

TRUST CLINICAL POLICY
ADULT NASO- ORO GASTRIC TUBE POLICY

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CONSULTATION	<i>Barts Health</i>	Safeguarding Adults Team Adult Nutrition Support Team Critical Care ECAM Surgery Head and Neck MDT Therapies Leads Infection Control Legal Services Clinical Governance Educational Leads
	<i>External Partner(s)</i>	Corpak Med Systems UK

SCOPE OF APPLICATION AND EXEMPTIONS	Included in policy: <i>For the groups listed below, failure to follow the policy may result in investigation and management action which may include formal action in line with the Trust's disciplinary or capability procedures for Trust employees, and other action in relation to organisations contracted to the Trust, which may result in the termination of a contract, assignment, placement, secondment or honorary arrangement.</i>
	All Barts Health Clinical Staff both medical and nursing who work with Adults who are being considered or have NG Tube in situ
	External Staff and students including locum medical staff and agency nurses who are deemed competent to care for Adult patients with NG tubes by designated manager in the area they are working.
	Exempted from policy:

	<p><i>The following groups are exempt from this policy</i></p> <p><i>Individuals exempt from this arrangement include staff employed by the Trust's private sector partners (or seconded to them under the Retention of Employment arrangement) providing Facilities Management services (Capital Hospitals Limited and its Service Providers).</i></p>
	<p><i>All staff who cannot demonstrate competence as per Appendix and authorised by manager of area where adult patients with NG tubes are cared for.</i></p>

TABLE OF CONTENTS

1	INTRODUCTION AND AIMS OF POLICY	5
2	INDICATIONS FOR NASO/ORO-GASTRIC TUBES	6
3	CONTRAINDICATIONS TO BEDSIDE NASOGASTRIC TUBE PLACEMENT	6
4	HIGHER RISK PATIENTS	7
5	COMPLICATIONS ASSOCIATED WITH INSERTION OF A NGT	7
6	COMPLICATIONS ASSOCIATED WITH PRESENCE OF A NASO/ORO-GASTRIC TUBE	8
7	INSERTION OF A NASO/ORO-GASTRIC TUBE	8
8	INSERTION PROCEDURE	9
9	CHECKING THE POSITION OF THE NASO/ORO-GASTRIC TUBE	12
10	DOCUMENTATION REQUIREMENTS POST INSERTION	16
11	MARKING AND SECURING NASO/ORO-GASTRIC TUBES	16
12	MANAGEMENT OF THE NGT	17
13	PREVENTION OF ACCIDENTAL REMOVAL OR DISPLACEMENT (NASAL BRIDLE USE)- ONLY TO BE USED IN DESIGNATED AREAS AT ROYAL LONDON HOSPITAL WHERE STAFF CAN DEMONSTRATE UP TO DATE COMPETENCE	18
14	NASOGASTRIC FEEDING IN THE COMMUNITY	23
15	REMOVAL OF THE TUBE	23
16	DUTIES AND RESPONSIBILITIES	25
17	MONITORING THE EFFECTIVENESS OF THIS POLICY	26
	APPENDIX 1: CHANGE LOG	27
	APPENDIX 2: IMPACT ASSESSMENTS	27
	APPENDIX 3: REFERENCES	28
	APPENDIX 4: NASOGASTRIC TUBE TRAINING FOR STAFF.	30
	APPENDIX 5: NUTRITION SUPPORT TEAM CONTACT DETAILS	30
	APPENDIX 6: NASOGASTRIC TUBES USED IN ADULTS AT BARTS HEALTH.	31
	APPENDIX 7: NGT INSERTION RECORD STICKER	32
	APPENDIX 8: PATIENT INFORMATION ON NASOGASTRIC FEEDING.	32

APPENDIX 9: NPSA ADVICE TO PATIENTS/CARERS	33
APPENDIX 10: PATIENT/CARER COMPETENCIES FOR FEEDING VIA NGT.	34
APPENDIX 11: PATIENT/CARE COMPETENCIES FOR INSERTING AND FEEDING VIA NGT.	34
APPENDIX 12: HOME NGT DISCHARGE CHECKLIST.	34
APPENDIX 13: NGT POSITION RECORD CHART (SEE NEXT PAGE)	34
APPENDIX 14: ADULT NGT PLACEMENT REFERENCE GUIDE	39

ADULT NASO/ORO-GASTRIC TUBE POLICY

1 INTRODUCTION AND AIMS OF POLICY

- 1.1 This policy is necessary to maintain the safety of all adult patients who have a naso/oro-gastric tube. Current best practice and learning from serious incident investigations have informed the principles within this. The policy applies to all patients with naso/oro-gastric tubes; in all clinical areas and departments including operating theatres, intensive care units and outpatient departments. The National Patient Safety Agency has issued guidance around this issue.
- 1.2 Whilst the majority of patients will be able to meet their nutritional requirements orally, there is a group of individuals who will require enteral tube feeding either in the short or longer term. It has been identified that there are a number of risks with the management of patients with NGTs, in particular when used for feeding. The use of NGTs for drainage is usually for short-term but potentially carries risks similar to those of feeding Nasogastric tubes.
- 1.3 The evidence for and published standards that underpin this policy include those published by NICE, NPSA, DoH Never Events, the full references for these are given in [Appendix 3](#).
- 1.4 Staff involved in placement, care and use of naso/oro-gastric tubes must ensure they read the full policy and understand the content. A quick reference is included at Appendix 14 to act as an aide memoir.

This policy aims:

- 1.5 To ensure the safety of and minimise risks to every patient with a nasogastric tube in situ.
- 1.6 To ensure ethical considerations and goals of treatment are discussed and documented in a patient's integrated healthcare record prior to insertion of a NGT for feeding.
- 1.7 To ensure the need for the NGT is clinically indicated, appropriate and this is also documented in a patient's integrated healthcare record.
- 1.8 To ensure the correct technique and tube is used for NGT insertion.
- 1.9 To ensure correct checking and rechecking of NGT position and this is documented correctly.

Definitions

- 1.10 Define any specialist terms used in the policy whose meanings may be open to ambiguity or not obvious to those using the policy.

NGT	Nasogastric tube: a tube inserted into the stomach via the nose. It is generally used for short term feeding (< 4 weeks) or short term drainage of the stomach (7-10 days)
Feeding NGT	A fine bore, fully radio-opaque, self lubricating NGT with a guide-wire

	and centimetre markings along its length and only compatible with enteral syringes is required. (NPSA 2005)
Drainage NGT	Tubes can be used for continuous and intermittent drainage of the gut. Please note: a fine bore feeding tube can also be used for short-term intermittent drainage purposes and so if one is in situ it should not be removed/changed unless continuous drainage is required (in order to minimise patient discomfort).
Oro gastric tube	A fine bore feeding tube inserted into the stomach via the mouth rather than the nose. Oro-gastric feeding is often used in patients who have suffered a head injury, or fracture to the base of the skull, in whom passing a nasogastric tube may be dangerous.
NST	Nutrition Support Team, Multidisciplinary team comprising of Nutrition Consultant, CNS's, Dietitians and Pharmacists with expertise in artificial nutrition support.
PPE	Personal protective equipment, for example, gloves, gown, eye protection

2 INDICATIONS FOR NASO/ORO-GASTRIC TUBES

- 2.1 Naso/oro-gastric tubes are most commonly used for **feeding** in patients with the following features or disorders (NICE 2006) (2):
- Unconscious
 - Neuromuscular swallowing disorders
 - Physiological anorexia
 - Increased nutritional requirements
 - Specific treatment e.g. Crohn's disease
- 2.2 Naso/oro-gastric feeding, is usually a short term solution (<28 days) for a patient who is unable to meet their nutritional requirements by mouth, and they have a functional and accessible gastrointestinal tract.
- 2.3 Naso/oro-gastric tubes are most commonly used for **drainage** of the stomach in patients with the following features or disorders:
- Gastrointestinal dysfunction e.g. ileus
 - Gastrointestinal obstruction
 - Post gastrointestinal surgery

3 CONTRAINDICATIONS TO BEDSIDE NASOGASTRIC TUBE PLACEMENT

- 3.1 The main contraindications for bedside placement of a nasogastric tube are:
- Base of skull fracture
 - Nasal injuries including deviation of the nasal septum
 - Recent Head and Neck Surgery

- Hiatus hernia and gastro-oesophageal reflux - if severe the risk of aspiration may be high
 - Oesophageal or gastric abnormalities e.g. varices, ulceration, tumours, stricture, pharyngeal pouch, pharyngeal compression, perforation, fistula, haemorrhagic oesophagitis (due to possibility of causing trauma)
 - Postoperative patients who have had upper GI surgery, with or without an anastomotic leak
 - Trauma from poisoning (e.g. oral consumption of bleach)
- 3.2 If NG tube placement is contraindicated please consult with the Adult Nutrition Support Team for further advice Monday- Friday 9-5pm . Out of hours please discuss with Gastro on call or ENT on call for specialist advice.
- 3.3 Orogastric tubes are only inserted in theatre/critical care by anaesthetists or surgeons and tend to be tolerated by unconscious patients.

4 HIGHER RISK PATIENTS

- 4.1 There are a number of patients who will be at a higher risk of complications from:
- The placement of NGT's
 - The management of enteral feeding or gastric drainage using NGT.
- 4.2 These include patients with:
- An altered level of consciousness
 - Impaired protective reflexes, i.e. gag / weak cough
 - Head injured patients, especially trauma related
 - Confused/disorientated patients
 - Altered anatomy e.g. pharyngeal pouch, oesophageal strictures/varices
- 4.3 These patients are at greater risk of:
- Tube misplacement
 - Tube dislodgement or displacement
 - Silent aspiration (choking without evidence of coughing/gagging)
- 4.4 It is advised for all patients (including the higher risk groups as above) that the tube position should be checked using the recommended methods (pH test of aspirates ≤ 5). See section 12 for management of NGTs.

5 COMPLICATIONS ASSOCIATED WITH INSERTION OF A NGT

- 5.1 Potential insertion complications include:
- Malposition
 - Coiling of tube into posterior pharynx

- Haemorrhage caused by trauma to any of the surrounding tissues
- Oesophageal or pulmonary perforation
- Pneumothorax
- Effusion, empyema, hydrothorax
- Respiratory failure

5.2 If a patient starts to show signs of distress or shortness of breath (cyanosis, tachypnoea, decreased oxygen saturation), the practitioner must stop inserting the NGT and reassess immediately.

5.3 Misplacement and use of a naso- or oro-gastric tube in the pleura or respiratory tract where the misplacement of the tube is not detected prior to commencement of feeding, flush or medication administration is listed in the Department of Health's "Never Event" list 2015/16 and must be reported as such.

6 COMPLICATIONS ASSOCIATED WITH PRESENCE OF A NASO/ORO-GASTRIC TUBE

- Accidental pulmonary feeding
 - Displacement
 - Unwanted removal
 - Blockage/breakage/leakage/cracking*
 - Local complications - Rhinitis*, pharyngitis*, oesophagitis*, gastritis*, erosion related upper GI haemorrhage*
 - Airway occlusion*
 - Gastric reflux*
- * More likely to occur with larger bore (>12 Fr) and Polyvinyl chloride (PVC/Ryles) tubes.

7 INSERTION OF A NASO/ORO-GASTRIC TUBE

7.1 The National Patient Safety Agency sets out a specific set of steps to go through **every** time a nasogastric feeding tube is inserted and asks clinicians to consider three essential questions:

- a) Is nasogastric feeding the right decision for this patient?
- b) Is this the right time to place the nasogastric tube and is the appropriate equipment available?
- c) Is there sufficient knowledge/expertise available at this time to test for safe placement of the nasogastric tube?

7.2 Nasogastric placement for feeding purposes should be avoided overnight unless there is an absolute clinical need (possible exceptions include critical care).

7.3 Before a decision is made to insert a nasogastric tube, an assessment of the risks and benefits is undertaken by at least two competent health care professionals, including the senior doctor responsible for the patient's care, to identify if

nasogastric feeding is appropriate for the patient, and the rationale for any decision is recorded in the patient's medical notes. (NPSA 2011)

- 7.4 Documentation must include a signed, dated and timed entry and the process of the initial risk assessment that evaluates the benefits against the risks of introducing a NGT for the purpose of feeding. The Nutrition Support Team can be contacted for extra support if there are any concerns regarding appropriateness of Artificial Nutrition and Hydration.
- 7.5 A decision must be made whether or not to insert a NGT for Artificial Nutrition and Hydration within 24 hours of identifying the possible need. For further advice contact the Adult Nutrition Support Team on the next working day.
- 7.6 Should there be any doubt whether a patient can swallow; a qualified practitioner (having had appropriate training) must perform a swallow screening assessment. If there is continued concern, a referral should then be made to the Speech and Language Therapy Service for further assessment. Only those patients who are alert with a GCS of 11 or more should be referred.
- 7.7 Obtain consent from the patient for the procedure where possible and ensure family/carers are fully informed of the treatment plan. Refer to [Trust Consent Policy](#) if necessary.
- 7.8 Insertion of NGTs must only be performed if the individual inserting the tube is a registered practitioner (nurse, doctor, dentist or GI physiologist) who has received adequate training and is competent in the procedure. ([Appendix 4](#))
- 7.9 Up to a maximum of 3 attempts should be made by a skilled practitioner. If still unable to insert the NGT, please contact your Nutrition Support Team for further support (see [Appendix 5](#)).
- 7.10 If a decision has been made to proceed with NGT feeding please ensure that a referral is made to the Nutrition and Dietetic Service. If the Dietitian is already involved with the patient please bleep or call this individual on the number they have provided in the patient's integrated healthcare record.

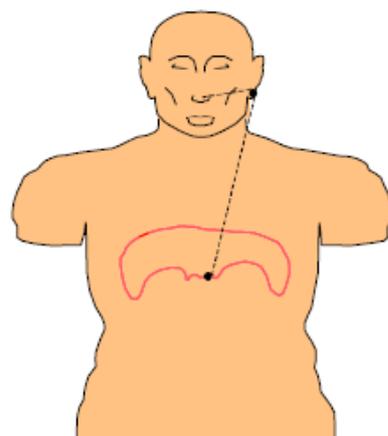
8 INSERTION PROCEDURE

Equipment required:	
<ul style="list-style-type: none"> • Nasogastric tube - fit for purpose <ul style="list-style-type: none"> ➢ For feeding – fully radio-opaque, polyurethane, with 1cm markings along length of the tube and only accessible by oral/enteral syringes. See Appendix 6. ➢ For drainage – PVC, smallest Fr gauge suitable • PPE • Securing device • pH testing strip (Merck 0-6) • Purple oral/enteral syringes • Cup of water and straw (if patient safe to swallow) • Sterile water • Tissues • Inco pad • Bowl 	
Action	Rationale
Ensure patient privacy.	To protect their privacy and dignity during an uncomfortable procedure.
Review patient's integrated healthcare	To ensure bedside insertion of NGT is possible

record and check against Section 3.1 and 4 for potential contraindications or higher risk patients.	and in the patient's best interest.
Explain procedure to patient, carers and/or family and establish that they understand the procedure.	To ensure the patient knows why they need the procedure, what to expect during it, and their role within it.
Arrange a signal the patient can use if they want to stop the procedure.	The patient feels that they have some control over the procedure.
Obtain informed consent from the patient, document; refer to the Barts Health Mental Capacity Act Policy if required.	To be able to document that the patient has given their informed consent. Verbal consent is sufficient for this procedure.
Decontaminate a tray/trolley, collect equipment required. Perform hand hygiene and wear PPE.	To minimise risk of cross infection.
Position patient, sitting upright, neck in neutral position. If patient is unconscious – lateral position.	This position optimises swallowing and ensures the epiglottis is not obstructing the oesophagus.
Select nostril – if necessary carry out nasal hygiene, check for obstruction.	To enable the smooth insertion of the tube. To identify any potential problems with inserting the tube.
Estimate NEX measurement (Tip of Nose - Earlobe - Xiphisternum) (see Figure 1)	To measure the likely length of tube required to reach the stomach.
Lubricate outside of fully radio-opaque nasogastric feeding tube with water but DO NOT flush tube. Use a water based lubricant when inserting a Ryles type tube for drainage.	Fine bore NGT's are self-lubricating in water avoiding the need for additional lubrication. Ryles tubes are not self-lubricating, so need additional lubrication.
Insert NGT into agreed nostril approximately 10 cm, aiming in the direction of the patient's ear. The patient may cough or gag at this stage and reassurance needs to be given. If obstruction is felt you may need to try a slightly different angle, gentle rotation of the tube or the other nostril. Never force tube when passing. Do not advance the tube any further than this until the patient has stopped coughing.	To facilitate the passage of the tube by following the natural anatomy of the nasopharynx. To prevent damage or perforation of any structure. To prevent placement to tube in the trachea.
Encourage a natural swallow as the tube is advanced. Unless Nil By Mouth – give sip of water using a cup and straw.	A swallowing action closes the glottis enabling the tube to pass into the oesophagus. If the patient has dysphagia they will be unable to swallow water but a dry swallow still aids insertion.
Unless contraindicated – Tilt chin downwards (Figure 2) and continue to advance tube to NEX measurement and a few centimetres beyond. Check tube is not coiled in throat or mouth.	Helps prevent tracheal intubation. NEX measurement is the minimum length required
If at anytime during the procedure the patient experiences respiratory distress, coughing, gasping, cyanosis or sudden	May indicate incorrect placement of the NGT into the trachea. Please note, signs of respiratory distress may

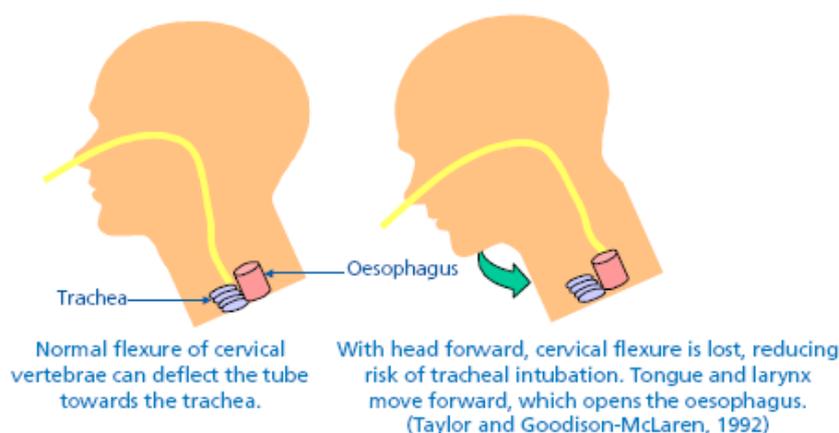
onset ear pain, withdraw tube immediately.	be absent in unconscious patients or patients with a poor gag reflex.
Secure NGT to nose with product dressing, and attach to cheek with small tegaderm or mepore for added security.	To prevent accidental removal of tube and enable pH testing.
Aspirate using gentle suction. Only purple oral/enteral syringes are to be used for accessing the device.	To prevent suction trauma to area adjacent to lumen of NGT. To prevent accidental administering of water, feed or medications into the lung.
Test aspirate on CE marked pH testing strips. Aim for pH of ≤ 5 to confirm gastric placement.	First line method of assessing whether the NGT tip has reached the patient's stomach in line with NPSA Alert 05. pH testing strips must be intended for testing human secretions.
Follow the decision tree for NGT placement in adults if aspirate is not immediately obtained (see Figure 3)	To ensure tip of NGT is under level of fluid and to prevent unnecessary or excessive use of X-ray.
Only once correct placement confirmed can the NGT be flushed with water and guide-wire removed. Hold the tube end firmly at the tip of the nose and gently withdraw the guide wire.	To prevent administration of any solution into a misplaced NGT (NPSA Alert March 2012). Removing the guide-wire improves patient comfort.
Use a non toxic permanent marker to mark the tube at the nose.	To enable prompt visual evidence of a tube that has been partially withdrawn.
Complete the "Nasogastric tube (NGT) Position Record Chart" (Appendix 13), the medical device record sheet and product sticker and place in patient's integrated healthcare record by the person who performed the insertion and checking of placement.	To provide a record of medical devices inserted into the patient. To have a record of the batch number of the tube if a problem is detected and to highlight a difficult insertion or what steps were required to obtain an aspirate.

Figure 1: Taking a NEX measurement



'NEX': Nose – Ear lobe – Xiphisternum

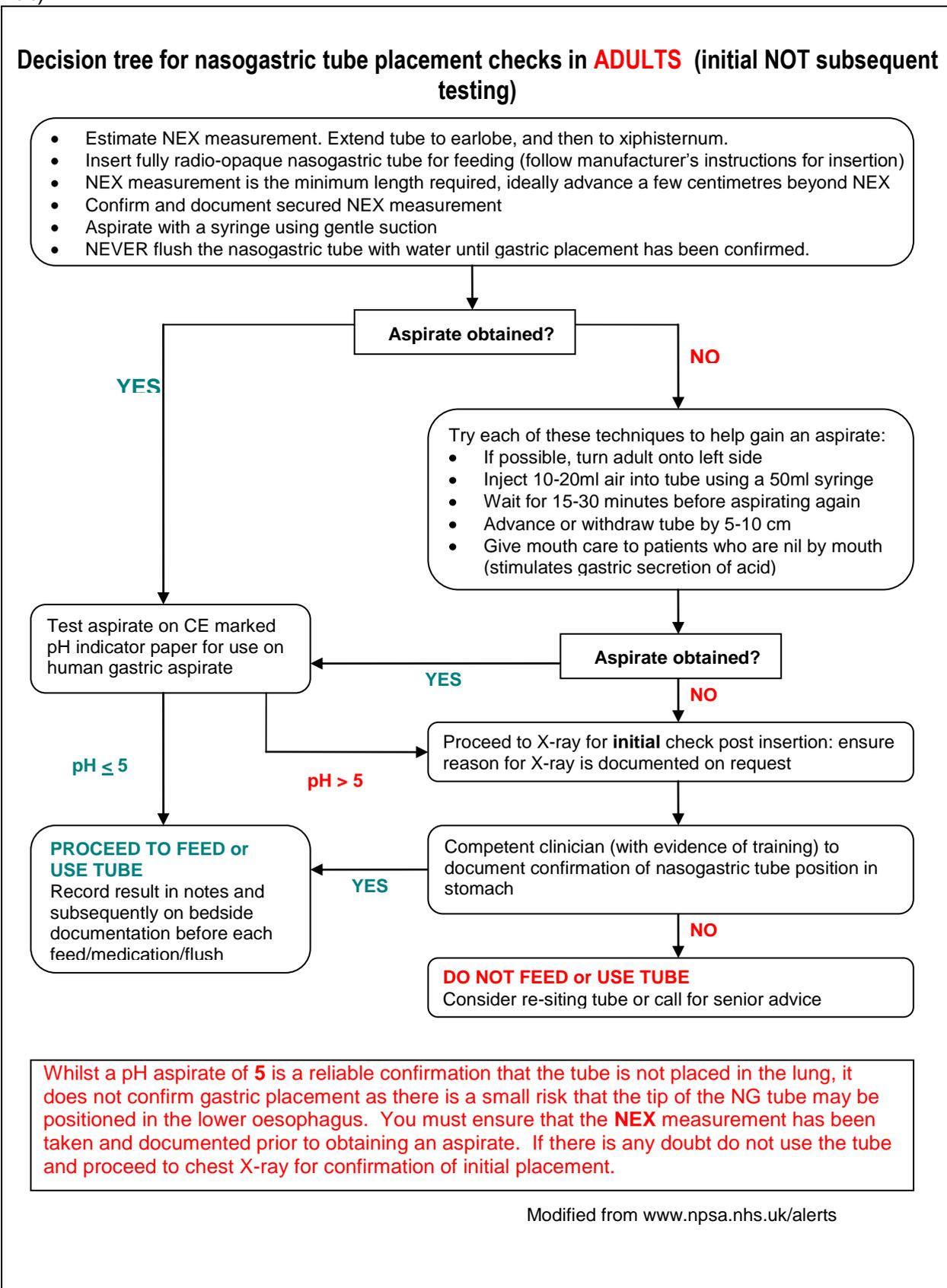
Figure 2: Head tilt to avoid tracheal placement of NGT.



9 CHECKING THE POSITION OF THE NASO/ORO-GASTRIC TUBE

- 9.1 The position of the tube must be checked immediately after insertion. Safe placement must be ensured only by one of the following approved methods:
- 9.1.1 Firstly - gastric aspirate that registers a pH of 5 or below on CE marked pH indicator paper intended by the manufacturer to test human gastric aspirate as per NPSA algorithm (see Figure 3).
 - 9.1.2 Only if these steps are unsuccessful proceed to chest x-ray for the positive identification of the tip of the tube either in or beyond the patient's stomach.
 - 9.1.3 In some areas the use of an electromagnetic sensing device (CORTRAK) may be used if the operator has received appropriate competency based training.

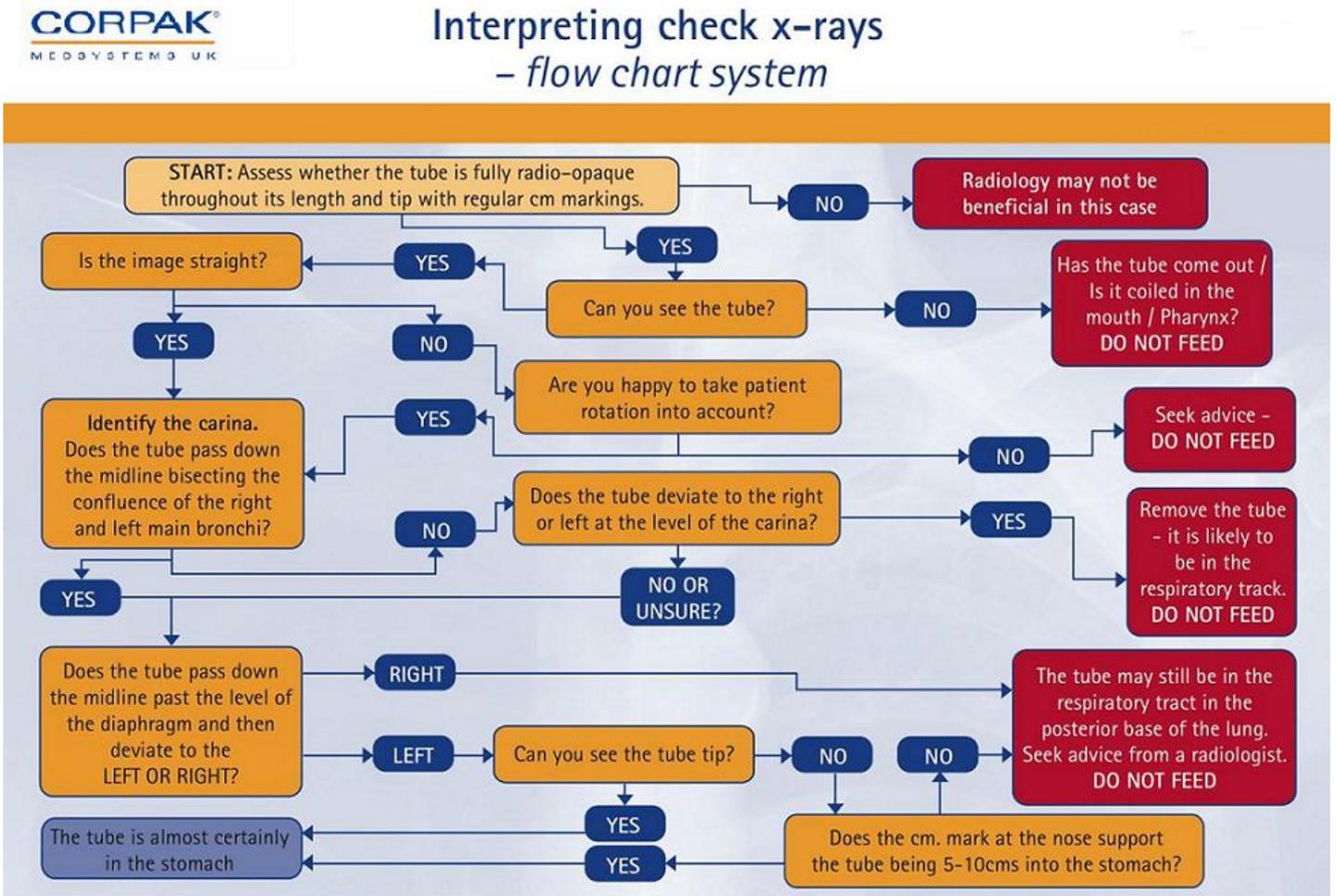
Figure 3: Modified NPSA algorithm for checking **initial placement of NGT's** (See Appendix 14)



The recommended method for checking pH of NGT aspirate is:

- 9.1.4 Aspirate 0.5-1mls from the NGT using a newly opened oral/enteral syringe and test this with a clean, dry NPSA compliant pH indicator strip (Rollins, 1997; NPSA, 2005). Before aspirating, inject the tube with 10-20ml of air to clear the lumen of other substances (Metheny, et al, 1993). **Not to be confused with the “whoosh” test.**
- 9.1.5 Ensure pH Indicator strips can distinguish between gastric acid (pH 0-5) and bronchial secretions (pH \geq 6) (Rollins, 1997; NPSA 2005).
- 9.1.6 Instances where it may not be possible to obtain pH \leq 5 on initial placement are:
- If a patient is on antacids or any other drugs that increase gastric pH
 - If a patient has had previous gastric surgery e.g. partial gastrectomy
 - If a patient has recently received food, water or medications orally
- 9.1.7 Wait up to 1 hour before aspirating to enable the food, water or medication to be absorbed and the pH to fall; otherwise an inaccurate test result may be obtained.
- 9.1.8 In instances where repeated gastric aspirates are more than pH 5 a chest X-ray will be required for **initial** insertion confirmation.
- 9.2 The use of X-rays for NGT confirmation should not be used routinely as:
- There are multiple reports of X-rays being misinterpreted by physicians who are not trained in radiology (NPSA 2005).
 - X-rays, even when interpreted correctly only confirm tube position at the time the X-ray was taken.
- 9.3 If a chest x-ray is indicated it must be requested by a practitioner qualified to request x-rays and the following wording must be put on the request *“Unable to clinically confirm naso-gastric tube placement. Chest X ray for naso-gastric tip placement please”*.
- 9.4 The chest x-ray must be reviewed by a practitioner with the training, experience and skills (see e-learning module in [Appendix 4](#)) to do so and following the flow chart in Figure 4. An example of an X-ray of correctly placed NGT is shown in Figure 5.
- 9.5 When a chest x-ray is needed to confirm correct NG tube placement in the stomach for feeding purposes the position must be reported as correct by a radiologist. The only exception to this is where a doctor has successfully completed the competency based training package (gained 100%), then a non-radiologist can confirm correct positioning.
- 9.6 The X-ray must be viewed on a suitable XR viewing screen, and NOT the portable screen of the mobile XR machine.
- 9.7 Where a NGT has been confirmed as misplaced the staff member must ascertain where the tube tip is and remove any feed or fluid that may have been administered. Once this has been done the NGT must be removed immediately. A misplaced gastric tube which has been accessed for feeding or drug administration constitutes a Never Event (NE). See Section 5.3

9.8 Figure 4: Flowchart for the checking of an Xray to confirm gastric placement.



To confirm gastric position of the nasogastric tube, ask:

- Does the tube path follow the oesophagus/avoid the contours of the bronchi?
- Does the tube clearly bisect the carina or the bronchi?
- Does it cross the diaphragm in the midline?
- Is the tip clearly visible below the left hemi-diaphragm?

Proceed to feed only if all criteria are met. If in any doubt repeat x-ray or call for senior help.

Figure 5: Correctly placed NGT and interpreted Chest X-ray. NPSA: 1253 | Nasogastric feeding tubes Alert | 08-03-2011 | v1

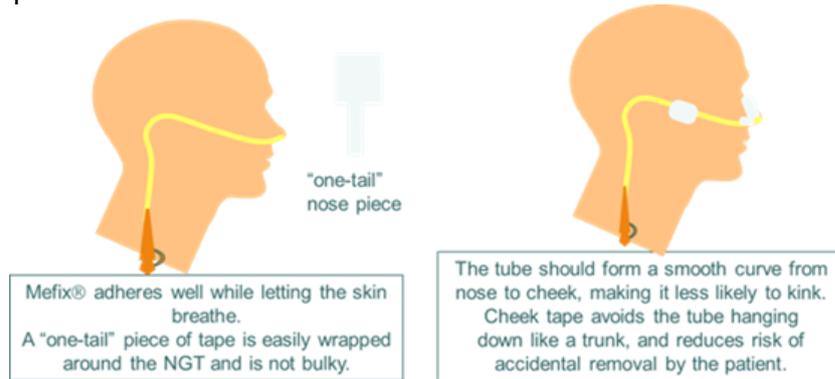
10 DOCUMENTATION REQUIREMENTS POST INSERTION

- 10.1 It is the responsibility of the professional who inserted the NGT to document the:
- Date and time inserted
 - Clearly document their name and position
 - Site of tube (i.e. left or right nostril)
 - Type, size and batch number of tube inserted
 - Measurement in cm at left or right nostril (e.g. 55cm marked on tube)
 - pH and amount of aspirate obtained in order to confirm position
 - Any additional comments, e.g. how well the patient tolerated the procedure, difficulties in insertion, steps taken to obtain an aspirate, etc.
- 10.2 The confirmation of the position of the tube must be documented in the patients' integrated healthcare records by the practitioner confirming its placement, prior to use and communicated to other practitioners caring for the patient.
- 10.3 The persons who performed the NGT insertion and checking of placement must complete the "Nasogastric tube (NGT) Position Record Chart" ([Appendix 13](#)), the Insertion and Removal Device Record, and the product sticker to be placed in the patient's integrated healthcare record, (this may be the same person).
- 10.4 If the initial placement of the NGT is confirmed by chest X-ray, the documentation must specify that: ***"NGT is seen to follow the oesophagus, bisect the carina, cross the diaphragm in the midline and the tip is visible below the left hemi-diaphragm"***. The Trust is working with the feeding companies to develop a sticker which will document the necessary as above.
- 10.5 If a patient with a NGT insitu requires a chest X-ray for any reason then it is the responsibility of the Radiographer to ensure that the nasogastric tube and tip can be clearly seen on the X-ray and used to re-confirm the NGT position at that time.
- 10.6 When a chest x-ray is needed to confirm correct NG tube placement in the stomach for feeding purposes the position must be reported as correct by a radiologist. The only exception to this is where a doctor has successfully completed the competency based training package (gained 100%), then a non-radiologist can confirm correct positioning.

11 MARKING AND SECURING NASO/ORO-GASTRIC TUBES

- 11.1 Once the position of the tube has been confirmed as correct, the tube must be marked as it exits the patients nose or mouth with a non toxic permanent marker to easily identify that the visible portion of the tube has changed length.
- 11.2 The tube must be secured with soft medical tape e.g. Mefix (not sutured) to the patients' nose and face, aligned with the patients' earlobe (Figure 6), to give two points of securement, to improve patient comfort and prevent displacement.

Figure 6: Two point securement of the NGT.



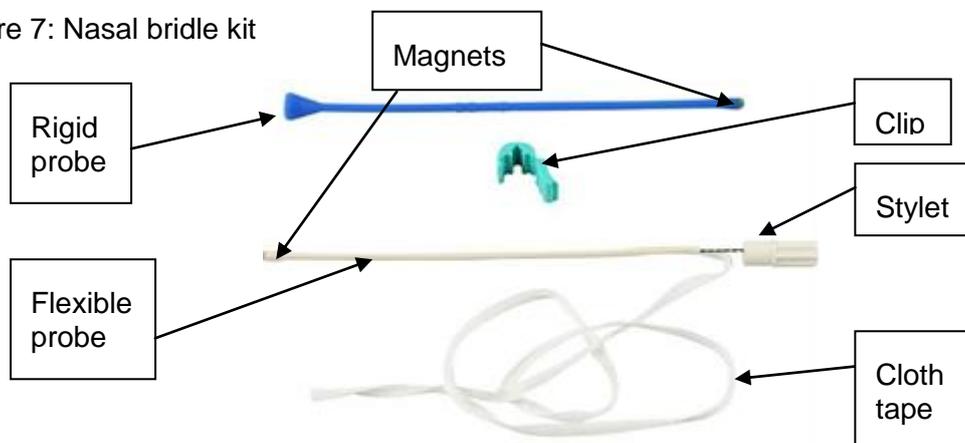
12 MANAGEMENT OF THE NGT

- 12.1 **Subsequent** testing of a NGT where the position has been confirmed on initial placement and the tube has already been in use (NOT valid for initial placement) is essential in the safe management of NGTs.
- 12.2 All patients must have their NGT position checked:
- Following initial insertion
 - Before administering each feed
 - At least once daily during continuous feeds, or when tube is used for drainage
 - Before giving medication
 - Following episodes of vomiting, retching or coughing
 - After suctioning or physiotherapy
 - Following evidence of tube displacement (e.g. loose tape or visible tube appears longer) (NPSA 2005)
 - If the patient complains of discomfort or develops respiratory distress
 - Following any transfer between units, departments or another hospital.
- 12.3 If you are having difficulty obtaining aspirates or aspirates are pH ≥ 5 and there is no reason to believe that the position of the NGT may have changed clinical judgement can be used to confirm position of a NGT. Check the placement of the tube using the following methods:
- Is the external marking (in cm) the same as what was documented at the time of initial insertion?
 - Is the tape, which secures the NGT at the nose and cheek, intact?
 - Is the NGT curled at the back of the patient's mouth? (To check you can observe using a touch and tongue depressor and also inject 10mls of air via the tube and observe for burping, this differs from auscultation)
 - Is the patient showing any signs of respiratory distress?
 - Check whether the patient is on medication which may increase the pH of gastric contents (antacids, H₂ antagonists and proton pump inhibitors).
- 12.4 Ensure these findings are documented in the patient's integrated healthcare record and on the NGT position record chart.

- 12.5 If the Practitioner is unable to confirm the correct placement of the NGT on subsequent testing using pH indicator strips and clinical judgement, then a second opinion from a competent person should be sought before the NGT is used.
- 12.6 During feeding the patient should be lying at a 30 - 45° angle (semi upright position) at all times to reduce the risk of regurgitation and aspiration of feed.
- 12.7 The tape used to secure the tube and area around the tube should be checked each 12 hour shift in order to prevent any inflammation, irritation, and allow early detection of a nasal pressure sore. Change the tape and reposition the external tube if irritation has occurred. Change the tape if it is not secure.
- 12.8 The type of feed administered should be as recommended by the Dietitian on the feeding regime or the starter regime. Always ensure that the feed is the one that has been prescribed, that it has not expired and is in a sealed, sterile bag.
- 12.9 The length of time the tube is in-situ prior to removal or re-insertion must comply with Manufacturers guidelines. However if a tube remains in situ longer then a risk assessment by the Adult Nutrition Team should be carried out and documented.
- 12.10 If the patient is non compliant, reassess the methods used to secure the tube and consider increasing supervision of the patient in accordance with safe staffing policy.
- 12.11 Report and document to medical team any dislodgements or lack of tolerance of NG tube for patients who are non compliant. The re -insertion of naso-gastric tube for feeding purposes should be avoided on night shifts. In cases where the risk of not feeding or administering medication could result in patient harm the decision to insert an NGT must be made with senior nursing/medical discussion.
- 12.12 If there are concerns that a patient receiving NGT feeding is not meeting their nutritional or fluid requirements contact the ward dietitian for review.
- 12.13 If feeding remains problematic inform the Nutrition Support Team for further assessment.
- 12.14 If long term feeding routes are being considered, e.g. Percutaneous Endoscopic Gastrostomy (PEG) tube or Radiologically Inserted Gastrostomy (RIG) tube ensure a referral is made to the Nutrition Support Team for consideration of this.
- 13 PREVENTION OF ACCIDENTAL REMOVAL OR DISPLACEMENT (NASAL BRIDLE USE)- ONLY TO BE USED IN DESIGNATED AREAS AT ROYAL LONDON HOSPITAL WHERE STAFF CAN DEMONSTRATE UP TO DATE COMPETENCE**
- 13.1 When NGTs are inserted, they remain in-situ to provide predictable amounts of nutritional support. Good nursing care, explanation of the indication for the NGT and a well secured tube are usually sufficient to keep the tubes in place.
- 13.2 However, NG tubes can become displaced for a variety of reasons and a small group of patients appear to be particularly intolerant of the NG tubes, requiring frequent re-insertions. This can be distressing for the patient, their family, can put the patient at significant risk of aspiration and be detrimental to their recovery and/or treatment.

- 13.3 In these situations additional measures may be required to prevent tube displacement. These include the use of:
- Nasal Bridles
 - Hand restraints
- 13.4 The hand restraints used in this Trust are large, soft, fingerless gloves of an approved design with a Velcro wrist strap. They are used to prevent a patient from displacing devices and dressings and to allow necessary care to be safely given. Any team considering the restriction of movement for a patient must contact the [Safeguarding Adults Team](#) who will support them through the safe use of restraint within the parameters of the law.
- 13.5 Nasal bridle devices do not restrict movement but provide a means of securing a nasogastric tube to prevent intentional or accidental removal of the tube by the patient. They should be considered for patients, who have pulled out their NGT multiple times and feeding or medication administration is proving problematic and putting the patient at risk. Any tube/bridle placement will only be undertaken if it is considered to be solely in the patient's best interests (RCP Guidelines 2010).
- 13.6 The nasal bridle consists of a rigid probe and a flexible probe with a tape attachment. The flexible probe has a removable stylet. Each probe has a magnet at the end. The probes are inserted by a competent member of staff, into each nostril, until the magnets join at the back of the nose; the stylet is then removed. The rigid probe is then pulled out of the nostril bringing the flexible probe and the loop of tape around the back of the nasopharynx and exiting from each nostril. The tapes from each nostril are then secured to the NGT, using the supplied clip, to reduce the risk of the patient dislodging their NGT (See Figure 7).

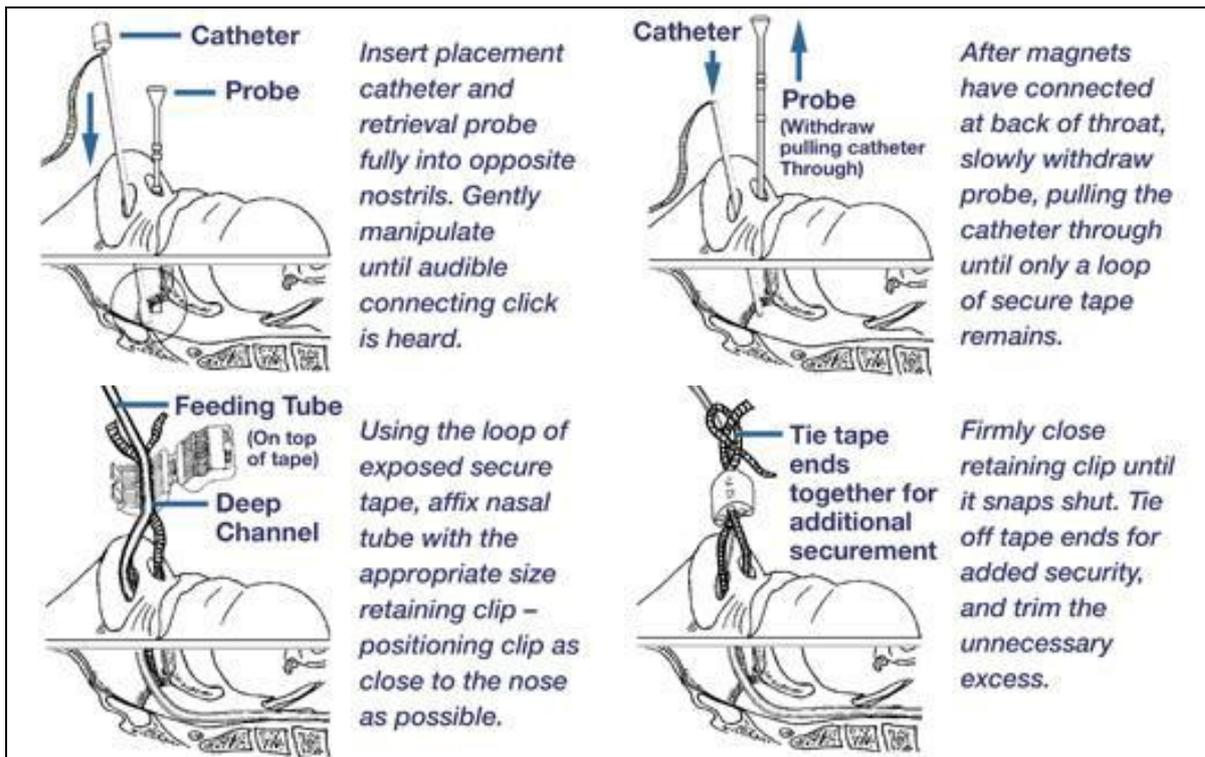
Figure 7: Nasal bridle kit



- 13.7 **Contraindications** for the use of nasal bridles include:
- Basal skull fractures
 - Deviated nasal septum
 - Structural deformity of the nose or nasopharynx
 - Recent head and neck surgery/oncology treatment
 - Patients with an INR >1.3
 - Patient refusal

- 13.8 Nasal bridle should not be used if the Consultant in charge of the patients care at the time refuses permission to use a nasal bridle.
- 13.9 Informed Consent to be obtained from patient and if patient cannot give verbal consent the mental capacity status to be documented by Medical Team. Patients without capacity, i.e dementia will be considered on an individual basis after consultation with multidisciplinary team and the family. Any tube/bridle placement will only be undertaken if it is considered to be solely in the patient's best interests (RCP Guidelines 2010).
- 13.10 For an adult without capacity, the clinician in charge of the patient's care is responsible in law for any decision to withhold, give, or withdraw a medical treatment. The doctor's duty is to act in the patient's best interest. A best interest meeting should be held with input from the full multidisciplinary team, including the patient where possible or, if this is not feasible, a representative of the patient who has enduring power of attorney and who can make decisions on behalf of the patient.
- 13.11 When the capacity to consent is in doubt or variable, efforts should be made to find out if the patient has made an advanced statement and consideration should be given to the appointment of an independent mental capacity advocate (IMCA).
- 13.12 All decisions on tube provision of food and/or fluids should ideally involve full consultation with the family/carers and members of the healthcare team from the outset. If there is significant disagreement an independent second opinion should be sought.
- 13.13 Under English law, relatives cannot make a decision on behalf of an adult patient and hence cannot override the doctor's decision.
- 13.14 The Mental Capacity Act (MCA) 2005 provides a statutory framework for people who lack the capacity to make decisions for themselves in connection with their care or treatment. The layout of this form ensures that, if completed in full, capacity assessments will have been taken in accordance with the Act. It is not necessary for this form to be completed every time a decision is taken for someone who lacks capacity, but it **should always be completed where a decision is being taken about serious medical treatment, a change in long term residence or where an IMCA is instructed.**
- 13.15 Placement should be carried out in designated care areas where staff can demonstrate competence and up to date training.
- 13.16 Nasal bridles are available after consultation with the Nutrition CNS.
- 13.17 Once the nasal bridle device is in place, the NG tube should be treated in the same way as an ordinary NG tube as the presence of a bridle does not guarantee the tip of the NGT remains in the stomach. Ensure the NGT position record chart is completed.

Figure 8: Procedure for the insertion of the AMT Nasal Bridle in Adult Patients



13.18 Insertion of a Nasal Bridle.

Equipment required:	<ul style="list-style-type: none"> • PPE • Alcohol based hand rub • Nasal bridle pack (Fr gauge equal to that of the NGT) • Glass of water and straw (if appropriate) or oral sponges • Tissues • Inco pad and bowl • Clean scissors
Procedure	
1. Ensure patient privacy.	
2. Review patient's integrated healthcare record and check against Section 13.7 for potential contraindications, to ensure insertion of nasal bridle is possible, indicated and in the patient's best interest.	
3. Explain procedure to patient, carer's and/or family and establish that they understand the procedure.	
4. Arrange a signal the patient can use if they want to stop the procedure.	
5. Obtain informed consent from the patient, document; refer to the Barts Health Mental Capacity Act Policy if required.	
6. Decontaminate a tray, collect equipment required. Perform hand hygiene and wear PPE.	
7. Insert the retrieving probe into the nostril until the first rib is at the bottom of the nostril.	
8. Insert the loop catheter into the opposite nostril. An audible click signifies contact between the magnets which may or may not be tactilely felt. (See Figure 8)	
9. If necessary gently move the retrieving probe from side to side and/or up and down to encourage contact between the magnets. If no contact has occurred then advance the loop catheter and the retrieving probe to the second rib.	
10. Once contact has occurred, remove the stylet completely from the catheter.	

11. Slowly withdraw the retrieving probe while allowing the bridge catheter to advance into the nose. Continue until only the cloth tape is in the nose. (See Figure 8)
12. Using scissors cut the loop catheter off of the cloth tape leaving only the tape in the nose. Dispose of both catheter tube and probe. Note: If the NGT is not already in place, it should be inserted according to Trust policy and procedure and arranged into final position now.
13. Lay both ends of umbilical tape in the clip's deep channel near the tip of the nose. Both ends of the cloth tape must be placed in the clip prior to the feeding tube.
14. Push the NGT into the deep channel on top of the cloth tape. The clip should be positioned just beyond the tip of the nose, so that it will rest on the upper lip when released.
15. Fold the two halves of the clip together & press tightly until the clip snaps shut. Double click to verify clip is fully closed. (See Figure 8) Note: The clip cannot be re-opened after closing, so ensure proper position of the feeding tube, cloth tape & clip prior to closure.
16. After the clip has been placed; verify that it is fully closed by holding the feeding tube in a fixed position while gently pulling the tape ends away from the feeding tube. If the clip happens to open, reposition the components as listed above then repeat the fully closed verification.
17. After the clip has been fully closed, tie the two tapes together (excluding the tube) creating a simple knot. The excess length of cloth tape may then be trimmed as desired using scissors. (See Figure 8)

13.19 Monitoring and Care

This must be undertaken daily to detect potential complications of the tube or nasal loop including sinusitis, damage to the nose, and tube migration.

Equipment required:	<ul style="list-style-type: none"> • PPE • Alcohol based hand rub
Procedure	
1.	Ensure patient privacy.
2.	Explain procedure to patient, carer's and/or family and establish that they understand the procedure.
3.	Perform hand hygiene and wear PPE.
4.	Observe the face for swelling or discolouration.
5.	Inspect the external nasal passage for pressure or other damage.
6.	Observe the presence or absence of purulent secretions from the nose or in the mouth or oropharynx
7.	Observe for any signs of tube migration.
8.	Document findings on Nasogastric tube position record chart

13.20 Procedure for the removal of the Nasal Bridle

The nasal loop should be removed safely when it and the NGT are no longer required, if the NGT becomes displaced or if there is evidence of pressure damage caused by the nasal bridle or NGT.

Equipment required:	<ul style="list-style-type: none"> • PPE
----------------------------	---

	<ul style="list-style-type: none"> • Alcohol based hand rub • Scissors • Tissues
Procedure	
1.	Ensure patient privacy.
2.	Explain procedure to patient, carer's and/or family and establish that they understand the procedure.
3.	Perform hand hygiene and wear PPE.
4.	Cut one side of cloth tape (between nose and clip).
5.	Gently pull both the loop and feeding tube out of the nose.
6.	Inspect the external nasal passage for pressure or other damage.
7.	Document findings on Nasogastric tube position record chart.
8.	Document removal of NGT on Medical Device chart.

14 NASOGASTRIC FEEDING IN THE COMMUNITY

- 14.1 If longer term feeding routes are not medically or surgically possible nasogastric feeding in the community is an option that can be explored but only after Nutrition Team involvement, MDT meeting and careful consideration of the individual case.
- 14.2 Factors that would affect the possibility of this being an option include:
- If the patient or their carer is competent in caring for the NGT.
 - CCG commissioning of services in each borough.
 - If the patient or their carer can be trained and become competent in insertion of NGT's.
 - If there is sufficient professional support in the community. District Nursing services do not provide care to these patients.
- 14.3 A full multidisciplinary supported risk assessment must be made and documented before a patient with a nasogastric tube is discharged from the acute setting to the community.
- 14.4 Prior to discharge a nurse trained in NGT insertion has to ensure the patient and/or carer is competent in the skills required to safely monitor the NGT by providing the patient information leaflet [Appendix 8](#), the NPSA patient information leaflet in [Appendix 9](#) and working through the competencies in [Appendix 10](#) for patients/carers who will not be reinserting NGT's or [Appendix 11](#) for those who will be trained to reinsert.
- 14.5 The nurse must also complete the checklist in Appendix 12 to ensure everything is in place for a safe and efficient discharge.

15 REMOVAL OF THE TUBE

- 15.1 Before the NGT is removed ensure it is no longer clinically required or there is a clear documented reason for removal. If the NGT has been used for feeding please inform the patient's Dietitian prior to tube removal.

Equipment required: <ul style="list-style-type: none"> • PPE • Tissues • Inco pad • Bowl • Spigot (if necessary) • Clinical waste bag 	
Action	Rationale
Ensure patient privacy.	To protect their privacy and dignity during an uncomfortable procedure.
Review patient's integrated healthcare record.	To ensure medical team has approved NGT removal.
Explain procedure to patient, carer's and/or family and establish that they understand the procedure.	To ensure the patient knows why they need the procedure, what to expect during it, and their role within it.
If able, sit patient upright (the patient may find taking a deep breath during the removal helpful)	Improve patient comfort. Reduces risk of aspiration if patient vomits during procedure.
Wash hands and put on PPE.	Universal precautions and adherence to infection control policy.
Ensure feed has been stopped and detached or spigot drainage bag if appropriate.	To prevent spillage/leakage of feed or gastric contents.
Remove tape.	To enable NGT to be removed.
Remove the tube in one swift action.	To improve patient comfort.
Dispose of in the clinical waste bag.	Universal precautions.
Wipe patient's nose and ask patient to blow their nose.	To improve patient comfort and clear airways.
Document in patient's integrated healthcare record and on the Insertion and Removal Device Record	To aid communication.

16 DUTIES AND RESPONSIBILITIES

All staff working in the Trust	<p><u>Ward Nursing Staff</u> Ward nursing staff are responsible for inserting nasogastric tubes and must not do so unless they have completed competency based training for this procedure. They are responsible for all nursing care of patients with nasogastric tubes including the rechecking of gastric placement and documenting of the same. They should undertake patient observations (see monitoring by ward nurses) alerting members of the primary and NST as appropriate. They should stop NGT feeding immediately if there is any concern that the tube may have become dislodged.</p>
Managers	<p><u>Ward Managers</u> Ward Managers are responsible for ensuring that all their nursing team members involved in the care of patients with nasogastric tubes have adequate knowledge, skills and competencies to do so.</p>
Other posts	<p>Primary Medical/Surgical Team is responsible for:</p> <ul style="list-style-type: none"> • Identifying the need for a nasogastric tube. • Having initial discussions with the patient, their cares and/or family about the risks versus the perceived benefits of having a nasogastric tube inserted. • Documentation of the above discussions and indication for NGT in the patient's integrated healthcare record. • Requesting chest X-rays to confirm gastric placement if indicated. • Ensure all staff checking chest X-rays have had appropriate training, possess the knowledge and skills to do so accurately and are aware of the serious complications of misplacement and how to avoid them. • Correctly confirming the position of the tube if nursing staff are unable to using pH analysis of aspirate, and documenting this clearly in the patient's healthcare records according to this policy. • Arranging ongoing blood tests, monitor biochemistry results and treating abnormalities accordingly, after liaising with the patient's dietitian. • Requesting diagnostic tests. • Prescribing any additional medications indicated, for example, Pabrinex, Electrolytes, motility agents. • Liaising with the dietitian over changes in the patient's management plan. <p>Radiographer</p> <ul style="list-style-type: none"> • Ensuring that if a patient with a NGT insitu requires a chest X-ray for any reason, that the NGT and tip can be clearly seen on the X-ray and used to re-confirm tube position. <p>Dietitian</p> <ul style="list-style-type: none"> • Assessing nutritional status. • Estimating nutritional requirements. • Monitoring and adjusting enteral regimen as appropriate. <p>Nutrition Support Team The NST is responsible for:</p> <ul style="list-style-type: none"> • Troubleshooting problems associated with NGT feeding. • Assisting in ethical decisions around artificial nutrition support.

	<ul style="list-style-type: none"> Monitoring effectiveness of policy.
Committees	Barts Health Nutrition Steering Committee Legacy sites Nutrition Action Groups Patient Safety Team

17 MONITORING THE EFFECTIVENESS OF THIS POLICY

Issue being monitored	Monitoring method	Responsibility	Frequency	Reviewed by and actions arising followed up by
Training on Chest x-ray interpretation	Review of records of training	Medical Director	6 monthly eLearning audit	Learning and development team
Documentation of indication for NGT	Review of patient's integrated healthcare record.	Director of Nursing and Medical Director	Annual audit	Learning and development team
Request for Chest X-ray confirmation of NG placement	Review of CRS requests.	Radiology	Annually	Barts Health Nutrition Steering Committee
Documentation of pH testing of NG placement	Review of patient's bedside documentation.	Director of Nursing	Annual Audit	Clinical Team
Serious harm or death caused by misplaced NGT's	Datix reports	Clinical teams	Ongoing	Trust Patient Safety Team / Governance

Appendix 1: Change Log

Change Log – Policy Name		
Substantive changes since previous version	Reason for Change	Author & Group(s) approving change(s)
Significant reorganisation of the material	Amalgamation of multiple legacy site policies Reformatting in Barts Health NHS Trust Policy Feedback from SUI's	Adult Nutrition Support Team

Appendix 2: Impact assessments

Equalities impact checklist - must be completed for all new policies



equalities

Organisational impact checklist - must be completed for all new policies



Organisational
impact assessment

Appendix 3: References

The Department of Health: The "never events" list 2015/16 <https://www.england.nhs.uk/wp-content/uploads/2015/03/never-evnts-list-15-16.pdf>

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NPSA Alert March 2012: Harm from flushing of nasogastric tubes before confirmation of placement <http://www.nrls.npsa.nhs.uk/resources/?EntryId45=133441>

NPSA Alert March 2011: Reducing the harm caused by misplaced nasogastric feeding tubes in adults, children and infants
<http://www.nrls.npsa.nhs.uk/resources/?entryid45=129640&q=0%C2%ACnasogastric%C2%AC>

NPSA Alert 19: Promoting safer measurement and administration of liquid medicines via oral and other enteral routes
<http://www.nrls.npsa.nhs.uk/EasySiteWeb/getresource.axd?AssetID=60068&..>

NICE: Nutrition support in adults: Oral nutrition support, enteral tube feeding and parenteral nutrition February 2006 <http://www.nice.org.uk/nicemedia/live/10978/29981/29981.pdf>

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Appendix 4: Nasogastric tube training for staff.

E-learning module:

[X-ray interpretation of nasogastric tube position](#)

Using smartcard or remote access, search for “nasogastric”, select and complete:

“BH X-ray Interpretation of Nasogastric Tube Position”

Link to:

[Adult Nasogastric \(NG\) Feeding Competencies for Healthcare Professionals.](#)

Appendix 5: Nutrition Support Team contact details

	BLT Legacy Sites	Whipps Cross	Newham
Nutrition Nurses (Office hours)	0203 594 2223 07703890134 Bleeps 1164/1325	0208 535 6829 Internal ext 5773 Bleep 959	0208 535 6829 Internal ext 5773 WXUH Bleep 959 via WXUH switchbaord
Dietitian (Office hours)	0203 594 1129 Bleep 1255	0208 535 6829 Internal ext 5774 Bleep 404	02074764000 Ext 8720 Bleep 234
Pharmacist	Bleep 1465		
Gastro Registrar (24 hours)	0207 377 7000 Bleep 0011		
Consultant's Secretary (Office hours)	020 3594 3500	0208 535 6829 Internal ext 5773	Via 020 7476 4000

Appendix 6: Nasogastric tubes used in Adults at Barts Health.

Fine bore Nasogastric tubes	Characteristics	Duration of use
<p style="text-align: center;">Entral 10Fr</p> 	<ul style="list-style-type: none"> • Polyurethane • Not compatible with IV syringes • Compatible with catheter tip syringe • Compatible with female Luer syringe • Completely radiopaque (40% barium) • Regular centimetre markings • Colour coded ports <p>Entral Nasogastric Feeding Tube (Un-weighted) 10Fr x 85cm Order number: FWM2119 through the supply chain.</p>	<p>28 days</p>
	<ul style="list-style-type: none"> • Merck pH indicator strips 0-6 Order number: FWM1216 (one pot of 100 strips) 	

Appendix 7: NGT insertion record sticker

Nasogastric Feeding Tube Insertion ENTRAL™	
Date/Time of insertion :	
Indication :	Consent: Verbal / NA
Tube Type :	Size: fr cm
NEX Measurement :	Inserted to: cm at R/L nostril
Aspirate obtained : Yes / No	pH of Aspirate:
CXR confirmation required : Yes/No	CXR Number :
CXR confirmed by : (Name)	(Signature)
Guidewire removed Yes/ No	Commence feeding: Yes/No
Authorised by : (Name)	(Signature)

Sticker for Entral fine-bore NGT in every packet. Placement of sticker in medical notes after every new / initial placement.

Appendix 8: Patient information on Nasogastric feeding.

If you have been trained to insert your own nasogastric tube, try the above or:
Remove the tube and flush with warm water whilst massaging the length of the tube. If this is unsuccessful then insert a new tube.

What should I do if the tube falls out & you have not been trained to reinsert it yourself?
If the tube falls out, contact your Dietitian, Nutrition Nurse or Feed Company Nurse. If this happens outside of regular office hours attend your local Accident and Emergency department. If you have a spare tube at home please take this with you.

Useful contact details:	Name	Telephone
District Nurse		
Nutrition Nurse		
Dietitian		
Speech and Language Therapist		
Feed Company		
Feed Company Nurse		
Hospital Consultant		
GP		

Large print and other languages
For this leaflet in large print, please ring 020 3594 2040 or 020 3594 2050.

For help interpreting this leaflet in other languages, please ring 020 7377 7280.

Reference: BH/PIN/XX
Publication date:
All our patient information leaflets are reviewed every three years.

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Barts Health **NHS**
NHS Trust

Patient information

Nasogastric feeding

Adult Nutrition Support Team

Appendix 9: NPSA advice to patients/carers

Patient briefing 05



National Patient Safety Agency

Patient and carer briefing



Information

21 February 2005

Understanding NPSA advice

Community nurse or
health professional
contact details:

Checking the position of nasogastric feeding tubes

This information is for carers who look after infants, children or adults who use nasogastric feeding tubes, and patients in the community who can check the position of their own nasogastric feeding tube.

What are nasogastric feeding tubes?

Nasogastric feeding tubes are small tubes that are inserted through the nose, down the back of the throat and into the stomach. They are used to give food to people who have difficulty swallowing or feeding.

Why is it important to check the position of the nasogastric feeding tube?

It is important to check the position of the tube before feeding, or after a coughing fit or vomiting episode, to ensure that the feed goes directly into the stomach and not into the lungs.

How can I check the position of the nasogastric feeding tube?

The most reliable way for you to check the position of the tube is to measure the pH (acidity/alkalinity) of the person's stomach contents using pH indicator strips or paper. These have a colour code chart indicating the colour change of each pH reading; from pH 1 (acid), through pH 7 (neutral) to pH 14 (alkaline).

REMEMBER: keep pH strips or paper clean and dry by storing them in a sealed container.

- wash your hands before and after checking the tube position;
- remove the cap or plug from the tube;
- attach a syringe containing air (1-5ml for infants and children; 10-20mls for adults) into the feeding tube and flush the air down the tube to remove any water or feed from the tube;
- draw back the syringe to obtain contents from the stomach (this is called 'aspirating' the tube);
- take the pH strip/paper and place a few drops of the stomach contents onto it;
- match the colour change of the strip/paper with the colour code on the box to identify the pH of the stomach contents;
- a pH reading of below 5.5 (or below 5 if your paper has single gradings) indicates an acid reaction, which means the tube is correctly positioned in the stomach.

Appendix 10: [Patient/carer competencies for feeding via NGT.](#)

Appendix 11: [Patient/care competencies for inserting and feeding via NGT.](#)

Appendix 12: [Home NGT discharge checklist.](#)

Appendix 13: NGT Position Record Chart (See next page)

NASOGASTRIC TUBE (NGT) POSITION RECORD CHART

Use a new position record
chart each time an NGT is
inserted

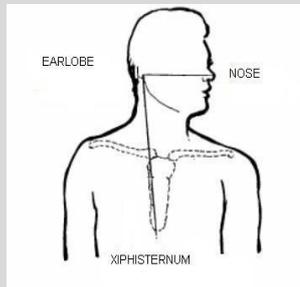


Surname:
 First name:
 MRN no:.....
 DOB:..... M / F
 Hospital:
 Ward:

INITIAL INSERTION: (Ensure that the sticker provided with the NG tube is completed and placed in medical notes)

Date and time of NGT insertion	Size and Make of NGT	Patients NEX Measurement <small>(minimum measurement)</small> <small>(see point 1 below)</small>	Nostril used	Position confirmed by	Document length of tube inserted <small>(Mark tube at nostril with indelible marker)</small>	If unable to obtain an aspirate please refer to the NPSA decision tree overleaf.
		_____ cm	Left / right	<input type="checkbox"/> pH _____ <input type="checkbox"/> Chest X-ray	_____ cm	

1. Nose-Earlobe-Xiphisternum **measurement** (NEX) used to determine the **minimum** depth of NG tube insertion (see Adult Naso-/Oro-gastric Tube Policy on the intranet for further information about NG tube insertion). Please note that this may differ from the documented length of tube inserted at the time of initial placement.



Nothing should be administered via the NGT before gastric placement has been confirmed

2. Always check the pH of gastric aspirate:

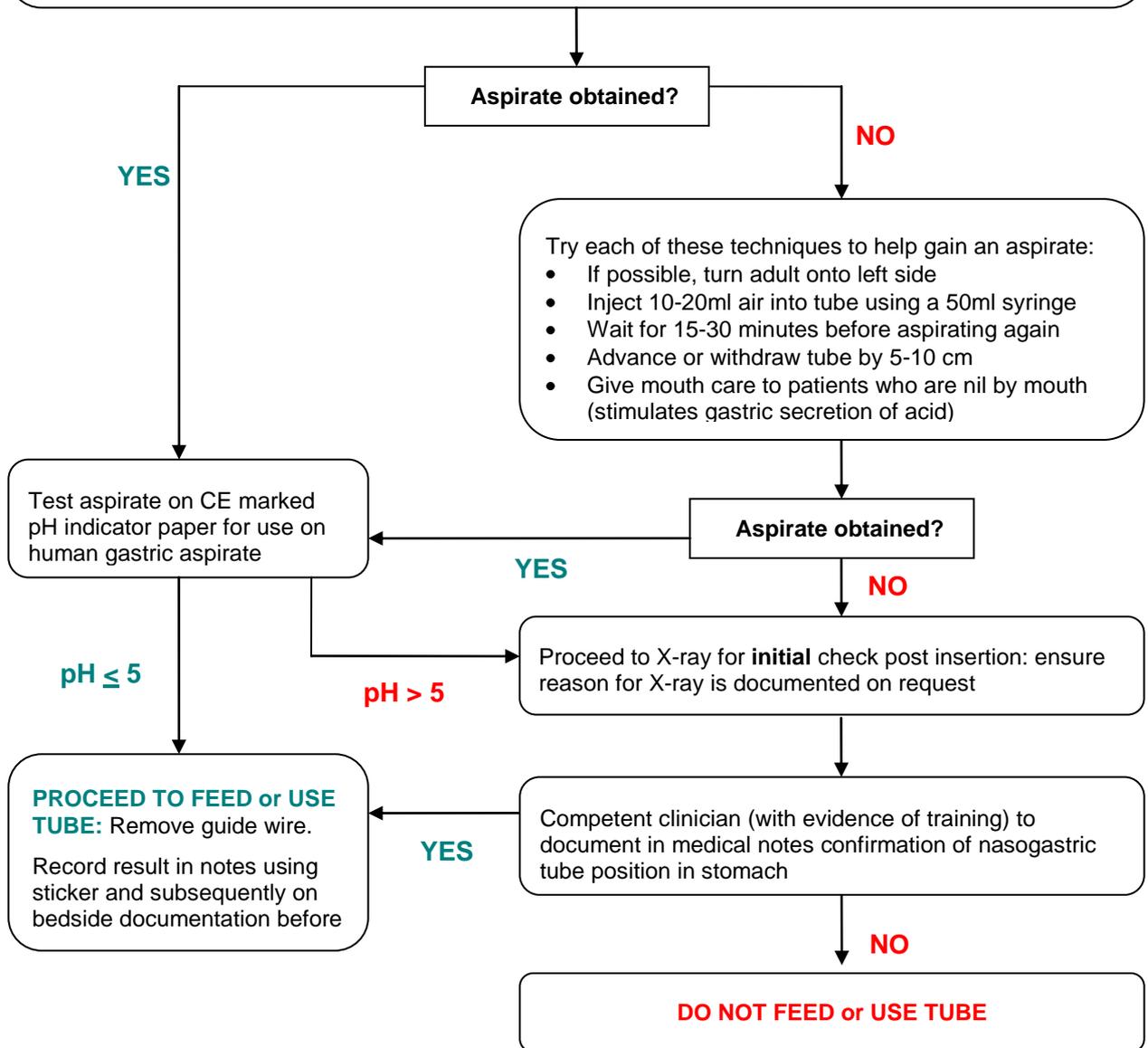
- | | |
|---|---|
| <ul style="list-style-type: none"> a) Following initial insertion b) Before administering each feed c) Before giving medications d) Following an episode of vomiting/retching or coughing e) If there is evidence of tube displacement | <ul style="list-style-type: none"> f) If the patient complains of discomfort or develops respiratory distress g) Following any transfer between units, departments or another hospital. |
|---|---|

3. **pH testing is used as the first line test method with a pH 0- 5 as the safe range** and this must be documented.

4. **X-ray is used only as a second line test** when no aspirate could be obtained or pH testing has failed to confirm the position of the nasogastric tube.

Decision tree for nasogastric tube placement checks in **ADULTS** (Initial placement NOT subsequent testing)

- Estimate NEX measurement. Extend tube to earlobe, and then to xiphisternum.
- Insert fully radio-opaque nasogastric tube for feeding (follow manufacturer's instructions for insertion),
- **NEX measurement is the minimum length required, ideally advance a few centimetres beyond NEX**
- Confirm and document length of tube inserted as per markings on the NGT (compare with NEX)
- Aspirate with a syringe using gentle suction
- NEVER flush the nasogastric tube with water until gastric placement has been confirmed.



Whilst a pH aspirate of 5 is a reliable confirmation that the tube is not placed in the lung, it does not confirm gastric placement as there is a small risk that the tip of the NG tube may be positioned in the lower oesophagus. You must ensure that the NEX measurement has been taken and documented prior to obtaining an aspirate. If there is any doubt do not use the tube and proceed to chest X-ray for confirmation of initial placement.

Modified from www.npsa.nhs.uk/alerts

Appendix 14: Adult NGT Placement Reference Guide

Adult Naso Gastric feeding tube placement & ongoing care

Quick reference guide

Base of skull fracture	Cautions for nurse led insertion	Septum defects
Clotting abnormalities	Hiatus hernia	<u>Oesophageal</u> surgery
	Max fax surgery	<u>Oesophageal</u> /gastric abnormality
	Upper airway trauma	

Insertion

- Explain procedure & consent (if appropriate)
- Prepare equipment
- Measure nose, ear to xiphisternum 'NEX' length
- 'NEX' length indicates **minimum** insertion length
- Insert NGT as per Trust policy
- Secure NGT & leave guide wire insitu
- Aspirate NGT and test for pH
- Once position confirmed remove guide wire
- Document date, position, insertion length and pH on Naso-gastric tube position record chart.

After 3 failed attempts seek senior advice or contact the Nutrition Team

Confirmation of Tube position

- Inject 10-20ml of air prior to aspirating
- Aspirate NGT using clean single use enteral syringe . Minimum aspirate required 0.5-1.0 mls
- Test gastric content using CE 0.5 incremental pH marked acid indicator strips
- Confirmation of pH ≤ 5.0
- If difficulty obtaining initial aspirate consider: Position patient onto left side wait 15-30 mins & recheck
- Consider mouth care to stimulate GI secretions

If unable to obtain an aspirate or pH >5.0 a chest x-ray must be performed

This must then be reviewed, position confirmed & documented by a trained clinician who has successfully completed the BH competency assessment. Otherwise contact the radiologist on duty.

Subsequent testing

At handover, following a pause in feed or disconnection and prior to administration of medication please assess and document the following:

If yes to any of the above question, do not use NG tube & seek SENIOR review

- Has the inserted length of tube changed?
- Has the tube dressing become loose?
- Has the NGT curled in patients mouth?
- Is the patient showing new signs of respiratory distress?

Check nostril for pressure damage & reposition tape at least 12 hrly

Critical Care: Aspirate NG 4 hrly & document volume. Refer to local ACCU policy re returning aspirate.

Accidental removal or partial dislodgment

If you suspect that the NGT is misplaced (eg : oesophagus/ lung) the NG tube should be aspirated to remove drug or feed prior to its removal.

In patient who have required 2 or more insertions in 24 hrs or patients requiring complex insertion consider the use of a nasal bridle with Consultant consent. Please see full policy and inform nutrition team.

For agitated patients consider use of hand restraints following assessment of mental capacity & acute delirium screen. Ensure all necessary safe guarding (DOLS) documentation is completed.

Daily assessment for ongoing need

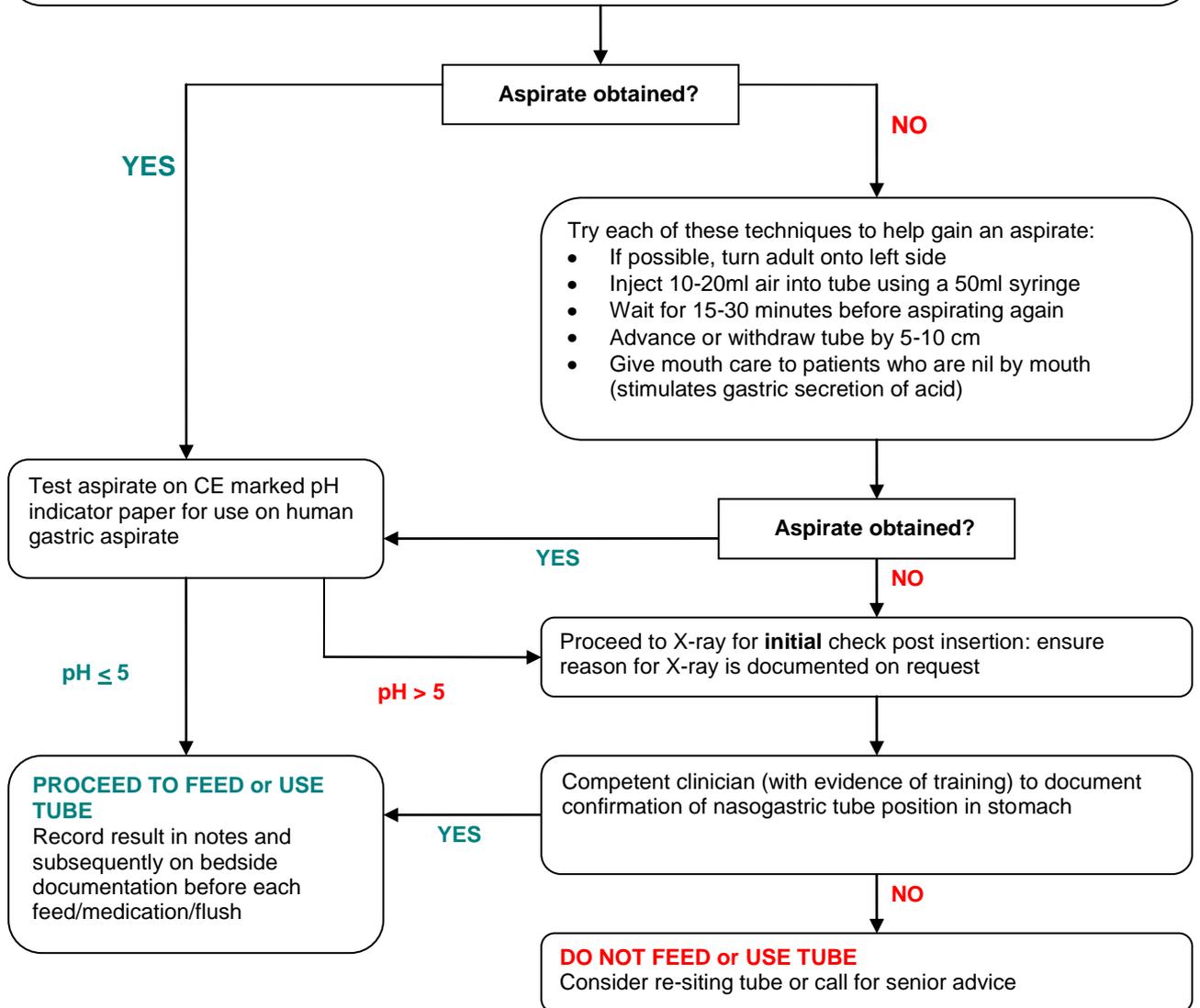
Removal and tube change

Dietitian input for all patients receiving supplementary feeding

Fine bore tube must be changed after 6 weeks. Patients requiring long term feeding via NGT should be discussed with the Nutrition team.

Decision tree for nasogastric tube placement checks in **ADULTS** (initial NOT subsequent testing)

- Estimate NEX measurement. Extend tube to earlobe, and then to xiphisternum.
- Insert fully radio-opaque nasogastric tube for feeding (follow manufacturer's instructions for insertion)
- NEX measurement is the minimum length required, ideally advance a few centimetres beyond NEX
- Confirm and document secured NEX measurement
- Aspirate with a syringe using gentle suction
- NEVER flush the nasogastric tube with water until gastric placement has been confirmed.



Whilst a pH aspirate of **5** is a reliable confirmation that the tube is not placed in the lung, it does not confirm gastric placement as there is a small risk that the tip of the NG tube may be positioned in the lower oesophagus. You must ensure that the **NEX** measurement has been taken and documented prior to obtaining an aspirate. If there is any doubt do not use the tube and proceed to chest X-ray for confirmation of initial placement.

Modified from www.npsa.nhs.uk/alerts