

NASOGASTRIC (NG) & NASOJEJUNAL (NJ) FEEDING TUBES – POLICY FOR INSERTION AND MANAGEMENT IN ADULT PATIENTS (EXCLUDES PAEDIATRICS AND NEONATES)

		POLICY	
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Enteral Tube Feed Monitoring Chart (Adults) Guideline for glycaemic control in patients with diabetes taking enteral nutrition SOP for imaging of nasogastric tubes in adults, children and infants	<i>All reviewed/ updated at same time as this policy</i>
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KEY MESSAGES

- Nasogastric (NG) tube feeding is the choice for patients who require short term enteral feeding i.e. 4-6 weeks and who have a functioning Gastrointestinal tract.
- The insertion of the tube will be completed by a competent practitioner, and details of insertion documented on the Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube
- A maximum of 3 attempts at inserting the tube should be made at any one time to prevent trauma to the nasal/oesophageal mucosa, and if difficulty in inserting the tube this should be escalated accordingly via the medical team to ensure adequate attempts are made to secure a safe enteral route for nutrition/fluid/medication.
- The position of a NG tube on initial placement will be confirmed by pH of 5 or below as first line test, with x-ray only being used when no aspirate could be obtained, or pH indicator paper has failed to confirm the location of the NG and all the recommended steps to gain an aspirate as documented on the NPSA decision tree have been followed.
- ***Following insertion of the tube the guidewire must be removed immediately. The NG tubes at SFHFT are radiopaque and NPSA compliant. Guidewires should never be reinserted under any circumstances.***
- Nasogastric tubes must not be flushed, or 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.
- The position of the NG tube will be checked and confirmed prior to any feed, medication or fluids being administered via the tube, and the result documented on the NG bedside check and x-ray interpretation document.
- **Whoosh tests, acid/alkaline test using litmus paper, the absence of respiratory distress or interpretation of the appearance of aspirate are NEVER to be used to confirm nasogastric tube position as these are not reliable.**

1.0 INTRODUCTION

Enteral nutrition refers to a method of feeding whereby nutrition is given via a tube into the gastrointestinal tract. Nasogastric (NG) feeding tubes are passed into the stomach via the nasopharynx for the purpose of providing nutrition. NG tubes are commonly used across the Trust, in a wide range of clinical settings. NG feeding is the most common method of providing artificial nutritional support for up to 6 weeks and is generally the first choice in the acute setting. NG feeding is an active nutritional support commonly used to maintain or improve the nutritional status of patients who are unable to take sufficient nutrition orally (Stroud et al 2003). Enteral tube feeding should be considered in people who are malnourished or at risk of malnutrition that have a functioning, accessible gastrointestinal tract and are unable to maintain health by adequate oral feeding (NICE, 2017).

This policy refers to the insertion of a Nasogastric tube (NGT) and Nasojejunal tubes (NJT) for the purpose of administering feed, fluids, and medication, verifying position and on-going management of NGT/NJT's. The policy also provides guidance for the safe practice for insertion and management of Nasal fixation devices in adults to secure NGT/NJT. It is intended to provide guidance and set safety standards for all clinicians.

This policy has been revised to comply with National Patient Safety Agency (NPSA) safety alerts (2005 and 2011) which were issued following multiple deaths and serious harm to patients due to misplaced NGT's. Further patient safety alerts and guidelines for NGT's have been issued by NICE (2006, 2017), NHS Improvement (2016), the Healthcare Safety Investigation Branch (HSIB) 2020, The British Association for Parenteral and Enteral Nutrition (BAPEN 2020) and the National Nutrition Nurses Group (NNNG, 2023). These alerts provide recommendations, guidance, and resources on how to improve safety and reduce the risk of death and severe harm caused by misplaced NGTs.

NPSA Never Event Data Definitions (BAPEN, 2020)

A Never Event (NE) is defined as “wholly preventable where guidance or safety recommendations are available at national level, and should have been implemented by all healthcare providers” - (as found in “Never Events list, 2018” published by NHSI
https://improvement.nhs.uk/documents/2899/Never_Events_list_2018_FINAL_v7.pdf)

Introducing fluids or medication into the respiratory tract or pleura via a misplaced nasogastric or orogastric tube is a Never Event. The definition of nasogastric or orogastric tube misplacement is: “Misplacement of a naso- or oro-gastric tube in the pleura or respiratory tract that is not detected before starting a feed, flush or medication administration” (BAPEN 2020).

Between September 2011 and March 2016, 95 incidents were reported to the National Reporting and Learning System (NRLS) and/or the Strategic Executive Information System (StEIS) where fluids or medication were introduced into the respiratory tract or pleura via a misplaced nasogastric or orogastric tube.

While this should be considered in the context of over 3 million nasogastric or orogastric tubes being used in the NHS in that period, 7 of these incidents show that risks to patient safety persist. Checking tube placement before use via pH testing of aspirate and, when necessary, x-ray imaging, is essential in preventing harm.

The vast majority of NGTs in the UK are passed safely and have their position confirmed using pH checks without issue, however, misreading X-ray's is the single most common cause of NES (BAPEN 2020). Oesophageal placement occurs in 19% of blind intubations (Hanna 2010). This complication is not recorded as a Never Event but contributes to the risk of aspiration pneumonia.

The perception of NGT feeding as a "simple" procedure must be changed to that of a "complex" and dangerous procedure and limited to properly trained and competent health care professionals (BAPEN 2020).

The Trust is committed to reducing the incidence of incorrectly placed Nasogastric and Nasojejunal (NJ) tubes and this policy sets out the trust standards which must be followed in practice.

2.0 POLICY STATEMENT

The scope of this policy is:

- To provide comprehensive guidance using evidence-based practice to all healthcare professionals and trainees who care for patients with an NG/NJ tube for feeding.
- Aimed at standardising the care of patients with NGT/NJTs to ensure that insertion and ongoing management is safe, effective, and comfortable for the patient.
- To stipulate the principles for the safe insertion of NG tubes.
- To specify safe methods for checking the position of NG feeding tubes and warns against unsafe methods, which should not be used.
- To set the standards for practice and reflect the requirements of the National Patient Safety Agency (NPSA) and National Institute for Clinical Excellence (NICE).
- To improve patient safety across Sherwood Forest Hospitals NHS Foundation Trust, consequently improving patient care, reducing risk of a Never Event.
- Applicable to adult in-patient areas only. Children and neonates guidance can be sought via the current [Nasogastric Tube Feeding in Children Guideline](#). This policy excludes consideration of wide bore NGTs for gastric drainage (often referred to as Ryles Tubes).

3.0 DEFINITIONS/ ABBREVIATIONS

Enteral Feeding	Feeding into the gastrointestinal tract
Nasal Bridle	A tube retaining device which is placed around the septum to secure the nasogastric/nasojejunal tube
Nasogastric feeding tube (NGT)	A fine bore feeding tube passed via the naso-pharynx with the tip siting within the stomach.
Orogastric Feeding tube (OGF)	A fine bore feeding tube passed via the oro-pharynx with the tip siting within the stomach.
Nasojejunal feeding tube (NJT)	A fine bore feeding tube which is longer than 110cm where the tip sits within the first part of the small bowel some are weighted or have modified ends to aid passage into the small bowel.
NEX Measurement	The NEX measurement is estimated as follows: place exit port of the NG tube at tip of nose, extend the tube to the earlobe and then to the xiphisternum.
KMH	King's Mill Hospital
MCH	Mansfield Community Hospital
NH	Newark Hospital
PEG	Percutaneous Endoscopic Gastrostomy
RIG	Radiologically Inserted Gastrostomy
PEG-J	Percutaneous Endoscopic Gastro-Jejunostomy
RIG-J	Radiologically Inserted Gastro-Jejunostomy
ED	Emergency Department
AHP	Allied Health Professional

4.0 ROLES AND RESPONSIBILITIES

The overall responsibility for ensuring the application of this policy lies with the Clinical Chair, Head of Nursing, Divisional Manager and Matron of each division.

Nutrition and Hydration Steering Group

- The Nutrition and Hydration Steering Group is accountable to the Trust Board via the Clinical Outcomes and Effective Care (COEC) and will send activity reports to Nursing, Midwifery and Allied Health Professional (AHP) Board.

Medical Staff

- It is the responsibility of the Divisional Leadership teams to ensure the dissemination and implementation of this policy. Medical staff are responsible for the decision to place NG feeding tubes, and for risk assessments for ongoing use ([Appendix D](#)).

Dietitian

- The Dietitian is responsible for completing a nutritional assessment of the patient and designing an appropriate feeding regimen, taking account of any risks.

Matrons/ Sister/Charge Nurses

- Matrons/ Sister/Charge Nurses are responsible for ensuring the dissemination and implementation of this policy within their clinical ward areas and for demonstrating compliance of staff competency through audit.

Registered Nursing Staff

- Registered nursing staff are responsible for ensuring their own compliance with this policy.

5.0 APPROVAL

This document has been approved by the Nutrition and Hydration Steering Group Committee.

6.0 DOCUMENT REQUIREMENTS

6.1 OVERVIEW

All staff involved in the insertion of NG tubes and/or position checks must have undergone appropriate training. They must be certified as competent to carry out this procedure and ongoing care (NPSA 2011, NICE guidelines 2006, NHS England 2016, BAPEN 2020, and HSIB 2020).

All information pertaining to the insertion and ongoing management of NG tubes should be recorded in the 'Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube'. Copies for use in practice can be obtained via Clinical Illustration using ref 001630.

The bedside checklist within the 'Pathway of Care for Patients Undergoing maintenance of feed via Nasogastric Tube' should be completed for all patients following insertion of a NGT, upon all subsequent insertions, and before every administration of artificial nutrition or medication via the nasogastric tube (when feed not running). Insertion and any additional procedure information must be recorded in the patient's medical notes.

All patients starting NG feeding should be referred to a dietitian on ICE. In the absence of a prescribed regime please follow the guidance in the ["Enteral Feeding Starter Regimen"](#).

6.2 INDICATIONS AND CONTRAINDICATIONS FOR NG TUBE FEEDING.

Indications	Absolute Contraindications	Relative Contraindications
Functioning Gut (upper and lower) to allow absorption of feeds and/or medication (NICE 2017)	Non-functioning gut including but not limited to: Acute abdomen, mechanical bowel obstruction, bowel ischemia, intestinal motility disorders (i.e. ileus, high gastric aspirate, or high risk of aspiration.)	Haemodynamic instability
If likely to be no oral nutritional intake for >5 days i.e. after acute stroke, ventilation.	Nasal/pharyngeal obstruction or ulceration, Choanal atresia, Anatomical deformities i.e. Tracheoesophageal fistula, Oesophageal stricture or other abnormalities of the oesophagus. Recent radiotherapy to head and neck, Post laryngectomy, Mucositis,	Post-operative ileus, Severe gastro oesophageal reflux disease, Oesophageal/pharyngeal pouch, Oesophageal obstruction, or ulceration Oral, nasal, or oesophageal tumours or

	Actively bleeding oesophageal or gastric varices (NNGG, 2023) Allergies to NGT and securing material.	have undergone oesophageal surgery,
Unable to meet requirements with food and oral supplementation	Nasal fractures and bleeds, abnormal nasal anatomy (consider orogastric tube), basal skull fractures, unstable cervical spinal injuries, Maxillo-facial surgery/trauma/disease.	Partial gastric outlet obstruction
Increased requirements (hypermetabolic)	Gastric outlet obstruction Intestinal obstruction Intractable vomiting not resolved by anti-emetics.	Oesophageal varices
Requires short term tube feeding (4-6 weeks)	Feeding deemed inappropriate for ethical reasons	Vomiting responding to anti-emetics
	Advanced dementia or neurological impairment	INR >1.5 Platelets <100/mcL
	Patients who have clear advanced directives against enteral feeding.	

(Adapted from Lewisham and Greenwich NHS Trust, 2024)

The above table of contraindications are not all absolute, and individuals should be discussed with the relevant clinician in charge of their care before an NGT is passed. Some patients may require tubes placing under endoscopic or fluoroscopic control via Interventional Radiology. Some contraindications are relative and may be dictated by level of experience of the clinician inserting the tube. Presence of relative contraindications necessitates awareness of the potential associated risk and extra care required when placing an NGT. The rationale and plan of care should be clearly documented in the patient's medical notes.

NGT insertion can be dangerous as well as difficult in patients with altered anatomy, such as oesophageal fistula or pharyngeal pouch or in certain clinical conditions for instance basal skull fractures. In these situations, or if these are suspected, a senior clinical review should be sought prior to NGT insertion.

6.3 COMPLICATIONS

There are some potential complications to NG tube insertion that practitioners should be aware of in order to recognise and appropriately respond to these if and when they may occur.

Fine bore NG feeding tubes are preferred for gastric feeding as large bore tubes (Ryles-type NG tubes) are harder to tolerate by patients and can cause rhinitis, oesophageal reflux, and strictures and they are not licensed for use for feeding. Wide bore NG tubes are therefore only recommended for gastric decompression or very short-term feeding in Critical Care Unit, where they use a specific agreed dual use NGT.

The use of fine bore NG feeding tubes, carries risk as some patients may tolerate accidental intubation of the trachea and bronchi without any obvious signs of distress. If a misplaced tube is

not spotted and feeding commenced, the consequences can be catastrophic. Such complications include:

- Pneumothorax
- Severe pneumonia
- Emphysema
- Pulmonary haemorrhage
- Death – depending on the response to any of the above.
- Never Event

6.4 THE DECISION PROCESS FOR ENTERAL FEEDING

The decision to start NG tube feeding should be made following an individualised assessment of the risks and benefits by at least 2 competent health care professionals (NPSA 2016). An MDT approach should be utilised with medical improvement (NHS Improvement 2016). The rationale for inserting a nasogastric tube must be recorded in the patient's medical notes.

Where possible, elective placement of NG tubes should be placed during normal working hours (BAPEN 2020). When a decision is made to insert or reinsert an NG tube out of hours, the rationale for the decision must be clearly documented in the patient's medical notes. It is anticipated that these patients will be cared for in areas where sufficient senior support is available at all times of night and day.

The following patient groups are at higher risk of malplacement error or tube migration:

- Patients with a reduced level of consciousness.
- Patients who are agitated or confused.
- Patients with swallowing dysfunction.
- Patients who are retching, vomiting, or coughing.

Gaining Consent

Where possible a discussion with the patient should take place prior to the insertion of NGT. This discussion must include the rationale for enteral feeding along with its associated risks, to gain informed verbal consent. This discussion must then be clearly documented in the medical notes. If capacity is in doubt, complete a TWO STAGE TEST. If the patient lacks capacity, then the [Best Interests checklist](#) must be followed. This should be clearly documented in the patient's medical notes. Staff should follow guidance according to the [SFH Policy For Consent to Examination, Treatment and Care](#).

6.5. FINE BORE NASOGASTRIC TUBE (NGT)

When enteral feeding is required, a fine bore NGT (less than 12fr) should be used. It is important that only ENFit compliant nasogastric tubes, which are, radiopaque throughout the entire length and have externally visual markings, are used for feeding (NPSA 2016 and NHS improvement 2016). Fine bore tubes reduce the possibility of nasal erosion and skin damage along with being more comfortable and enables the patient to eat and drink more easily as condition allows.

Within this Trust it is recommended that size 10Fr NGTs are used to administer enteral nutrition in adult patients, and all syringes used to access nasogastric tubes and to administer feeds,

medications or to aspirate must be purple 60ml enteral ENFit syringes. In hospital these are single use only.

Where possible nostrils should be swapped each time, the tube is replaced to prevent nasal erosion and discomfort. Observe nostril daily for signs of discomfort and pressure damage. Nasal dressings should be changed regularly, and their security checked each shift, taking note of any skin sensitivity.

6.6. UPON INITIAL INSERTION OF NGT

The below information is to be used in conjunction with [Appendix A](#) – Flow chart for Insertion of Nasogastric Tube. This provides a list of all the equipment needed and the process that must be followed when inserting NGTs.

NG tube insertion is a clean procedure and health care professionals should adhere to universal infection control precautions throughout.

The NG tube should not be flushed or lubricated with water prior to insertion as this may give a falsely low pH reading, indicating correct placement when the tube is in fact incorrectly placed. A small amount of lubricating jelly can be used to assist insertion and increase patient comfort.

If the patient has an intact swallow, they should be encouraged to take sips of water during insertion of the NG tube enabling the inserter to progress the tube safely and comfortably with each swallow (whilst considering the risk of false pH readings as described). For patients who do not have a safe swallow, mouth care swabs can be used to moisten the mouth which will make it easier for the patient to swallow as the tube is inserted.

The tube must be removed immediately if the patient shows any signs of respiratory distress and, if possible, another attempt at insertion made. If the tube meets resistance and cannot be advanced further the procedure must be abandoned, the patient reassured, and a referral made to a more experienced practitioner.

A maximum of 3 attempts should be made at any one time. If the procedure is unsuccessful after 3 attempts stop and seek senior specialist advice (NNNG, 2023).

Once the tube is safely inserted and secured to the nose using a nasal retention dressing, ***the guidewire must be removed***. The pH of the aspirate must be checked, and the internal tube length documented on the 'Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube' care plan.

IMPORTANT

Nasogastric tubes must not be flushed with water, nor should any feed be introduced prior to confirmation of gastric placement.

This is important because:

- Any flush could cause an aspiration pneumonia if the tube is placed in the lungs.

- pH testing for gastric placement relies on collecting aspirate via the tube; anything introduced down the tube will contaminate this aspirate, potentially leading to false positive pH readings.

It is the responsibility of the person inserting the NG tube to complete the insertion record section of the 'Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube'. All qualified healthcare professionals must ensure that the insertion record shows a signed and printed confirmation of correct NG tube position before using the NG tube.

6.7 CHECKING THE POSITION OF NGT ON INITIAL PLACEMENT

Gastric position of NGT placement MUST be confirmed before anything is administered via the NGT.

Gastric position must be confirmed using the following methods:

1. **First line:** NGT aspirates and checking that pH is 5.0 or less, is confirmed using CE marked pH indicator strips.
2. **Second line:** Chest X-ray interpreted and reported on ICE (NPSA 2011)

There are new products coming onto the market for checking NGT placement. Until national recommendations changes 1st line confirmation will remain as pH testing and X-ray interpretation as 2nd line practice (NNNG 2023). It has been repeatedly shown that failure to implement the basic methods according to the best practice is the root cause for failure to detect misplaced NGT before use (BAPEN 2020).

If an NG tube is inserted in the operating theatre during laparotomy, surgical confirmation of intra-gastric or post-gastric positioning, either manually or by direct vision, this will be sufficient to allow immediate use without further assessment. NG tubes that are inserted under direct vision by specialist practitioners using endoscopy and fluoroscopy may also be used without the need for pH testing or X-ray. Where tube position has been confirmed in this manner, a free text note to this effect should be made on the 'Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube'. Subsequent use of the tube will be subject to the checks detailed in this policy.

First line: pH Testing

The pH of an aspirate from the NG tube can be tested effectively using pH indicator strips CE marked for use in human gastric aspirate (NHS Improvement Resource Pack).

A pH reading 1 - 5 means the content is acidic and tube is safe to use. X-ray is not required to confirm NGT placement and feeding through the NG feeding tube can be commenced as soon as the insertion record has been completed.

pH of 5.5 or above DO NOT FEED. A pH of 5.5 and above could indicate bronchial placement of NGT. Leave up to 1 hour and aspirate again, clearly document in medical

notes and on 'Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube' care plan. If pH remains 5.5 or above proceed to X-ray.

Statement regarding pH range

Following a review of the national guidance Sherwood Forest Hospitals have made the decision to set the acceptable limit for pH aspirate to 5.0 to be the recommended safe pH to deliver a feed.

Although NPSA guidance does say a pH of 5.5 is acceptable there is also an additional safety notice to say that we cannot be confident the tube is positioned correctly, therefore by working to a pH of 5.0, we are increasing patient safety and the confidence of those checking the position of a tube that it is safely placed.

Brands of pH testing strips can make it difficult to see colour changes between readings so again by setting 5.0 as our acceptable pH level we remove the need for a clinical judgement and we can have greater confidence that at a pH 5.0 our NG tube is in the correct place, and it is safe to feed.

6.8 PROBLEMS OBTAINING ASPIRATE ON INITIAL INSERTION

Aspirating fluid from NG tubes can be problematic. Some useful advice as follows:

- Ensure that correct length of tube is established using NEX measurement + 5-10cm (BAPEN 2020) to ensure aspirate can be obtained.
- Use the correct sized, purple-coloured oral/enteral polyurethane syringe as advised by the NG tube manufacturer.
- Instil 10-20mls of air into the NG tube prior to aspiration. This will clear any debris from the end of the tube and dislodge the tip of the NG tube if it is imbedded in the gastric mucosa. The patient's medical condition should be considered prior to instilling air down the NG tube, and if there is any doubt as to whether this is appropriate air should not be injected. This method must not be used for subsequent checks once the tube has been used for feeding and medications.
- Recheck NEX measurement + 5-10cm and compare the length of the NGT at nostril and consider if NGT position needs to be changed.
- If safe to do so, ask the patient to drink a small amount of water then try again to aspirate.
- Give mouth care to patients who are nil by mouth according to their oral hygiene care plan.
- Change the position of the patient to move the fluid level in the stomach e.g. if sitting up, turn the patient onto the left side which will allow the tip of the tube to enter the gastric pool.
- If possible, advance the tube 10-20cm in adult patients. This may allow the NG tube to pass into the stomach if it has been in the oesophagus.

IMPORTANT

If unable to obtain an aspirate or the aspirate is higher than 5.0 on initial insertion, an X-ray MUST be obtained to confirm position.

Second Line: X-RAY

refer to: [SOP for Imaging of Nasogastric tubes in adults, children and infants](#)

Chest x-rays are only used as a second line test where aspiration has been unsuccessful, or the pH indicator paper has failed to confirm correct placement. Although the use of x-ray is advocated in patients who are at risk of inadvertent placement into the respiratory tract, it should not be used 'routinely' to check tube position (NHS Improvement 2016, NPSA 2005, Metheny 1990, Stroud 2003).

HSIB have indicated the most reliable method to confirm the position of a NGT is to obtain a chest radiograph and this is to be interpreted by someone with specific image interpretation skills. Use in conjunction with pH testing as described above, chest radiography is an appropriate second line test.

Chest radiograph misinterpretation is the most common cause of NG tube related never events (NHS Improvement 2016, NPSA 2005, 2011, HSIB 2020). If a chest radiograph is appropriate, an approved report issued by a specially trained and accredited person in the interpretation of chest radiographs must be completed before an NG tube can be used for feed, medication and/or fluid administration. Other limitations to the use of X-rays include exposure to radiation, loss of feeding time and increased patient movement (Metheny 1990). It must also be remembered that an X-ray only confirms tube position at the time the was taken. The NG tube can become displaced at any time.

It is essential that a request for chest radiography to confirm position of NG tube clearly states this is the purpose of obtaining the image. This allows the acquisition technique to be adapted and the person reporting to be clear the report must be both expedited and contain clear indication of the position.

When requesting an x-ray for the purpose of checking NG tube position, the reason for the request must be included on the request form. It is the responsibility of the radiographer to ensure the NG tube can be clearly seen on the x-ray.

When a chest x-ray is obtained to confirm position of an NG Tube, an approved report, must be issued by a person accredited in the interpretation of chest radiographs within 2 hours of the image being acquired. The tube must not be used until this report is issued and approved. Should tube use be urgent, expedited reporting can be arranged by contacting Radiology.

6.9 ONGOING POSITION CHECKS OF A NG TUBE AND MANAGEMENT

The below information is to be used in conjunction with [Appendix B](#) and [Appendix C](#)

The position of the NG tube should be checked by pH and if required x-ray imaging in the following circumstances:

- Before restarting feed after a rest period.
- Before administering medication or fluid (when feed is not running).
- If there are any concerns that the tube may have become displaced (e.g. loose tape, episodes of retching or coughing, excessive sneezing, any change in external length).
- Before bolus feeding

- If there are any new or unexplained respiratory symptoms or reduction in oxygen saturations

This check consists of checking the internal length of the tube by noting the length markings at the nostril and comparing it to the initial insertion record and that the tube is securely taped or fastened to the nose. This check must be documented on 'The Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube'.

Due to the use of continuous feeding and/or PPIs for gastric protection on Critical Care, pH testing is unlikely to confirm position for NGTs. Please refer to the [ACCU Nutritional Support Guidelines](#) for further advice.

Nasal retention dressings must be securely fixed to the patients nose and a secondary dressing can be used to the cheek. This dressing must be checked daily and replaced if loose or soiled (NNNG 2016). On accessing the NGT, check for signs of pressure damage or excoriation to the nostrils cause by the tube.

Ensure the patient is positioned greater than a 30-degree angle during and for one hour after feeding (NNNG 2016). The NGT must be flushed before and after administration of feed and before and after each individual medication. Dispose of jugs and syringes after as these are single use.

Care must also be taken when obtaining subsequent aspirates to check pH if there is a concern over tube position. If water has been used to flush the tube following completion of an earlier feed, then approximately 5mls of fluid will need to be aspirated from the NG tube and discarded before obtaining a further aspirate sample to confirm gastric pH.

Routine mouth care is vitally important for the patient unable to eat or drink; mouthwashes and oral mouth care should be offered in accordance with the patients 'Care for patients requiring assistance with Oral Care Plan'.

If the nasogastric tube is blocked, the safest action to take is to remove it and insert a new NG tube (NNNG 2023)

6.10 DIFFICULTY OBTAINING ASPIRATE

If aspirate cannot be obtained follow the below steps

- If possible, turn the patient onto their left side.
- Provide good mouth care in accordance with the patients oral and hygiene care plan.
- Recheck the NEX + 5-10cm and compare to the insertion record and consider advancing or withdrawing the tube (do not reinsert the guidewire)
- Consider if the nasogastric tube needs to be changed.
- If the patient has a safe swallow, ask them to drink some squash/juice as this may facilitate an aspirate to be tested.
- Perform an individualised risk assessment and if safe to do so, instil 10-15mls of air using a 60ml ENfit oral/enteral syringe through the NGT. This is not a whoosh test. This is to release the end of the tube (NNNG 2023)

If all the above steps have been attempted, proceed to perform a chest x-ray to confirm tube position.

6.11 ONGOING CHECKS - IF ASPIRATE HAS BEEN OBTAINED AND PH IS 5.5 AND ABOVE

In some situations, such as when patients are continuously fed, when being treated with acid-reducing medications and when medications are frequently given via an NGT, it may be possible to obtain aspirate with a pH of 5.5 and above therefore, there are some limitations to confirming tube position using this method. Gastric pH can be affected by medications, particularly proton pump inhibitors (e.g. Omeprazole, Lansoprazole, Pantoprazole) and H2 receptor antagonists (e.g. Cimetidine, Ranitidine, Nizatidine) and these can cause the stomach acid to have a high pH. Consideration should be given to changing the timing of medication administration or aspiration to enable correct pH readings to be carried out.

The most likely reason for an elevated pH is the dilution of gastric acid by feed. Feed being stopped for up to an hour will allow time for the stomach to partially empty and the pH to reduce. If there is any doubt about the position of the tube and/or the pH of the aspirate, then feeding should not be commenced. A risk assessment should be carried out and senior clinical advice sought from the responsible team.

It is possible for the tip of the tube to displace upwards into the oesophagus, particularly with retching, coughing or vomiting, increasing the risk of aspiration, even if the external length appears unchanged (NNNG 2004). If suspected, additional checks as per initial insertion are necessary to confirm gastric placement. Removal and replacement of the tube or performing a chest x-ray may be necessary if this is suspected.

Consider rechecking the patients NEX measurement +5-10cm according to the initial insertion record as the NGT may have advanced into the duodenum causing the pH to be 5.5 or above.

Daily X-rays are not practical, and patients may experience delays to feeding while waiting for these checks to be completed (NPSA 2016, NNNG 2023). In circumstances where initial placement was appropriately confirmed and there is no reason to suspect displacement, an alternative method of determining if the tube remains correctly placed is through external observations of the tube AND completion of an individualised risk assessment ([Appendix D](#)) this **must** be completed by the treating SpR (Speciality Registrar) or above, prior to administration of medications and/or feed.

6.12 NASOJEJUNAL TUBES (NJT)

Nasojejunal (NJ) tubes are fine bore feeding tubes that are longer than 110cm. The tip of an NJ tube sits within the first part of the small bowel, some are weighted or have modified ends to aid passage into the small bowel.

Nasojejunal tubes should be placed either radiologically or endoscopically. Please refer to these separate departments on ICE should they be required.

Indications	Contraindications	Relative Contraindications
Post pyloric feeding required.	Basal skull fracture	Frequent nosebleeds

Gastric reflux/ gastroparesis	Trachea-oesophageal fistula	Nasal polyps/ injuries
Therapeutic requirement to bypass duodenum i.e. pancreatitis.		Upper GI obstruction
Upper gastro-intestinal obstruction/ fistula		Coagulation disorder
Peri-operative feeding		Oesophageal pouch or stricture

The make and size of NJ tube should be documented in the nursing and medical records. Patients who have a Nasojejunal tube should have their pre, post procedure and ongoing care documented in the medical records and on the “Care Plan for Patients undergoing maintenance of feed via Nasojejunal Tube (NJ)”. Copies for use in practice can be sought from Clinical Illustration using ref 001620. The length of tube must be clearly documented on this care plan so that any movement of the tube is easily identified.

Post placement care:

As this method bypasses the gastric acid, it is important to ensure sterile procedures during feed preparation. The feeding regimen must be followed carefully as the rate must be gradually increased to prevent nausea and diarrhoea as there is no stomach reservoir to hold large amounts of feed. Some patients may be fed over 24 hours initially as there is no reservoir to hold large feed volumes. NJ tubes must be flushed a minimum of 8 hourly using sterile water and a push/pause technique. As these tubes easily block it is recommended that drugs are not administered via the NJ tube. Suitable alternatives should be discussed with Pharmacy. It is possible for NJ tubes to migrate back into the stomach. Feed noticed in vomit, gastric aspirate, or an increase in pain in patients should be notified to the medical staff and dietitian for consideration of performing an abdominal x-ray to confirm tube position.

Care of a Nasojejunal tube

Ensure that the jejunal tube is flushed with sterile water whenever the feed is interrupted. Otherwise, the feed should be administered as directed by dietician. If the jejunal tube is not in use, ensure that the tube is flushed at least every 8 hours with sterile water using a purple ENFit 60ml enteral syringe.

Drug administration via Nasojejunal tubes.

Ensure that the clinical pharmacist is aware that the tube is jejunal rather than gastric. In all cases patients should be monitored for clinical signs to establish that the medications are being sufficiently absorbed to give therapeutic levels. When liquid preparations are administered it is important to be aware that they are hypertonic and will not be diluted with gastric contents as with intragastric administration. The hyperosmolar solution creates a gradient across the intestinal mucosa that inhibits water absorption and can cause osmotic diarrhoea.

Radiologically/Endoscopically placed Nasojejunal tubes

When the patient arrives back on the ward, make a note of the centimetre markings at the nostril and compare this against the insertion record.

The position of the tube should be checked before and after administration of feed, medications and/or fluids and at each handover between nursing staff.

If the patient vomits resulting in an altered measurement or the nurse is in any doubt that the tube is in the correct position, ascertain tube position with abdominal X-ray.

6.13 NASAL FIXATION DEVICES - BRIDLE

Nasal Bridle – Guidance for the safe practice for the insertion and management of a nasal fixation device in adults to secure a nasogastric tube (NGT) See [Appendix E](#).

When nasal retention dressings are found to be ineffective or the NG/NJ tube is repeatedly dislodged, a nasal fixation device may need to be considered. These devices should only be used following an individualised risk assessment and a discussion with a health care professional that is competent performing this procedure.

Bridles are loops which go through each nostril, around the posterior aspect of the nasal septum and then secured to the feeding tube in front of the nose. They are intended as a method of securing the feeding tube, so that they are not easily displaced. A nasal fixation device does not prevent regurgitation of the NG/NJ tube to the oesophagus and pulmonary trees but can reduce accidental removal and can reduce the need for NG/NJ tube replacements. External NG tube measurement and pH and/or x-ray are still required despite the use of these devices. Use of mittens and nasal fixation device may be considered appropriate for patients who repeatedly dislodge their NG/NJ tubes.

Nasal fixation devices should only be used when at least 3 feeding tubes have become dislodged. For guidance on patients that repeatedly dislodge NGT, refer to [appendix F](#).

If a patient is assessed as requiring a nasal fixation device (bridle) and capacity is in doubt, complete a TWO STAGE TEST. If the patient lacks capacity, follow this by completing the BEST INTERESTS check list. This should be clearly documented in the patient's medical notes and indicated on the 'Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube' OR for patients with a NJT complete the 'Care Plan for Patients undergoing maintenance of feed via Nasojejunal Tube.'

The patient must have a Deprivation of Liberty form completed once the nasal fixation device has been applied. Refer to the trusts **Deprivation of Liberty Safeguards Policy (For Adults 18 years and over)**. Further advice can be sought from the Trusts Safeguarding Team. Consider moving the patient into a more observable area of the ward and if the patient is at a high risk of causing harm to themselves whilst this device is in place, discussions must be held with the senior Registered Nurse and/or Matron on duty for consideration of 1:1 observation.

DISCHARGE TO COMMUNITY CARE

Discharging a patient from the acute setting to community services with an enteral feeding tube in place requires careful planning. At SFHT we do not discharge anyone into the community with a fine bore nasogastric tube. In the context of this policy, SFHT only discharge patients with a Nasojejunal feeding tube. A multidisciplinary risk assessment should be performed and documented prior to the patient's discharge (NHS Improvement 2016, NPSA 2011). Guidance and support can be provided by contacting the Nutrition Nurse Specialist on extension 4459 and electronically via ICE and the Dietitians on extension 3688 and electronically via ICE.

LEARNING FROM PATIENT SAFETY INCIDENTS

Feeding into the lung as the result of a misplaced NG tube was designated a 'Never Event' in England by the NPSA in 2009. 'Never Events' are serious, largely preventable patient safety incidents that should not occur if the available preventative measures have been implemented. In the interest of patient safety and in order to learn from any mistakes made within our Trust, all misplacement incidents must be reported to your immediate line manager, the Trust Governance Support Unit and recorded as an incident on the Datix system.

7.0 MONITORING COMPLIANCE AND EFFECTIVENESS

Compliance with this policy will be monitored by the Nutrition and Hydration Group, who will monitor the number and type of incidents. Audit of NG insertion practice and documentation will be carried out by Nutritional Nurse Specialist across the Trust every 3 months to via the Nursing metrics audit to ensure ongoing monitoring and review of practice.

Minimum Requirement to be Monitored (WHAT – element of compliance or effectiveness within the document will be monitored)	Responsible Individual (WHO – is going to monitor this element)	Process for Monitoring e.g. Audit (HOW – will this element be monitored (method used))	Frequency of Monitoring (WHEN – will this element be monitored (frequency/ how often))	Responsible Individual or Committee/ Group for Review of Results (WHERE – Which individual/ committee or group will this be reported to, in what format (e.g. verbal, formal report etc) and by who)
Trust-wide audit to assess compliance with NG Policy, in particular 'Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube' All patients with an NG feeding tube in situ on the day of audit will be included.	Nutrition Nurse Specialist	Audit of NG insertion practice and on-going care via Nursing Metrics audit	3 months	Nutrition and Hydration Steering Group
All incidents involving NG feeding tubes reported will be categorized according to level of risk Datix reports will be compiled and any themes for concern identified	Nutrition Nurse Specialist	Incidents recorded on Datix will be monitored and reviewed	Monthly	Nutrition and Hydration Steering Group

8. TRAINING AND IMPLEMENTATION

NASOGASTRIC TUBE INSERTION TRAINING & ONGOING CARE

All registered doctors and nurses who insert NG tubes and perform testing of gastric aspirate must have been trained to do so. All registered nurses involved in the ongoing care of patients with NG feeding tubes should also have been trained to do so.

NG tube insertion training for registered nurses is currently available through Nutrition Nurse Specialist as appropriate. For registered nurses this must be used as documentary evidence of competency to practice. Competency should be recorded on the Trust's centrally held training registers.

Trust Registered Nursing and AHP staff seeking competency to insert NG tubes should be compliant with the following standards of training:

- Attendance at a recognised face-to-face classroom-based theory session
- Complete and pass a theory assessment.
- Complete a period of supervised practice.

X-RAY INTERPRETATION TRAINING

Doctors and other registered practitioners (as appropriate to role) who check NG tube position by interpreting X-ray must be trained and competent to do so (NHS Improvement, 2016).

9. IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, refer to [Appendix G](#).
- This document is not subject to an Environmental Impact Assessment

10.0 EVIDENCE BASE (Relevant Legislation/ National Guidance) AND RELATED SFHFT DOCUMENTS

Evidence Base:

- British Association for Parenteral and Enteral Nutrition (BAPEN), (2020) A position Paper on Nasogastric Tube Safety. "Time to put patient safety first" [A Position Paper on Nasogastric Tube Safety \(bapen.org.uk\)](https://www.bapen.org.uk/A-Position-Paper-on-Nasogastric-Tube-Safety)
- Cole, S & Rubio, C (2023) Good Practice Guidance Safe Insertion and Ongoing Care of NG Feeding Tubes in Adults 2023. Presentation for BAPEN 2023 Annual Conference, [Conference Presentations 2023 | BAPEN](#)
- Dougherty, L & Lister S (2008) The Royal Marsden Manual of Clinical Nursing Procedures. 7th Edition, Blackwell Science, Chapter 24
- MHRA Notice (2004) MHRS/MS/026
- Metheny, NA & Titler, M (2001) Assessing placement of feeding tubes. *American Journal of Nursing*;101: 36-45.

- Metheny, NA et al (1998) Detection of improperly positioned feeding tubes. *Journal of Healthcare Risk Management*; 18(3): 37-48.
- Metheny, NA et al (1990) Effectiveness of the auscultatory method in predicting feeding tube location. *Nursing Research*; 39; 262-267.
- National Nurses Nutrition Group, (2004) Guidelines for confirming correct positioning of NG feeding tubes. Working party report.
- National Nurses Nutrition Group, (2023) Good Practice Guidelines – Safe Insertion and Ongoing care of Nasogastric (NG) Feeding Tubes in Adults. [Good Practice Guideline Safe Insertion and Ongoing Care of Nasogastric \(NG\) Feeding Tubes in Adults Final CR June 2023 PDF](#)
- National Patient Safety Agency (2005) Reducing the harm caused by misplaced NG tubes. Interim advice for healthcare staff.
- National Patient Safety Agency (2011) Reducing the harm caused by misplaced nasogastric feeding tubes in adults, children and infants, NPSA/2011/PSA002 <http://www.nrls.npsa.nhs.uk/alerts/?entryid45=129640>
- Neumann MJ., Meyer CT, Dutton JL & Smith R. (1995) Hold that x-ray: Aspirate pH and auscultation prove enteral tube placement. *Journal of Clinical Gastroenterology*, 20, 293-295.
- National Patient Safety Agency: Rapid Response Report (2012) Harm from flushing of nasogastric tubes before confirmation of placement, NPSA/2012/RRR001 <http://www.nrls.npsa.nhs.uk/resources/?EntryId45=133441>
- Rollins, H. (1997) A nose for trouble. *Nursing Times*; 93: 66-67.
- Stroud, M, Duncan H & Nightingale J. (2003) Guidelines for enteral feeding in adult hospital patients. *GUT* 52 Suppl vii, 1-12.

RELATED SFHFT DOCUMENTS:

- [Consent to Examination, Treatment and Care Policy](#)
- [Mental Capacity Act \(MCA\) Policy](#)
- [Refeeding Syndrome Prevention and Management Guideline](#)
- [Deprivation of Liberty Safeguards Policy \(For Adults 18 years and over\).](#)
- [Nasogastric Tube Feeding in Children Guideline.](#)
- [“Enteral Feeding Starter Regimen”](#)

11.0 KEYWORDS

Nasogastric tubes, NGT, Nasojejunal tubes, NJT, Nasal fixation device, bridle, nasal retention dressing, pH, aspirate, Chest X-ray.

12.0 APPENDICES

[Appendix A](#) – Flow Chart for the Insertion of a Nasogastric Feeding Tube in adults

[Appendix B](#) – Ongoing position checks of a Nasogastric feeding tube in adults

[Appendix C](#) – NG troubleshooting Guidelines (A-J)

[Appendix D](#) – Risk Assessment for patients with existing Nasogastric tubes with pH of 5.5 or above.

[Appendix E](#) – Guidance for the safe practice for the insertion and management of a nasal fixation device in adults to secure a nasogastric tube (NGT)

[Appendix F](#) – Flow chart for patients who repeatedly dislodge NG tubes.

[Appendix G](#) – EQUALITY IMPACT ASSESSMENT FORM (EQIA)

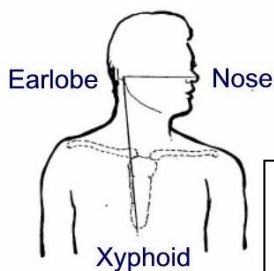
Appendix A - Flow chart for the Insertion of a Nasogastric Tube in Adults

Key points before insertion of a nasogastric Tube

- Is this necessary (NBM/dysphagia/poor nutritional intake)
- If patient is deemed to lack capacity, is this in their best interests?
- If out of hours, is this essential now?
- Has consent been obtained?
- Are you competent to insert a nasogastric tube?

Gather equipment needed for NG insertion and check expiry date -

- 10fr Fine bore NGT
- 60ml Enteral syringe
- Nasal retention dressing
- Non-sterile gloves
- Apron and gloves
- Lubricating gel
- pH testing strips



Introduce self and explain procedure to the patient. Obtain their informed consent. If patient lacks capacity complete a 2-stage mental capacity test and decide if this is in their best interests.

Perform the NEX measurement +5-10cm. This is done by using the exit port of the NG, which is placed at the patient's nose, then extend the tube to the patient's ear and finally down to their xiphisternum. Once you have your measurement add 5-10 cm to ensure oesophageal placement is avoided.

Check the guidewire moves freely in the tube and secure in place by tightening it at the end with the screw cap.

Lubricate the tip and begin to insert the NG tube up the chosen nostril. Insert to around 12-14cm and ask the patient to swallow (this will help with insertion). Once a swallow is felt fully insert a Flocare 10fr nasogastric feeding tube to the NEX measurement +5-10cm.

If rebound is felt or patient is coughing/distressed remove the tube and retry once patient is more comfortable. A **maximum of 3 attempts** should be made at any one time. If the procedure is unsuccessful after 3 attempts stop and seek senior specialist advice.

Once in place secure tube with nasal retention dressing and remove guidewire, these tubes are fully radio opaque. Insert 10-20ml of **AIR** into the NG using a 60ml enteral syringe to clear any debris from the end of the tube. Aspirate with a 60ml enteral syringe using gentle suction.

Aspirate obtained pH 5.0 or below.

No Aspirate or Aspirate obtained and pH 5.0 or above.

Ensure patient is positioned at a minimum of a 30° angle (to reduce the risk of aspiration), flush with 30mls of water and commence feeding as per feeding guideline. Complete Pathway of Care for Patients undergoing maintenance of feed via Nasogastric Tube and document in medical notes. Documentation to include, date, time, external tube length (NEX +), whether pH obtained, the result of pH, make and size of tube and who the tube was inserted by. Tube is considered safe to use.

Retry aspirate in 30 minutes. If after 30 minutes there is either no aspirate or the pH remains 5.5 or above, perform a chest x-ray to confirm NGT position. Following a review of the x-ray report, this must be documented in the medical notes along with the decision to feed.

If the NG cannot be identified on the chest radiograph, consider removal, and replace with a new NG. DO NOT USE until position confirmed.

Appendix B - Ongoing position checks of Nasogastric feeding Tube in Adults

To be used in conjunction with the Nasogastric Tube Trouble Shooting Guidelines ([Appendix C](#))

Always confirm the position of the tube using pH when:

- A new NG tube is inserted (see [appendix A](#)).
- NG has been re-inserted, repositioned, or displaced with an altered length of external 'cm' markings at the nostril (A).
- The patient vomits, sneezes or coughs violently, and/or has unexpected respiratory changes, and/or increased suctioning/significant unexplained changes in ABG (B).
- Feeding has been paused or stopped for an intervention (C).
- Restarting feed after any rest period.

Aspirate obtained (min 0.5-1ml using 60ml enteral syringe) (D)

Aspirate obtained.

Aspirate **NOT** obtained.

pH 5.0 or below

pH 5.5 or above

-Commence feed as per dietitian regime or the [Enteral Feeding Starter Regimen](#).
-Ensure care plan is completed and up to date.

-If any doubt arises when reading pH result, seek independent second check of pH.
-If any discrepancies between the two independent checks seek medical advice.

DO NOT FEED

Seek independent second check of pH. If 5.5 or above seek medical assistance and remeasure NEX measurement +5-10 cm to ensure the tube length correlates with the initial placement of NGT, consider readjusting NGT position (E)
Is there any reason to suspect tube has moved or has been displaced?

Retest aspirate.

If pH 5.0 or below

pH 5.5 or above.

No aspirate obtained.

DO NOT FEED

Try each of these techniques to help gain aspirate.
-Turn patient onto their left side if possible (F)
-Give mouth care (G)
-Inject 10-20mls of air (**this is not the whoosh test**) (H)
Recheck pH after each intervention.

If pH remains at 5.5 or above do NOT use the tube and medical team to complete NGT risk assessment in [appendix D](#)

DO NOT FEED

Remeasure NEX measurement + 5-10 cm to ensure current tube is inserted to the correct length (NEX = Nose, ear lobe and xyphoid) (E).
Consider readjusting the NGT according to the NEX + 5-10 measurement and document new measurement.

If aspirate obtained go back to beginning of this decision tree.

Aspirate **NOT** obtained.

DO NOT FEED

Try each of these techniques.
-Give mouth care (G)
-Turn patient onto their left side if possible (F)
-Inject 10-20mls of air (*this is not the whoosh test*) (H)
- Check medications, is the patient on PPI or H2 receptor antagonist (K)
Recheck pH after interventions.

Aspirate **NOT** obtained.

DO NOT FEED

Request chest x-ray for confirmation of tube position on ICE.
-Prior to transfer to x-ray recheck the length of the NGT at the nostril and document. (I)
-Upon return from x-ray recheck the NGT length at nostril and document. (J)
If external length of NGT is different upon return from x-ray go back to the beginning of this decision tree and follow the steps.

Please note:

- Patients with a safe swallow who can eat and drink, who are on a supplementary feed consider reviewing the timings of PPI. PPI should be administered after the pH check.

-Any clinical indication that the NGT has moved or displaced based on the medical team's clinical judgement/assessment then a chest x-ray is required to check position of tube prior to use.

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Appendix C

NG troubleshooting Guidelines (A-J) to be used in conjunction with Appendix B	
<u>Action</u>	<u>Rationale</u>
A) Check for signs of tube misplacement.	pH testing should be the 1st line method to confirm tube position, once position is confirmed the external length should be checked immediately and documented in the care plan, prior to EVERY use. Any signs of displacement without pH or high pH please follow the steps on the Decision Tree for Ongoing Checks of Nasogastric Tube Position (see appendix B).
B) Signs of respiratory changes and vomiting.	Increased coughing, suctioning, and retching can, not only lead to tube displacement but is also signs and symptoms of a misplaced tube. Recheck external tube position and pH prior to using the tube. It is possible for the tip of the tube to displace upwards into the oesophagus, particularly with retching, coughing, or vomiting, increasing the risk of aspiration, even if the external length appears unchanged (NNNG 2004). If suspected, additional checks as per initial insertion are necessary to confirm gastric placement. Removal and replacement of the tube may be necessary if this is suspected and if additional checks do not confirm gastric placement.
C) Feeding has been paused/stopped for an intervention.	If the feed has been paused for an intervention the external 'cm' marking needs to be checked and documented to ensure the tube has not migrated during the intervention prior to restarting feed. If the feed was stopped then check pH and external tube length prior to restarting feed.
D) Obtaining Aspirate	Use a 60ml enteral syringe to aspirate the tube 0.5-1ml is a sufficient volume, apply this to the enteral pH test strips. Please allow 10-60 seconds for colour changes to occur. Please do NOT use smaller syringes as these create too much pressure and can spilt the tube.
E) NEX measurement + 5-10cm	NEX = Nose, Ear lobe and Xyphoid and add 5-10cm to avoid oesophagus placement (BAPEN 2020). Consider advancing/withdrawing to meet measurement, by advancing 5-10cm may allow tube to pass into the stomach. If the tube has been inserted too far the tube may be in the duodenum where a high pH may occur. If tube length is adjusted document the new length in medical notes and care plan.
F) Turn on to left side if possible	This will allow the tip of the nasogastric tube to enter the gastric fluid pool.
G) Give mouth care	This can stimulate gastric secretions.
H) Inject 10-20mls of air using a 60ml enteral syringe.	This is not a whoosh test or a position testing procedure. By injecting 10-20mls of air via the tube it may dislodge the exit-port of the nasogastric tube from the gastric mucosa or it may dislodge and remove any possible debris from blocking the tube.
I) Checking the external tube length prior to x-ray.	Check and document on the care plan the external measurement (cm) of the nasogastric tube at the patients nose prior to x-ray.
J) Checking the external tube length upon return from x-ray.	Check and document on the care plan the external measurement (cm) of the nasogastric tube at the patients nose upon returning from x-ray. Compare this with the measurement prior to x-ray if it is unchanged this indicates that the nasogastric tube hasn't moved when the x-ray was performed. If the measurement is different then, repeat the Decision Tree for Ongoing Checks of Nasogastric Tube Position (see appendix B).

K) Check medications, is the patient on PPI or H2 receptor antagonist	There are some limitations to the testing for gastric pH. Gastric pH can also be affected by medications, particularly proton pump inhibitors (e.g. Omeprazole, Lansoprazole, Pantoprazole) and H2 receptor antagonists (e.g. Cimetidine, Ranitidine, Nizatidine). Consideration should be given to changing the timing of medication administration or aspiration to enable correct pH readings to be carried out.
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Adapted from BAPEN 2020, NPSA 2011 and Lewisham and Greenwich NHS Trust

Appendix D - Risk Assessment for patients with existing Nasogastric tubes with a pH of 5.5 or above.

Has the Decision Tree for the Ongoing position Checks of NGT position (Appendix B) been followed prior to completing this assessment? YES/NO (if NO follow Decision Tree for the Ongoing Checks of NGT position)		
Patient Name:		
D number:		
Date risk assessment completed		
		YES/NO
1.	Patient identity checked?	
2.	Is there clear documentation of initial insertion of the current NGT in the medical notes with gastric position clearly established using either pH of <5.0 or chest x-ray reported by reporting radiographer or radiologist on ICE?	
3.	Is the patient being treated with an acid reducing medication?	
3a	Do you consider this to be the cause for the elevated pH result?	
4.	Is the tube secure with a nasal retention dressing or bridle and has been since initial placement of NGT?	
5.	Has there been any change in the external 'cm' markings at the nostril since initial placement of NGT?	
6.	Has the patient had any episodes of vomiting, retching or coughing?	
7.	Has the patient had any unexplained respiratory symptoms, increase in oxygen requirements, respiratory distress, cyanosis or changes in ABG's?	
8.	Has there been an increase in frequency of suction or change in appearance of sputum?	
9.	Is the NGT coiled in the back of the patient's mouth?	
10.	Decision made to use the NGT and commence feed, medications and/or fluids?	
If answered 'No' to question 10, proceed to chest x-ray		
Risk Assessors Name:		Risk Assessors Job Title:

If the decision is made by the treating SpR (Speciality Registrar) or above, that external observation of the tube is the only practical method of determining if the tube is correctly placed and used alongside this risk assessment, this decision must be clearly documented in the patients' medical

notes and a new risk assessment must be completed and filed in the patient's medical notes daily if the pH remains 5.5 or above. (NPSA 2016, NNNG 2023).

BAPEN Annual Conference 2023 [PowerPoint Presentation \(bapen.org.uk\)](https://www.bapen.org.uk)

Appendix E – Guidance for the safe practice for the insertion and management of a nasal fixation device in adults to secure a nasogastric tube (NGT)

See [Flow chart for patients who repeatedly dislodge Nasogastric tubes](#) at end of policy for this guidance.

This guidance (or part thereof) is for use by:

- Consultant Physicians
- Junior Medical Doctors
- Relevant Specialist Nurses

Indications for a nasal bridle

- Patients in whom at least 3 NG tubes have become dislodged or where intubation has been difficult.
- Patients who require medium or long term (LT) feeding via a fine bore NG tube (using size 10)
- Confused patients in the short term, but they may attempt to pull them out (see appendix)

Exclusions: Basal skull fracture
Deviated nasal septum
Nasopharyngeal deformity.

Capacity

Assume patient has capacity:

- offer information in an appropriate way for the individual.
- treat any medical condition that may influence capacity.
- consider asking the question at another time when patient is better able to communicate, if capacity seems impaired.

Assessment:

- Does the patient have impairment of mind/brain which affects the way it works?
- Is the patient unable to make the decision in question as a result of this?

The following questions might be employed: -

- Does the patient have a general understanding of the decision to be made and the need to make it?
- Does the patient understand the consequences of making / not making this decision?
- Is the patient able to understand / retain / use / weigh up the information relevant to the decision?
- Can the person communicate a decision by any means, including help of a specialist?
- Can the choice be made without any outside influences?

If the patient's responses to the above are not all affirmative, then this implies she/he may lack capacity.

Any act or decision made on behalf of a person without capacity must be done / made in their best interests.

When acting in a person's best interest: -

- Encourage participation in the decision-making process.
- Identify choices the person would have considered when acting for themselves.
- Find out person's views: Past / present verbal or written.
Any personal beliefs/values that may influence choices.

Do not make assumption on basis of age/condition/appearance/behaviour.

Will person regain capacity?

No assumption should be made about quality of life.

Consult with others (e.g. friends, relatives, carers, lasting power of attorney, court appointed deputy). Consider using an Independent Mental Capacity Advocate.

Avoid restricting a person's rights.

Weigh up all of these factors, discuss with MDT. Consult with independent clinician or Ethics in Clinical Practice Committee.

Arrive at a final decision.

Document discussion / conclusion.

Procedure

The bridle may be placed prior to or following the NG tube insertion. For guidelines on safe insertion and management of NG tubes, see Practical Guidelines on Enteral Tube Feeding in Adults, on the Trust intranet. Instructions are available in the packet.

Re Nasal Bridle

- The aseptic non-touch technique should be used.
- Lubricate the distal ends of both introducing probes with water soluble jelly.
- Insert the retrieving probe into the nostril until the first rib is at the bottom of the nostril.
- Insert the bridle catheter into the opposite nostril with the stylet in place to stiffen it.
- Gently manipulate the probes until contact is made between the 2 magnets at the end of the probes. An audible click will be heard.
- If no contact has occurred, advance the bridge and retrieving probes to the second rib.
- Once contact has occurred, remove the stylet completely from the catheter.
- Slowly withdraw the retrieving probe while allowing the bridle catheter to advance into the nose. Continue until only the umbilical tape is in the nose.
- Using scissors cut the bridle catheter off the umbilical tape, leaving only the tape in the nose. Dispose of both the catheter tube and probe.
- Select the correct size retaining clip for the feeding tube.
- Place the umbilical tape and the NG tube in the deep channel of the clip. This should be positioned so that it just rests on the upper lip when released. Snap the 2 halves of

the clip shut until it clicks. Verify that the clip has closed tightly. Knot the ends of the tape together and trim any excess tape.

- Note the position of NG tube at either end of the bridle and mark with indelible ink. Record in the patient's notes and monitor this regularly to use as a guide when checking for feeding tube migration.
- Monitor carefully for discomfort in accordance with the PUP chart.
- Inspect regularly for local trauma.
- Ensure the date of insertion is documented in the patients' medical notes and/or nursing notes has been updated in the NG care plan.

Hygiene/ After Care

Clean and dry the nasal bridle at least daily.

It may be necessary to do this more frequently if there are excessive secretions from the nose.

The nasal mucosa should be observed carefully each day for signs of irritation or bleeding.

Mouth care should be provided as per the Trust's oral hygiene guidelines.

Removal

The bridle can remain in situ for up to 6 weeks, after this there is a risk of damage to the nasal septum.

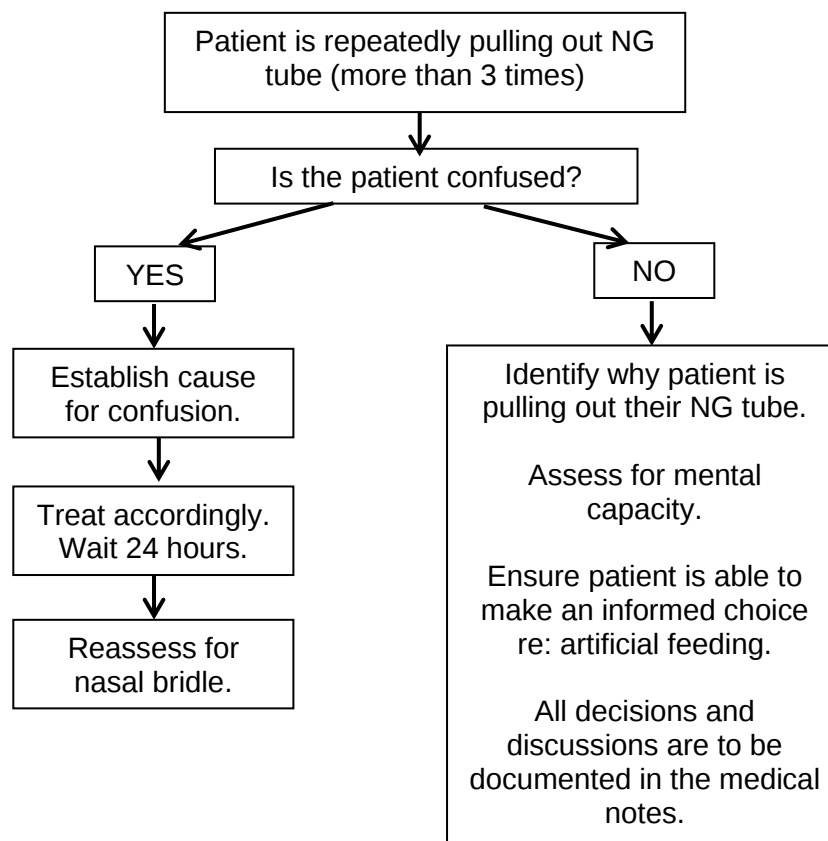
When removal is required, cut one side of the umbilical tape (between nose and clip) and gently pull both the bridle and feeding tube out at the same time.

Document removal in patients' medical and/or nursing notes.

TRAINING REQUIREMENTS

Ensure all nurses who undertake any activities within this guideline complete the relevant documentation to evidence competency.

Appendix F Flow chart for patients who repeatedly dislodge Nasogastric tubes.



Appendix G – Tube feed monitoring chart

Name _____

Date of birth _____

Address _____

District or NHS Number _____


Sherwood Forest Hospitals
NHS Foundation Trust

**ENTERAL TUBE FEED
MONITORING CHART
(ADULTS)**

- This chart must be completed for all patients receiving enteral tube feeds.

Date/ Time	Feed Type	Batch Number	Start time	Rate	Finish time	Volume Water Flush	Name / Signature

APPENDIX G – EQUALITY IMPACT ASSESSMENT FORM (EQIA)

Name of service/policy/procedure being reviewed: Nasogastric (NG) and Nasojejunal (NJ) Feeding Tubes – policy for insertion and management in adult patients (excludes paediatrics, neonates and critical care)			
New or existing service/policy/procedure – revised Policy			
Date of Assessment: 07 th October 2024			
For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)			
Protected Characteristic	a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?	b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?	c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality
The area of policy or its implementation being assessed:			
Race and Ethnicity	No direct impact identified	Not applicable	None identified
Gender	No direct impact identified	Not applicable	None identified
Age	The Policy covers older adults with cognitive impairment through acute delirium or Dementia.	Where required mental capacity will be assessed and decisions around NG insertion made with the managing consultant and based on the best interest of each individual patient with the involvement of patient, family and carers as appropriate.	None identified
Religion	No direct impact identified	Appropriate enteral liquid feed options for NG feeding are available for patients with specific dietary requirements and specialist Dietetic advice is available.	None identified

Disability	The Policy promotes mandatory safe practice. Six monthly Trust wide audits Traffic light documents are available for patients with learning disabilities which prompt staff to consider what reasonable adjustments may be required and facilitate sharing of information in regard to nutritional care and patient preferences.	The Trust will have a Learning Disability Specialist Lead who will help support patients with learning difficulties by ensuring that advocates are available to assist in best interest decision making. If following appropriate assessment, a patient with learning difficulties lacks the mental capacity to provide informed consent for procedure and ongoing care decision will be made in the best interest of each patient along with the managing consultant, with involvement of any family and carers as appropriate. Traffic light documents are available for patients with learning disabilities which prompt staff to consider what reasonable adjustments may be required and facilitate sharing of information in regard to nutritional care and patient preferences.	None identified
Sexuality	No direct impact identified		None identified
Pregnancy and Maternity	No direct impact identified		None identified
Gender Reassignment	No direct impact identified		None identified
Marriage and Civil Partnership	No direct impact identified		None identified
Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation)	No direct impact identified		None identified

What consultation with protected characteristic groups including patient groups have you carried out? No direct consultation undertaken as no specific barriers identified.
What data or information did you use in support of this EqIA? Review of evidence from knowledge and library service review.
As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments?
Level of impact From the information provided above and following EQIA guidance document Guidance on how to complete an EIA (click here), please indicate the perceived level of impact: Low Level of Impact For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.
Name of Responsible Person undertaking this assessment: Jenna Parsons
Signature: Jenna Parsons
Date: 07th October 2024.