Medical staff request for relevant blood tests (RS)
3. Acute Dietitian informed (RS)
4. HEF Dietitian informed (AD)

RIG placed with patient consent (RD)

1. Acute Dietitian referral for RIG feeding regime (WNS)
2. Feeding regime provided (AD) and feeding commenced (WMS)
3. RIG aftercare discussed with patient and arrangements for stitches to be removed, equipment for tube care and written information given (RS)

Preparation for discharge

1. Home Enteral Tube Feeding Equipment Pack for discharge and feeding pump given to patient (AD)
2. Patient and carer trained on feed delivery using checklist in ward Nutrition Folder or provided by Acute Dietitian and trained on care of tube (WNS)

Discharge date decided (MS)

1. Acute Dietitian informed (WNS)
2. Radiology Sister informed (WNS)
3. Pharmacist referral to review medications and suitability of administration route (WNS)
4. Feed (14 days supply) ordered from Pharmacy Dept. (WNS)
5. Home Enteral Feeding Dietitian informed and transfer letter sent (AD)

Patient contacted at home within 2 working days of discharge and visited at home or Nursing Home within 10 days of discharge (HEFD) GP informed of visit and follow up arrangements (HEFD)

Footnotes
1. Outside of normal working hours (i.e. 8.30am-4.30 pm Mon-Fri) ward nursing staff to use ‘Adult Gastrostomy Feeding Regime’ available on Nutrition Support Team webpage on Plymouth HealthNET and in ward nutrition file
2. 1x 14 F Foley catheter, spigot for Foley catheter, 5ml luer slip syringe and 1x catheter tip syringe
Appendix 5
Risk assessment for syringe choice for patients with enteral feeding tubes in primary care.

Single Use syringes or reusable enteral syringes for patients with enteral feeding tubes in primary care.

If the patient meets all the criteria below then reusable enteral feeding syringes may be used - 1 reusable syringe every 7 days

The patient is living in their own home. YES NO
The home environment is socially clean. YES NO
The patient is not immuno-compromised. YES NO
The patient is over the age of 12 months. YES NO
The patient does not have a jejunal enteral feeding tube. YES NO
The syringe is being used to flush water only. YES NO
The patient and/or carers understand the need for cleanliness YES NO

Abbreviations:

NE Nurse Endoscopist
HEFD Home Enteral Feeding Dietitian
AD Acute Dietitian
MS Medical Staff
ED Endoscopy Department
RD Radiology Department
RS Radiology Sister
MS Medical Staff
WNS Ward Nursing Staff
DN District Nurse
All policies are required to be electronically signed by the Lead Director.

(The policy will not be accepted onto Healthnet until the e signature is received.)

The proof of signature for all policies is stored in the policies database.
The Lead Director approves this document and any attached appendices.

Signed:

Date: