The Newcastle upon Tyne Hospitals NHS Foundation Trust

Insertion and Management of NG feeding tubes
Adult & Paediatric Policy (excludes neonates)

Version No. 4.0
Effective From: 21 May 2018
Expiry Date: 21 May 2021
Ratified By: Clinical Risk Group
Date Ratified: 27 October 2017

1 Introduction

Displacement of nasogastric (NG) tubes can have serious implications if undetected (NPSA, 2015). NG tubes can be misplaced into the lungs on insertion or displaced from the stomach into the oesophagus at a later stage. Incorrectly positioned tubes leave patients vulnerable to the risks of regurgitation and respiratory aspiration, which can cause serious harm and in some cases can be fatal. It is crucial to differentiate between gastric and respiratory placement on initial insertion to prevent potentially fatal pulmonary complications. Feeding into the lung as the result of a misplaced NG tube was designated a ‘Never Event’ by NHS England (NHS England, 2015). ‘Never Events’ are serious, largely preventable patient safety incidents that should not occur if the available preventative measures have been implemented. The Trust is committed to reducing the incidence of incorrectly placed NG tubes.

2 Aim of the Policy

The scope of this policy is to provide guidance to all healthcare professionals who care for patients with an NG tube for feeding. This policy is aimed at standardising the care of patients with NG feeding tubes to ensure that insertion and ongoing management is safe, effective and comfortable for the patient. The policy includes principles for the safe insertion of NG tubes. The policy also includes safe methods for checking the position of NG feeding tubes and advises on unsafe methods, which should not be used. It is applicable to both adults and children but excludes neonates.

3 Roles and Responsibilities

Responsibility for ensuring the application of this policy lies with the Clinical Director of each Directorate, supported by the Directorate Manager and Matron.

Insertion and care of an NG tube should only be carried out by a registered doctor or nurse who has undergone theoretical and practical training and is deemed competent or is supervised by someone competent. Practitioners must have documentary evidence that competence has been achieved. Assistant Practitioners and other unregistered staff must never insert Nasogastric feeding tubes or be involved in the initial confirmation of safe nasogastric tube position.

Removal of an NG tube should only be carried out by a registered doctor or nurse.
4 **Background**

NG feeding tubes are tubes passed into the stomach via the naso-pharynx for the purpose of providing nutrition. NG tubes are commonly used across the Trust, in a wide range of clinical settings. Nasogastric 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. It is the commonest way of providing artificial nutritional support to patients in hospitals.

5 **Key principles**

Insertion of NG feeding tubes should be carried out in accordance with procedures outlined in the Royal Marsden Manual procedure ‘NG intubation with tube using an introducer’. Management of patients thereafter should be carried out in conjunction with this Trust Policy.

All information pertaining to the insertion of NG feeding tubes should be recorded in ‘CHART 1/2: Key points of care for the insertion of NG tubes in adults and children (excludes neonates)’ (Appendix 1). All information pertaining to the ongoing management of NG tubes should be recorded in CHART 2/2: ‘Key points of care for ongoing use of NG tubes in adults and children (excludes neonates)’ (Appendix 2). Any additional information should be recorded in the patient’s medical or nursing notes as appropriate.

6 **Contraindications**

The following are relative contraindications for the insertion of a NG feeding tube:

- Anatomical deformities
- Maxillo-facial surgery/trauma/disease
- Oral, nasal or oesophageal tumours/surgery
- Basal skull fractures
- Severe gastro oesophageal reflux disease
- Mucositis
- Allergies – to NG tube or securing material

These contraindications are not absolute, but in these patient groups the insertion of a nasogastric tube must be discussed with the medical team in charge of the patient’s care and specialist advice sought where appropriate. The decision and plan of care should be documented in the patient’s medical notes. Such patients may require NG tube insertion under fluoroscopic control.

7 **Complications**

There are some serious 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.
If a misplaced tube is not spotted and feeding commenced, the consequences can be serious.

Such complications include:

- Pneumothorax
- Severe pneumonia
- Emphysema
- Pulmonary haemorrhage
- Death – depending on the response to any of the above.

8 The Decision to Insert a NG Feeding Tube

8.1 Consider: Is NG tube feeding the right decision for this patient?

The decision to start NG tube feeding should be made following a risk assessment. Where possible this will include a Nutrition Nurse Specialist or Dietitian. A senior doctor responsible for the patients care, a senior ward nurse familiar with the patient and if appropriate the patient themselves should be involved in the decision to insert an NG tube for feeding. A decision must be made that balances the risks of feeding with the need to feed. The rationale for inserting a nasogastric tube should be recorded in the patient’s medical notes.

The following patient groups are at higher risk of placement 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.

Patients receiving medication which has an antacid effect are more likely to have stomach aspirate pH levels of 6 or above, making identification of an incorrectly placed tube more difficult.

8.2 Consider: Is this the right time to place the NG tube for feeding?

Where possible, elective placement of NG tubes should not occur at night and should be inserted the next day, unless there is sufficient 24 hour senior cover available to accurately confirm placement if an x-ray is needed. The National Patient Safety Agency (NPSA) cited a number of errors occurring as the result of junior staff confirming tube position by x-ray out of hours.

When a decision is made to insert an NG tube out of hours, the rationale for the decision must be documented in the patient’s medical notes. It is anticipated that the majority of these will be urgent situations for patients who are emergency admissions or in critical care areas.
8.3 Consider: Is there sufficient knowledge / capacity to test for safe placement of the NG tube?

All staff involved in the insertion of NG tubes and/or position checks must have undergone training. They must be certified as competent to carry out this procedure and ongoing care.

9 Consent

Where possible, informed verbal consent should be obtained from an adult patient prior to the insertion of a NG tube. If the adult patient is assessed as not having the mental capacity to provide consent, the clinician in charge of the patient’s care should make this decision, taking into account the patient’s best interest and if possible the opinions of the patient’s family.

For children under 16 and not Gillick competent, a parent/legal guardian’s verbal consent is required. Children under 16 who are Gillick competent are able to consent themselves. For 16–17 year olds who lack capacity to consent, as per the Mental Capacity Act, 2005, the clinician in charge should make this decision in the patient’s best interest together with the parent’s consent. If there is disagreement by any party in these scenarios, legal advice may be required. For further information please refer to Trust Mental Capacity Act Policy for guidance.

Consent should be clearly documented in the patient’s medical notes and indicated in Chart 1/2: ‘Key points of care for the insertion of NG tube’.

10 Type of Tube

NG tubes must be radio-opaque throughout their length at the time of insertion, and have visible external markings in 1cm increments along the length of the tube. NG tubes are available in a number of sizes and lengths, and the person inserting the NG tube should select the most appropriate. More information on this can be found in ‘Caring for adult & paediatric patients with enteral feeding tubes’ guidelines.

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. Wide bore NG tubes are therefore only recommended for gastric decompression or very short term feeding.

Fine bore NG feeding tubes may be more easily tolerated if accidentally passed into the lungs or respiratory tract without any obvious signs of distress.

11 Insertion

It is the responsibility of the person inserting the NG tube to complete ‘Chart 1/2: Key points of care for insertion of NG tube’ form (Appendix 1). All qualified healthcare professionals must ensure that the insertion record shows a signed and printed confirmation of safe NG tube position before using the NG tube.
Prior to insertion, the tube length should be estimated for each patient by measuring from the xiphisternum to the ear lobe, and then to the tip of the nose (NEX measurement - see Appendix 3). Inserting the tube at the correct length for each patient increases the chances of successful tube aspiration. Aspiration of the tube allows for the pH to be checked on initial insertion and also thereafter if there is any cause for concern about tube position.

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. 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.

If the patient has an intact swallow they should be encouraged to drink 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 should 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 should be abandoned, the patient reassured and a referral made to a more experienced practitioner.

Once the tube is safely inserted the pH of the aspirate should be checked and the internal tube length documented in ‘Chart 1/2: Key points of care for insertion of NG tube’ form.

11.1 Tube displacement

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.

11.2 Safe methods for testing correct placement

Following initial insertion and on subsequent testing, there are two reliable methods for checking that the NG feeding tube is correctly positioned; testing the pH of a nasogastric aspirate and X-ray appearances.

11.2.1 pH Testing
pH testing is the first line test method of checking NG tube position. 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. A pH aspirate reading of between 1 and 5.5 confirms correct gastric placement and feeding through the NG feeding tube can be commenced as soon as the insertion record has been completed.

There are some limitations to the testing for gastric pH. 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). Consideration should be given to changing the timing of medication administration or aspiration to enable correct pH readings to be carried out.

Gastric pH can also be altered by the prescribed feeds given to patients. In the case of continuous NG feeding, feed should be stopped for an hour before obtaining the aspirate. The decision to stop continuous feeding must however be subject to a risk assessment.

**IMPORTANT**

**Adult patients** - If unable to obtain an aspirate or the aspirate is higher than 5.5 on initial insertion, an X-ray **MUST** be obtained to confirm position.

**Children** - If unable to obtain an aspirate consider; changing the child's position, checking inside the mouth to see if the NG tube is coiled up, offering a drink if not contraindicated, adjusting the position of tube either in or out, instilling 1-3mls air to expel any blockage such as stomach wall or debris. If concerns with the correct position of tube continue, discuss with relevant medical staff.

**11.2.2 X-ray**

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.

X-ray is an accurate and reliable method for confirming tube position however there have been multiple reports of x-rays being misinterpreted. Other limitations to the use of x-ray include exposure to radiation, loss of feeding time and increased patient movement. It must also be remembered that an x-ray only confirms tube position at the time the x-ray was taken. The NG tube can become displaced at any time.

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.
Care must be taken when interpreting x-rays and this should only be undertaken by a qualified trained and competent healthcare professional.

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, is 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 on initial insertion 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 Chart 1/2: Key points of care for insertion of nasogastric tube chart. Subsequent use of the tube will be subject to the checks detailed in section 11.4.1 of this policy.

11.3 Unsafe methods of testing which MUST NOT be used

There are a number of methods of testing to confirm NG tube position, which have been widely used in the past, and which now MUST NOT be used. These unsafe methods are;

11.3.1 ‘Whoosh test’
The auscultation of air injected into the feeding tube, or ‘whoosh test’, has often been used in the past to ascertain correct tube position. There are however reports on the ineffectiveness of this method. Cases have been highlighted where results indicated correct tube placement and feeds were started with disastrous results. The ‘Whoosh test’ must not be performed.

11.3.2 Litmus paper
Until relatively recently, it was common practice to identify position of NG tube by testing gastric aspirate with Litmus paper. However, this practice is not recommended as litmus paper cannot indicate degree of acidity. It is not sensitive enough to reliably distinguish between gastric acid (pH 3-5) and bronchial secretions (pH >6). Litmus paper must never be used.

11.3.3 Absence of respiratory distress
Observing for signs of respiratory distress is often ineffective in detecting a misplaced tube. This test is made even less effective with the widespread use of fine bore tubes which can enter the respiratory tract with few, if any, symptoms. If the patient has a reduced level of consciousness, large bore tubes can enter the respiratory tract without causing symptoms. The absence of respiratory distress must not be used as a sign of correct placement.

11.3.4 Bubbling at the end of the tube
Placing the proximal end of the NG tube under water and observing for bubbling is unreliable. The stomach also contains air and could falsely indicate respiratory placement resulting in the unnecessary removal of correctly positioned tubes. Testing for bubbling from the end of the NG tube must not be performed.
11.3.5 Appearance of aspirate
Evidence indicates that relying on the appearance of feeding tube aspirate to rule out misplacement is unreliable as gastric contents can look similar to respiratory secretions. The appearance of aspirate must not be used as a sign of correct placement.

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.

A small amount of air may be used to flush a tube to relieve any blockage and to facilitate aspiration of gastric contents for pH testing as described above in section 11.4.

11.4 Ongoing management of NG tubes including re-confirmation of position.

11.4.1 Daily risk assessment
The position of the NG tube should be checked at least daily using the ongoing risk assessment guidance outlined in Chart 2/2: Key points of care for ongoing use of NG tubes’ (Appendix 2) and repeated below. In children these checks should be performed prior to every use of the NG tube.

These checks should be recorded on Chart 2/2: Key points of care for ongoing use of NG tubes’ as appropriate.

11.4.2 When NOT to feed
If confirmation of ongoing safe NG tube position cannot be confirmed after carrying out the risk assessment using ‘Chart 2/2 Key points of care for ongoing use of NG tubes’, i.e. 1) there are concerns that the tube may have dislodged AND 2) a pH of between 1 and 5.5 has NOT been obtained from NG aspirate AND 3) correct tube placement has NOT been confirmed by a competent person through x-ray then patients should NOT be fed and the NG tube should be removed and, if indicated, replaced.

11.4.3 Problems obtaining an aspirate
It is possible to aspirate from fine bore feeding tubes however, occasionally this may be problematic due to incorrect tube tip position or poor technique. Some useful advice is as follows:

- Ensure that correct length of tube is established on initial insertion using NEX measurement (see appendix 3) to ensure aspirate can be obtained.
• Use the correct sized, 50-60 mls purple-coloured oral/enteral polyurethane syringe as advised by the NG tube manufacturers.
• Instill air (10-20mls for adults, 1-3mls infants and children dependent on size) 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 taken into account 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.
• If safe to do so, ask the patient to drink a small amount of water then try again to aspirate.
• Change the position of the patient in order 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 an adult, 1-2cm in infants and children). This may allow the NG tube to pass into the stomach if it has been in the oesophagus.

11.4.4 Obtaining a pH of 6.0 or above
The aspirate obtained may have a pH of 6.0 or above because the NG tube has been misplaced into the lungs on initial insertion or become displaced at a later stage either into the intestine or the lung.

If a pH check is performed as part of ongoing care then chances of obtaining a pH of 5.5 or less are maximised by:

• Waiting at least one hour after stopping feed before performing the check, if safe to do so.
• Wait as long as possible after giving antacid medication before performing the pH check.

If there is any doubt about the safe position of the tube and/or the pH of the aspirate then feeding should not be (re) commenced. A risk assessment should be carried out and medical advice sought from the managing team to consider removing the NG tube.

12 Discharge to community care

Discharging a patient from acute to community services with an NG tube in place requires planning. A multidisciplinary risk assessment should be performed and documented (NPSA 2011). Guidance and support can be provided by contacting the Nutrition Nurse Specialist for Adults or Paediatrics and further information is also available in ‘Caring for adult and paediatric patients with enteral feeding tubes (excludes neonates)’:

13 Learning from mistakes

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 the Trust Clinical Governance and Risk Department and recorded as an incident on Datix.
14 Training

14.1 NG 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.

Competency assessment documents are available for registered doctors and nurses and can be found on the patient services site on the Intranet:

For registered nurses this must be used as documentary evidence of competency to practice. NG tube insertion training for registered nurses is currently available through Clinical Educators and Nutrition Nurse Specialists as appropriate.

Induction training is available for all Foundation 1 doctors on commencing the Trust which includes a practical competency dimension.

14.2 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 as competent to do so using the Trust e-learning package ‘Reducing the risk of feeding through a misplaced NG feeding tube’, which is available to access in the ESR enrolment page.
15 Monitoring

Compliance with this policy will be monitored by the Nutrition Nurse Specialists (Adults & Paediatric) in conjunction with CGARD, who will monitor the number and type of incidents. Audit of NG insertion, on-going practice and documentation will be carried out by Clinical Governance & Risk Department across the Trust every six months to ensure ongoing monitoring and review of practice.

<table>
<thead>
<tr>
<th>Standard / process / issue</th>
<th>Monitoring and audit</th>
<th>By</th>
<th>Committee</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>Audit of NG insertion practice</td>
<td>Trust-wide audit to assess compliance with NG Policy, in particular ‘Key points of care NG insertion chart’ All patients with an NG feeding tube insitu on the day of audit will be included.</td>
<td>CGARD</td>
<td>Clinical Risk Group</td>
<td>6 monthly</td>
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<tr>
<td>Incidents recorded on Datix will be monitored and reviewed</td>
<td>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</td>
<td>Nutrition Nurse Specialist/CGARD</td>
<td>Clinical Risk Group</td>
<td>On-going</td>
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</tbody>
</table>

16 Bibliography

  [http://www.nrls.npsa.nhs.uk/resources/?EntryId45=133441](http://www.nrls.npsa.nhs.uk/resources/?EntryId45=133441)

Appendix 1 – CHART 1/2 to go in here...
**Guidance on Obtaining a pH**

**Troubleshooting Checklist: When aspirate is unobtainable**

<table>
<thead>
<tr>
<th>Step 1: Clinical assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Assess the back of the patient's throat for coiling of the NG tube</td>
</tr>
<tr>
<td>b. Identify any oesophageal or breathing discomfort</td>
</tr>
</tbody>
</table>

If either of the above are identified consider replacing the NG tube

If no concerns with step one, continue with step two:

**Step 2: Attempt the following to obtain aspirate for pH measurement:**

| a. If possible, turn the patient onto their left side then aspirate |
| b. Consider advancing the tube (10-20cm in adults, 1-2cm in infants and children) |
| c. Remove the guide-wire if present and re-aspirate (the NGT is fully radio-opaque without the guide-wire in situ) |

If still unable to aspirate after all steps done, a Chest X-Ray must be performed to confirm safe position prior to feeding

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1. Pre insertion required tube length **SHOULD** be estimated using the “NEX” measurement exit port of tube at tip of nose, extend tube to earlobe, and then to xiphisternum)

2. Any incident involving displacement of nasogastric tubes **SHOULD** be reported to the Trust Clinical Governance and Risk Department.

3. **Elective** placement of nasogastric tubes for feeding **SHOULD NOT** occur out of normal hours unless senior medical cover is available

4. Informed consent **MUST** be obtained prior to insertion.

5. The pH of gastric aspirate **MUST** be checked using pH indicator strips, not Litmus paper.

6. The insertion record **MUST** be signed as confirmation of correct nasogastric tube position before using for feeding.

7. The interpretation of CXRs **MUST** be undertaken by a qualified, trained and competent healthcare professional.

8. Nasogastric tubes **MUST NOT** be flushed or lubricated with water prior to insertion. Nothing should be introduced down a nasogastric tube until gastric placement has been confirmed.

9. The following methods **MUST NOT** be used for confirming correct placement of a nasogastric tube: the ‘whoosh’ test, absence of respiratory distress, absence of bubbling at the end of the tube and the appearance of aspirate.
Appendix 2 – CHART 2/2 to go in here….

Key Points of Care for Ongoing Use of a Nasogastric (NG) Tube in Adults and Children (excludes neonates)

CHART 2/2: ONGOING RISK ASSESSMENT

Site: FH / RVI / CAV  Ward: A

PLEASE PERFORM THIS RISK ASSESSMENT TOOL AT LEAST DAILY PRIOR TO RESTARTING/CHANGING FEED IN ALL PATIENTS: DOCUMENT BY SIGNING OVERLEAF

NB: This form must be completed if an NGT originally inserted for drainage is to be used for feeding or the administration of any medication.

1. Has there been any recent oesophageal or breathing discomfort?
2. Have there been any recent episodes of vomiting, retching, coughing, or is there any other concern that tube may have become displaced? Any of these may have caused the tube tip to be dislodged upwards without any visible external displacement.
3. Is the NG tube coiled in the back of the patient’s throat? (If so remove tube.)

Are there any clinical concerns? (All questions above must be answered no)

Is length of NG tube at nostril within 2cm of baseline insertion length? (NB: within 1cm in children)

YES

Confirmation of safe position, 1st line method: pH Aspirate

Did you get a pH?

NO

YES

pH not obtainable
Troubleshoot (overleaf). If still unable after all steps, CXR must be performed

pH: > 5.5
Troubleshoot (overleaf) and re-aspirate prior to CXR

pH: 1 - 5.5
Confirmation of safe tube position

Use for feeding

Confirmation of safe position, 2nd line method: CXR

Remove ECG wires and leads etc. from patient prior to CXR if safe to do so
CXR Confirmation (please ask for senior advice if you have any concerns interpreting a CXR)

1. Is the CXR the most recent for the correct patient?
2. Is the tube seen crossing the diaphragm in the midline?
3. Is the tip of the tube clearly visible below the left hemidiaphragm?

Does CXR confirm correct tube positioning? (All questions answered yes? Sign overleaf)

NO

YES

Use for feeding

Replace tube and follow chart 1: insertion

NB: Any diabetic patient on insulin on continuous NG feeding must have blood sugar checked at least hourly if their feed has been stopped suddenly - an IV infusion of 10% dextrose may be required.
### Guidance on Obtaining a pH

**Troubleshooting - When aspirate is unobtainable**
- Instil air (10-20mls adults, 1-3mls infants and children, dependent on size) into the NG tube prior to aspiration (this is not the whoosh test!)
- Ask the patient to drink a small amount of water and try again to aspirate
- Consider turning the patient onto their left side.

**Troubleshooting - When aspirate has pH > 5.5**
- Check and consider stopping acid inhibiting medications
- Aspirate tube before medications are given
- Aspirate NG tube after feeding rest period to avoid residual feed in the stomach (this can affect pH)

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**In the event of failure to satisfactorily troubleshoot please return to confirmation of safe position, 2nd line method: CXR (overleaf)**

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### Ongoing Checks

NG Tube Inserted on ___/___/___ at __:___hrs

Length of NG tube at nostril at time of insertion: __________cm

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>NGT length at Nose</th>
<th>pH of aspirate (if done)</th>
<th>Repeat CXR needed? Y/N</th>
<th>CXR shows tube in correct position? Y/N</th>
<th>Sign and Print Name (Person performing ongoing check following guidance steps on front page) or person checking CXR if one has been</th>
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Appendix 3

**Technique to measure NG tube length – NEX measurement**

Measure the distance on the tube from the bridge of the nose to the ear lobe plus the distance from the ear lobe to the xiphisternum
The aim of the policy is to provide guidance to all healthcare professionals who care for patients with an NG tube for feeding. This policy is aimed at standardising the care of patients with NG feeding tubes to ensure that insertion and ongoing management is safe, effective and comfortable for the patient.
7. Does this policy, strategy, or service have any equality implications? Yes √ No □

If No, state reasons and the information used to make this decision, please refer to paragraph 2.3 of the Equality Analysis Guidance before providing reasons:

8. Summary of evidence related to protected characteristics

<table>
<thead>
<tr>
<th>Protected Characteristic</th>
<th>Evidence</th>
<th>Does evidence/engagement highlight areas of direct or indirect discrimination?</th>
<th>Are there any opportunities to advance equality of opportunity or foster good relations? If yes what steps will be taken? (by whom, completion date and review date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race / Ethnic origin (including gypsies and travellers)</td>
<td>Appropriate enteral liquid feed options for NG feeding are available for patients with different cultural and dietary needs. Dietetic specialist advice is available for all patients with different requirements e.g. vegetarian, vegan, kosher. Ensure communication support is given as needed e.g. Interpreting Service Mandatory EDHR Training</td>
<td>No direct discrimination. Insertion of NG feeding tube is based on clinical need and in the best interest of every patient. Patient who need communication support may struggle to understand the procedure without it.</td>
<td>No</td>
</tr>
<tr>
<td>Sex (male/ female)</td>
<td>Not applicable</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Religion and Belief</td>
<td>Appropriate enteral liquid feed options for NG feeding are available for patients with different religious needs and specialist Dietetic advice is available. Mandatory EDHR Training</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sexual orientation including lesbian, gay and bisexual people</td>
<td>Not applicable</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Age</td>
<td>The Policy covers adults with cognitive impairment through acute delirium or Dementia. These patients would have their mental capacity 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 family and carers. The Trust has developed ‘Guidance for clinical management of complex feeding problems in patients with cognitive impairment’ which gives advice to the MDT on assessment &amp; decision making to ensure appropriate care of this patient group. The Policy promotes mandatory safe practice. Six monthly Trust wide audits demonstrates that every patient who has an NG feeding tube inserted has a key points of care chart documented, which includes a prompt for consent and best interest documentation. The Policy covers children &amp; young people (excludes neonates). Parents will give consent for NG feeding tube insertion &amp; feeding for infants and children as appropriate to age and Gillek competency. The Trust provides carer's packs for carers of all ages which were developed in partnership with Newcastle City Council, Newcastle Carers and Barnados Young Carers. Ensure communication support is given as needed e.g. Interpreting Service. The Trust has also signed up to John’s campaign to provide additional support for Carers of patients with dementia.</td>
<td>No direct discrimination. Insertion of NG feeding tube is based on clinical need and in the best interest of every patient. Patient who need communication support may struggle to understand the procedure without it.</td>
<td>No</td>
</tr>
<tr>
<td>Disability – learning</td>
<td>The Trust protects patients with learning</td>
<td>No direct discrimination.</td>
<td>No</td>
</tr>
</tbody>
</table>
difficulties, physical disability, sensory impairment and mental health. Consider the needs of carers in this section.

Difficulties by ensuring that advocates are available to assist in best interest decision making. If a patient with learning difficulties lacks the mental capacity to provide informed consent for NG insertion procedure, decision will be made in the best interest of each patient along with the managing consultant, with involvement of any family and carers.

The Policy promotes mandatory safe practice. Six monthly Trust wide audits demonstrates that every patient who has an NG feeding tube inserted has a key points of care chart documented, which includes a prompt for consent and best interest documentation.

The Trust has developed ‘Guidance for clinical management of complex feeding problems in patients with cognitive impairment’ which gives advice to the MDT on assessment & decision making to ensure appropriate care of this patient group.

Hospital Passports and Care Pathways 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 provides carer’s packs for carers of all ages which were developed in partnership with Newcastle City Council, Newcastle Carers and Barnados Young Carers. The Trust has also signed up to John’s campaign to provide additional support for carers of patients with dementia. Ensure communication support is given as needed e.g. Interpreting Service.

Gender Re-assignment

Not applicable

No

No
| Marriage and Civil Partnership | Not applicable | No | No |
| Maternity / Pregnancy | Not applicable | No | No |

9. Are there any gaps in the evidence outlined above? If ‘yes’ how will these be rectified?

   No

10. Engagement has taken place with people who have protected characteristics and will continue through the Equality Delivery System and the Equality Diversity and Human Rights Group. Please note you may require further engagement in respect of any significant changes to policies, new developments and or changes to service delivery. In such circumstances please contact the Equality and Diversity Lead or the Involvement and Equalities Officer.

   Do you require further engagement

   No

11. Could the policy, strategy or service have a negative impact on human rights? (E.g. the right to respect for private and family life, the right to a fair hearing and the right to education?)

   No

PART 2

Name of author: Jo Ledger

Date of completion
(If any reader of this procedural document identifies a potential discriminatory impact that has not been identified, please refer to the Policy Author identified above, together with any suggestions for action required to avoid/reduce the impact.)