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North Cumbria University Hospitals NHS Trust

Nasogastric Tube Policy

SUMMARY & AIM:

The Nasogastric Tube Policy provides a step by step process for the insertion of a nasogastric tube (NG) and the related tests to confirm appropriate placement. It applies to all Adults and Children (but excludes Neonates) who require nasogastric tube insertion or have a nasogastric tube *in situ*.

The aim of this policy is to reduce patient harm and to comply with current National Guidelines. This policy is to provide all health care professionals with directives for the safe and effective placement of a nasogastric tube and to ensure that nasogastric tube feeding and administration of enteral medications are given safely. The policy reflects the guidelines within the NPSA Alerts in 2005, 2011, 2012

TARGET AUDIENCE:

All medical staff including Consultants, Chief Matrons, Matrons, Nurses, Midwives, Allied Health Professionals, Divisional Associate Medical Director and Divisional Associate Chief Operating Officer

TRAINING:

All medical staff are to complete, as part of their induction, an eLearning programme 'North Cumbria University Hospitals Trust – Trust Doctors Patient Safety Programme'.

All clinical staff who insert NG Tubes must complete the 'NG Tube Insertion Training' via e-learning or face to face. On completion of the e-learning programme staff must complete a self-declaration of competence or request further training. All staff involved in checking NG position by pH testing must complete the competency assessment.

All staff involved in the ongoing care must complete the 'NG Tube ongoing care face to face training' and complete the competency assessment.

All clinical staff who confirm nasogastric tube placement via X-ray must complete the eLearning training package for radiological interpretation of NG Tubes (261 NG X-ray Confirmation eLearning)

EVIDENCE OF COMPLIANCE

- Learning & Development department records regarding medical and nursing staff compliance with the Trust NG tube training.
- Monthly summary of NG tube related incidents to be sent to Head of Dietetics
- Audit completed monthly as outlined in the LocSIPP

KEY REQUIREMENTS:

1. An assessment to identify if NG tube insertion is appropriate and the rationale for any decision is recorded in the patient's medical notes.
2. Placement should be delayed until sufficient experience and competent support is available.
3. Approved pH CE marked indicator strips and radio opaque NG tubes with visible length markings must be used.
4. NEX measurement must be confirmed.
5. First line test method is a
   - pH test
6. Second line test method is X-ray confirmation
7. Complete the NG Insertion Record for all NG Tube Insertions.

Any staff member encountering an NG tube in use where the appropriate checks have not been undertaken and documented in the notes are empowered to stop and must prevent use of that NG Tube until all appropriate checks have been completed and are evidenced within the medical and nursing case notes.

DOCUMENT CONTROL

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Version	Date	Section & Description
13.1	26/10/2017	Addition Page 9 re Paediatrics, page 1 within Summary and Aim 'Adults and Children (but excludes Neonates)'
13.2	23/11/2017	• Addition to the summary under Training:- On completion of the e-learning programme you must complete a self declaration of competence or request further training. All staff involved in checking NG position by PH testing must and co complete the competency assessment. • Amends to table within 6.2 Training • Removal of 5.12 – re NJ entry • Section on pregnancy added at page 18
13.3	12/12/2017	• Section on training amended section 6.2 page 21
13.4	18/01/2018	• Section 6.2, page 21, amendments to bullet points • Addition of a second monitoring arrangement within section 7.0 • Amends to Paediatric in 'Bold' type, ph 5.0 • Link to 000Reducing the Risk of Feeding Through a Misplaced Feeding Tube" replaced with 261 NG X-ray Confirmation eLearning
13.5	05/02/2018	• All clinical staff who insert NG tubes and confirm position by pH testing
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List of Stakeholders who have reviewed the document

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SUMMARY NASOGASTRIC (NG) TUBE POLICY

THIS SUMMARY IS NOT A SUBSTITUTE FOR READING THE NG TUBE POLICY. STAFF WHO CARE FOR PATIENTS WITH NG TUBES MUST KNOW AND FOLLOW THE NG POLICY

All procedures and checks relating to NG tube insertion, confirmation of position and administration of substances down the tube must ONLY be performed by two staff qualified to do so. Those who confirm position either by pH testing or radiologically, or who administer substances down the tube must have documentary evidence of having completed the relevant Trust training.

The term NG tube is used here to describe any tube inserted either via the naso or oro-pharynx into the stomach or beyond and which is to be used for drainage of gastric contents or for the administration of feeding, flushes, or medication. It includes ALL tubes inserted via this route including both wide bore ('Ryles' tubes) and fine bore feeding tubes.

Any staff member encountering an NG tube in use where the appropriate checks have not been undertaken and documented in the notes are empowered to and must 'stop the line' or prevent use of that NG tube until all appropriate checks have been completed and are evidenced within the medical and nursing case notes

NOTHING is to be given via a nasogastric tube before confirmation of position.

This means nasogastric tubes are **NOT** to be flushed, nor any liquid, feed or medications to be introduced through the tube following initial placement until gastric placement has been confirmed.

Internal guidewires/ stylets should **NOT** be lubricated until the tube tip is confirmed, by NEX measurement and pH testing and/or X-ray, to be in the stomach or beyond.

NOTE: The relevant documentation must be completed before any substance is administered via the tube. This includes the bedside chart confirmation of correct placement/position of nasogastric tube and the Trust nasogastric tube initial insertion record (or MetaVision documentation if in ICU)

Insertion of NG tubes

Before a decision is made to insert a nasogastric tube, an assessment must be undertaken to identify if nasogastric feeding is appropriate for the patient, and the rationale for any decisions are recorded in the patient's medical notes. The decision to insert a nasogastric tube for feeding must be made by a consultant and appropriate consent undertaken.

Placement must be delayed if there is insufficient experienced support available to accurately confirm nasogastric tube placement (e.g. at night), unless clinically urgent, and that the rationale for any decisions made is recorded in the patient's medical notes.

Nasogastric tube insertion can be dangerous as well as difficult in patients with certain pathologies. In these situations senior help should be sought.

If insertion is appropriate and documented to be so, then insertion can take place having considered contraindications. Notes on the procedure for insertion of an NG tube can be found in the NG LocSIPP

If resistance is felt during the insertion process and before the NEX measurement has been achieved then the tube must be removed.

Remove a nasogastric tube in which it is not certain the documented NEX has been achieved on insertion and discard the tube.

Nasogastric tubes for the purposes of feeding must be radio-opaque throughout their length and have externally visible length markings.

Confirmation of position on initial placement:

Initial confirmation of position requires a minimum of 2 checks by 2 qualified/permitted persons:

A. The 'NEX measurement '(see LocSIPP – Insertion of a Nasogastric Tube) – that is the measurement of the external mark at the nose must be equal to or beyond the original NEX measurement (i.e. the tube has moved further into the stomach/small bowel). If measurement of the external mark at the nose is less than the original NEX measurement (i.e. indicating the tube has moved upwards and out of the stomach/small bowel) do not use the tube.

and

B. The pH Test, (NG aspirate pH is less than or equal to 4),which if cannot be fulfilled then ALSO
C. Radiological Confirmation (CXR or CT scan)

If the length of the tube as measured at the nose is shorter than the NEX measurement on the relevant insertion record, the tube MUST NOT be used.

The pH test (the Primary Check/First line test method):

Adults
This test is to be performed after the NEX measurement. Only an aspirate pH less than or equal to 4 (using only CE approved pH strips and intended by the manufacturer to test human gastric aspirate) is acceptable. Both the drawing of aspirate and the pH must be confirmed by 2 qualified persons at the bedside. Each aspirate procedure and aspirate test result must be documented on the bedside chart and stored at the patient's bedside (or MetaVision if the tube was inserted on ICU). If no aspirate is obtained then staff must reposition the patient and try to aspirate once again.
If the pH is greater than 4 on any aspirate at initial confirmation of the NG tube or no aspirate is obtained, then staff can proceed directly to radiological confirmation.

Children
This test is to be performed after the NEX measurement. An aspirate with pH between pH1 and pH5 (using only CE approved pH strips and intended by the manufacturer to test human gastric aspirate) is required to confirm that the NG tube is not in the lung. This is particularly relevant in infants as a consequence of frequent milk feeds where generally it is found that the pH is pH5. There remains a small chance that the tube tip may sit in the oesophagus if the pH is above pH5, which carries a higher risk of aspiration. An X-ray must be taken if this is a concern.

Both the drawing of aspirate and the pH must be confirmed by 2 qualified persons at the bedside. Each aspirate procedure and aspirate test result must be documented on the bedside chart and stored at the patient's bedside (or MetaVision if the tube was inserted on ICU). If no aspirate is obtained then staff must reposition the patient and try to aspirate once again.

See LocSIPP for Insertion of NASOGASTRIC Tubes in Children and its Appendix: Decision tree for nasogastric tube placement checks in children and Infants (not Neonates) – NPSA guidance

Radiological Confirmation (the Secondary Check/Second line test method):

To be performed after the NEX measurement only as a second line check to confirm initial NG tube position when no aspirate is obtained, or the pH indicator paper has failed to confirm the position of the NG tube. In addition it must be undertaken in all patients considered to be at high risk of aspiration and in those with a naso-jejunal tube.

Note:
- No foundation doctor is qualified/permitted to check the NG tube position radiologically
- The NG check X-ray must be adequate for the purposes of checking the position of an NG tube
- The radiographer takes responsibility to ensure that the nasogastric tube can be clearly seen on the X-ray to be used to confirm tube position
- If any NG check X-ray is to be used for confirmation of the NG tube position, the request form must clearly state that the purpose of the X-ray is to establish the position of the nasogastric tube for the purpose of feeding.

- Radiological confirmation must be undertaken by clinicians who are involved in the confirmation of NG tube placement by X-ray. Ensure that the X-ray for the correct patient is reviewed and the most recent X-ray for THIS tube insertion is reviewed (be aware that there may be other recent x-rays but that relate to previous tube insertions)

- Radiological confirmation must fulfil the following NPSA criteria to be valid:
  1. Does the tube path follow the oesophagus/avoid the contours of the bronchi?
  2. Does the tube clearly bisect the carina or the bronchi?
  3. Does it cross the diaphragm in the midline?
  4. Is the tip clearly below the left hemi-diaphragm?

  (If there is any difficulty in interpretation of the X-ray the advice of a radiologist should be sought and NO medications, flush or feed to be commenced via the nasogastric tube until a written report is received)

Additional caution is required if a patient has had upper gastro-intestinal surgery.

If there is any doubt regarding the X-ray interpretation seek senior/specialist advice.

The doctor responsible for the patient must review the X-ray as soon as possible after it has been performed and document their findings in the notes. Documentation of the tube placement checking process must include confirmation that any X-ray viewed was the most current X-ray for the correct patient, how placement was interpreted, and clear instructions as to required actions. It must also include that the nasogastric tube is safe to use for feeding/fluids/medications. Documentation must be completed on the **Trust** nasogastric tube insertion record (or MetaVision if in ICU) before any substance is administered via the tube. Any tubes identified to be in the lung must be removed immediately, whether in the X-ray department or clinical area.

Once 2 or more of the checks above (one of which must be the NEX measurement**)** have confirmed the initial placement then the tube can be assumed to be in the stomach or beyond.

'Whoosh' tests, acid/alkaline tests using litmus paper, or interpretation of the appearance of aspirate must never be used to confirm nasogastric tube position as they are not reliable.

Repeat checks after initially correct placement has been confirmed

After initial insertion and after circumstances, signs or symptoms that indicate the tube could have been displaced, **only** a NEX measurement **and** either a pH test between 1 and 4 or radiological confirmation is an acceptable checking method.

The ongoing 'NEX measurement'(see LocSIPP – Insertion of a Nasogastric Tube) – that is the measurement of the external mark at the nose must be equal to or beyond the original NEX measurement (i.e. the tube has moved further into the stomach/small bowel). If measurement of the external mark at the nose is less than the original NEX measurement (i.e. indicating the tube has moved upwards and out of the stomach/small bowel) do not use the tube.

Confirmation of position requires a minimum of 2 checks by 2 staff qualified/permitted to do so.

The value of the external marking of the tube at the nose must be recorded on a daily basis on the bedside chart and prior to administration of any liquid/change of feed container.

The results of repeat checks must be documented appropriately on the bedside chart. Repeat checks of tube position are required:

- Before administering each bolus feed or administering feed/water following a rest period
- Before giving medication
- If the patient has been observed vomiting or retching, had coughing spasms or complains of discomfort. (Ask the patient if in any doubt if she/he has been vomiting, retching or coughing)
- If there is evidence that the tube has become displaced
- If the patient becomes acutely distressed, breathless or has difficulty breathing
- After physiotherapy or oropharyngeal suctioning
- If there is any doubt about the position of the tube
- At least once daily

IN SUMMARY:

Do not feed down a nasogastric tube unless a completed Trust NG insertion record (or MetaVision record for tubes inserted on ICU) has been completed, placed in the notes and the NEX measurement and aspirate pH test and/or X-ray test have been completed.

The patient remains nil by mouth and nil by NG tube until placement of the nasogastric tube is confirmed.

Consider IV fluids to maintain hydration

NASOGASTRIC TUBE POLICY

1.0 SCOPE

This policy applies to all patients who require nasogastric tube insertion / or have a nasogastric tube *in situ*. It applies to all healthcare professionals who are involved in the insertion and post insertion care of nasogastric tubes. All practitioners who undertake this procedure must:

- Accept accountability and responsibility for their practice.
- Adhere to this policy.
- Must be registered with an appropriate professional body such as:

    - The Nursing & Midwifery Council (NMC)
    - The General Medical Council (GMC)
    - The Health and Care Professions Council (HCPC)

- Be assessed as competent through theoretical and practical learning and if training needs are identified in the insertion or post-insertion care of nasogastric tubes, further training must be undertaken.
- Provide evidence of competence when transferring from another health care provider if their responsibilities include the care and post insertion care of nasogastric tubes

Doctors who interpret X rays for nasogastric tube position must have achieved competency training and undertaken both theoretical and practical learning in this procedure(261 NG X-ray Confirmation eLearning)

2.0 PURPOSE OF THE DOCUMENT

This Nasogastric Tube Policy sets out how Nasogastric Tubes must be inserted within the Trust. This policy is supported by a LocSIPP for insertion of a nasogastric tube. It applies to all patients who require nasogastric tube insertion or have a nasogastric tube *in situ.*

The aim of this policy is to reduce patient harm and to comply with current National Guidelines. This policy is to provide all health care professionals with directives for the safe and effective placement of a nasogastric tube and to ensure that nasogastric tube feeding and administration of enteral medications are given safely.

The policy reflects the guidelines within the NPSA Alerts in 2005, 2011, 2012 and 2013.It also recognises the 2016 NPSA Alert aimed at Trust Boards.

2.1 Never Event

UNRECOGNISED MISPLACEMENT OF A NASOGASTRIC TUBE IS A 'NEVER EVENT'.

This is misplacement and use of a naso or oro-gastric tube in the pleura or respiratory tract where misplacement of the tube is not detected prior to commencement of feeding, flush or medication administration.

Misplaced naso or oro-gastric tubes continues to be included within the 2018 list of Never Events

Setting: All settings providing NHS funded care (www.Never Events List 2018)

3.0 DUTIES (ROLES & RESPONSIBILITIES)

3.1 CEO/Board Responsibilities:

The Chief Executive's responsibility is to ensure that this Policy is implemented across the Trust.

3.2 Medical Director Responsibilities:

The Medical Director is responsible for implementation of this policy and associated national guidance. He/she are also responsible for ensuring adequate training is available for all medical staff with a responsibility for the care of patients with nasogastric tubes.

3.3 Director of Nursing & Midwifery Responsibilities:

The Director of Nursing will be responsible for ensuring adequate training is available for all nursing staff with a responsibility for the care of patients with nasogastric tubes.

3.4 Line Managers Responsibilities:

Line Managers are responsible for ensuring that any practitioners within their ward or department who have responsibility for the care of patients with nasogastric tubes are familiar with this policy and other associated policies and that their competency is assured on a regular basis. This includes any associated training or audit requirements.

Line managers must ensure that incidents or near misses relating to nasogastric tubes are formally reported on the Ulysses system.

3.5 Radiographers Responsibilities:

The radiographer must ensure that

- exposure of the X-ray is adjusted to allow the nasogastric tube to be visible to the bottom of the film
- the film is centred lower than would normally be appropriate for a chest X-ray so that it shows the abdomen as far as possible below the diaphragm
- the X-ray film must show the bottom of both hemi-diaphragms in the midline.

X-rays that are not as described above will not allow accurate interpretation of naso gastric tube placement and patients must not be allowed out of the X-ray department until a correct radiograph is taken.

3.6 Radiologists Responsibilities:

A Radiologist is required to confirm placement of the tube within 24hrs or the next working day. When the Radiologist reports on the placement film within the next working

day, they must document the position of the nasogastric tube and tip. This may not be done immediately and the Doctor responsible for the patient must review the x-ray as soon as possible and document in the medical notes that the nasogastric tube is safe to use for feeding/fluids/medications. This must always be documented prior to commencement of feeding.

3.7 Clinicians Responsibilities:

The Consultant responsible for the patient must ensure that the patient is assessed clinically to ensure that it is both appropriate and safe for feeding to commence. They must ensure that medical staff are competent in assessing correct placement of the nasogastric tube and managing complications having completed the NLMS training package.

All clinicians, with responsibility for confirming the position of nasogastric tubes by X-ray must have completed the 261 NG X-ray Confirmation eLearning package. Clinicians must forward to the Education and Training department a completed certificate of this training. The Education and Training department will record this against individuals' training records.

No foundation doctor (this includes both F1 and F2 doctors) is qualified/permitted to check the NG tube position radiologically

3.8 All Staff Responsibilities:

All practitioners must accept accountability for their practice. It is the responsibility of all staff involved in the insertion and post-insertion care of nasogastric tubes to update their practice to maintain competence and skills. Clinical and professional judgement must be used at all times when caring for these patients.

Results of all confirmatory tests of position must be documented in the patient's medical record and nursing notes and bedside chart.

3.9 The Nasogastric Tube Steering Group Responsibilities:

The Nasogastric Tube Steering Group is responsible for updating and approving the Policy, this includes the direct support and decisions taken by the clinical reference group.

4.0 ABBREVIATIONS / DEFINITION OF TERMS USED

ABBREVIATION	DEFINITION
COPD	Chronic Obstructive Pulmonary Disorder
DoH	Department of Health
GI	Gastrointestinal
MHRA	Medicines and Healthcare Products Regulatory Agency
NG	Nasogastric
NPSA	National Patient Safety Agency
NEX	Nose to ear to xiphisternum.
NLMS	National Learning Management System

TERM USED	DEFINITION
Nasogastric Tube (NG)	A tube passed through the nose into the stomach, used to aspirate material from, or introduce material into, the stomach.
pH Indicator	Indicator strip or paper which changes colour and will confirm the acidity or alkalinity of aspirated (or other) liquid
PPI (Proton Pump Inhibitor)	Group of drugs used to reduce gastric acid secretion
SLT	Speech and Language Therapist

5.0 POLICY:

The purpose of the nasogastric tube is to provide an access route to the gastrointestinal tract for the administration of fluids, medicines and or nutrients when oral access is not possible.

5.1 Is the nasogastric tube route the right decision for feeding/giving medication to this patient?

Before a decision is made to insert a nasogastric tube, an assessment is to be undertaken to identify if NG feeding is appropriate for the patient and the rationale for any decision is recorded in the patients medical notes.

A decision must be made that balances the risks with the need to feed or administer medications. Patients who are comatose or semi-comatose, have swallowing dysfunction or recurrent retching or vomiting, have a higher risk of placement error or migration of the tube, whereas patients on antacid medication are more likely to have pH levels of 6 and above, making confirmation of tube position more difficult. Actions to reduce all identified risks and the rationale behind these actions should be documented prior to insertion of a nasogastric tube for the purpose of feeding, as follows:

- The details of the assessment must be recorded in the patient's medical notes prior to commencement of feed.
- The decision to insert a nasogastric tube for the purpose of feeding must be made following careful assessment of the risks and benefits by at least two competent health care professionals including the senior doctor responsible for the patient's care

Nasogastric tube insertion can be dangerous as well as difficult in patients with certain pathologies, e.g. oesophageal fistula or stricture, patients with Head & Neck Cancer, pharyngeal pouch or in certain other clinical conditions e.g. basal skull fracture. In these situations, or if these are suspected, senior clinical help should be sought and nasogastric tube insertion should only be attempted under fluoroscopic control or using a nasendoscope/ gastroscope for direct visual insertion.

In the case of basal skull fracture it may be appropriate to insert the tube orally.

5.2 Indication for nasogastric tube feeding:-

Indication for enteral tube feeding	Examples
Unconscious patient	Head injury, ventilated patient
Neuromuscular swallowing disorder	Post Cerebrovascular Accident, Multiple Sclerosis, Motor Neurone Disease, Parkinson's disease
Physiological anorexia	Cancer, sepsis, liver disease, HIV, inadequate or unsafe oral intake
Upper GI obstruction	Head & Neck Cancer or oesophageal stricture or tumour
GI dysfunction or malabsorption	Dysmotility, inflammatory bowel disease, reduced bowel length
Increased nutritional requirements	Cystic fibrosis, burns, Chronic Obstructive Pulmonary Disease(COPD)
Psychological problems	Severe depression, anorexia nervosa
Perioperative	GI surgery, Head and Neck Surgery, and complications
Respiratory illness in babies	Bronchiolitis
Children who require extra nutrition to maintain growth & development.	Faltering growth

NICE (2006)

5.3 Is this the right time to place the nasogastric tube?

- If there is not sufficient experienced support available to accurately confirm nasogastric tube placement (for example at night or out of hours) then, unless clinically urgent, placement must be delayed until that support is available, and that the rationale for any decisions made is recorded in the patient's medical notes
- Note that that there may be a delay in feeding/hydrating a patient while waiting for insertion of a tube and confirmation of position. In these circumstances the patient may become dehydrated. Consider intravenous or subcutaneous fluids to cover this delay.

5.4 Is the Appropriate Equipment Available?

- Nasogastric tubes used for the purpose of feeding must be radio opaque throughout their length and have externally visible length markings
- pH indicator strips must be CE marked and intended by the manufacturer to test human gastric aspirate

5.5 Short term use of Ryles tubes for administration of medications

There are occasions when there may be a need to utilise a Ryles tube for the administration of emergency medication within critical care. Example of emergency medication includes:

- Dispersible Aspirin
- Clopidogrel
- Ticagrelor

The use of Ryles tubes for the administration of medication is not routine and is acceptable for 24hrs based on clinical need. The primary check for the placement of a Ryles tube for the purpose of administration of medication remains the same as for fine bore tubes i.e. NEX measurement, gastric aspirate and/or a secondary check of an CXR to confirm position of the nasogastric tube when appropriate. The Ryles tube must be replaced with an appropriate fine bore feeding tube for feeding purposes and for emergency medication longer than 24 hours. Ryles tubes are not suitable for feeding because:

- they do not comply with NPSA guidance (NPSA 2011);
- it can be uncomfortable for the patient;
- the incidence of reflux and subsequent stricture is higher than with silicone tubes;
- when exposed to gastric aspirate they become brittle and may cause ulceration (Payne-James et al 2001).

5.6 Nasogastric tubes for STOMACH DRAINAGE only

NG tubes for stomach drainage only can be inserted by one person and follow the procedure as described in LocSIPP - Insertion of a Nasogastric Tube.

5.7 Is the patient at High Risk of Acid Aspiration?

Reports and incidents have occurred where there is a false positive pH test from fluid aspirated from an NG tube placed in the lung. Whilst this is rare it occurs in patients at high risk of aspiration. This policy requires that ALL patients assessed as high risk of acid aspiration have the primary check of nasogastric pH testing confirmed by an X-ray to provide additional assurance of correct tube placement.

5.7.1 Patient at High Risk of Acid Aspiration:

<u>Includes</u>

1. Patients with modified textured diet and/or thickened fluids.
2. Patients awaiting SALT swallowing assessment. Some patients may be awaiting specialised swallowing assessment post treatment and may not be at high risk of aspiration.
3. Any patient with a diagnosis and/or symptoms that indicates an absence of the normal functioning of swallowing and airway protective reflexes including:
   a. Unconscious patients
   b. Patients with diagnosis of moderate or severe Dementia
   c. Patients with relevant neurological or physical deficits that impair swallowing e.g. Stroke, Motor Neurone Disease, Multiple Sclerosis, Parkinson's disease, post radiotherapy damage, patients with untreated or treated oesophageal cancers, airway cancers, patients extubated after prolonged ventilation in ITU.

d. Paediatric patients with respiratory compromise.

Excludes

1. Patients who have had a Laryngectomy
2. NG Tubes placed and confirmed in the GI tract by endoscope. CXR only if primary aspiration test pH >4 or equivocal.

5.8 Nasogastric tubes in Pregnancy

Management of NG tubes do not sit within the Midwifery Scope of Practice therefore in the very rare event a pregnant woman requires an NG tube a plan must be in place for the management of her care. This care must be undertaken by the most appropriate clinical area or with direct access to staff that are competent with the insertion of and ongoing management of NG tubes

5.8.1 Hyperemesis Gravidarum

Nasogastric (NG) or percutaneous endoscopic gastromy (PEG) feeding or parenteral nutrition (PN) may be required in severe disease which fails to respond to medical therapy. Women requiring an NG tube would be cared for within the surgical setting and managed by nursing staff competent in the insertion of and ongoing management of NG tubes

5.9 Competency

Healthcare professionals must ensure that if involved with nasogastric tube position checks they have been assessed as competent through theoretical and practical training as described in this policy.

5.10 Other safety Considerations

- Be aware of the risk of hypoglycaemia in patients with intensive Insulin therapy. The insulin infusion rate may need to be reduced or stopped (recommended time period 1 hour) and blood glucose levels monitored regularly according to patients' clinical condition.

- Feeding will normally be initiated within the hours of 09.00hrs-17.00hrs, Monday - Friday unless the clinical condition of the patient dictates an immediate feeding/medication regimen which is confirmed by the Consultant in charge of the patient's care

- Whoosh tests, acid/alkaline test using litmus paper, or interpretation of the appearance of aspirate **ARE NEVER** used to confirm nasogastric tube position as these are not reliable.

5.11 Specialist Tests

Nasoendoscopy/direct laryngoscopy/endoscopy/bronchoscopy/and radiological techniques.

There are occasions when nasogastric tubes are inserted under direct vision by Specialist operators e.g. Ear Nose and Throat (ENT) specialists, Gastroenterologists, Radiologists and passage into the oesophagus can be definitely confirmed. In these cases a NEX measurement and a primary check of pH aspirate must be taken and documented on the insertion record within the medical notes. If there is no aspirate or pH > 4, then a secondary check X-ray is required

5.12 Patients who have had the procedure of laryngectomy

Patients who have undergone total laryngectomy have an altered anatomy. These patients have had their respiratory tract separated from their alimentary tract so, that nasogastric tubes that are passed through the nose cannot enter the trachea. Such patients do not need the usual checks prior to feeding, although it is good practice to do the first line testing. Intraoral examination to ensure that the tube is not curled up in the mouth, and tracheal examination via the stoma, is all that is required.

5.13 Transfer of care to community settings

Outside the acute care setting access to radiology can be difficult, particularly if the patient requires transportation from the community. A full multidisciplinary discussion and supported risk assessment should be made and documented, before a patient with a nasogastric tube is discharged from acute care to the community. Guidance on ongoing confirmation of nasogastric tube placement by community staff should be provided and communicated with this risk assessment.

6.0 TRAINING AND SUPPORT

All staff at all levels caring for patients with nasogastric tubes must read and be aware of the contents of the Trust policy 'Nasogastric Tube Policy'. **All staff** who are involved in insertion, confirmation of placement via X-Ray and ongoing care and feeding must complete the mandatory training packages as outlined in the table **6.2 below**.

6.1 All medical staff

All medical staff are to complete, as part of their induction, an eLearning programme 'North Cumbria University Hospitals Trust – Trust Doctors Patient Safety Programme'

6.1.2 New medical staff (permanent and locum) – induction

As part of NCUHT induction all medical staff will be asked to complete a programme designed to provide key background information to aid the safe delivery of practice within NCUHT. The programme has been designed to support compliance with NCUHT mandatory training and is entitled North Cumbria University Hospitals Trust – Trust Doctors Patient Safety Programme. Completion of the 261 NG X-ray Confirmation eLearning package is also required which is accessed via eLearning Log in.

6.2 Training Requirements for all staff:

WHO	WHAT *(COURSE NAME)*	METHOD	FREQUENCY
All clinical staff who confirm NG tube placement by X-Ray.	000 Reducing the Risk of Feeding Through a Misplaced Feeding Tube	E-learning	Three-yearly
All clinical staff who insert NG tubes but **will not** be confirming placement via pH checking (medical staff).	NG Tube Insertion Training	E-Learning and complete declaration of competency at the end of the E-learning package for insertion only. **or** Face to Face	Three-Yearly
All clinical staff who insert NG tubes **and confirm** placement by pH checking.	NG Tube insertion training	E-Learning and complete declaration of competency at the end of the E-learning package for insertion and pH checking **Or** Face to Face	Three-Yearly
	NG Tube insertion competency assessment	5 competency assessments on patients or through simulation. At least one competency assessment must be on a person rather than simulated.	Three-Yearly
All staff involved in the ongoing care of and feeding through an NG tube.	NG Tube Ongoing Care & Feeding Training	Face to Face	Three-Yearly
	NG Tube Ongoing Care & Feeding Competency Assessment	5 competency assessments on patients or through simulation. At least one competency assessment must be on a person rather than simulated.	Three-Yearly

Note:

- No foundation doctor (this includes both F1 and F2 doctors) is qualified/permitted to check the NG tube position radiologically.
- Competency Assessments are signed off by staff who have been approved as an NG Assessor by the clinical skills training team.
- Once competency assessments are signed off by an NG Assessor a Competency Framework Notification must be completed
- The Competency Framework Notification must be signed by the line manager
- The Line Manager will retain a copy of the Competency Framework and the Competency Framework Notification
- Practitioner must maintain a copy of their Competency Framework and the Competency Framework Notification within their personal portfolio
- The signed Competency Framework Notification is sent Learning and Development who upload onto OLM

- Learning and Development produce a monthly compliance report for achievement of competencies
- Matron monitors and actions compliance with achievement of competencies for areas of responsibility
- Learning and Development will forward the completed Competency Framework Notification Letter to Human Resources to be filed within the individual's personal file.
- Human Resources will place the Competency Framework Notification within the individuals personal file
- If the skill has not been practiced for a period of 12 months the training and competence process must be repeated. This should be discussed at the annual appraisal.
- Face to Face Insertion Training will be available periodically during the year for staff to book on if they prefer this method to E-learning.

7.0. PROCESS FOR MONITORING COMPLIANCE

The process for monitoring compliance with the effectiveness of this policy is as follows:

Monitoring/audit arrangements	Methodology	Reporting		
		Presented by	Committee	Frequency
Compliance report for mandatory training	Reports from ESR will support each Business unit to monitor training.	HR Business Partners / Business Unit General Managers	Workforce Committee	Monthly
Compliance report for achievement of Competence	Reports from ESR will support each Business unit to monitor achievement of Competence.	HR Business Partners / Business Unit General Managers	Workforce Committee	Monthly
Incidents involving Nasogastric Tubes	A report on incidents involving Nasogastric Tubes will be sent to the Head of Dietetics monthly	Head of Dietetics	Nutrition Steering Committee	Quarterly

Wherever the above monitoring has identified deficiencies, the following must be in place:

- Action plan
- Progress of action plan monitored by the respective committee minutes
- Risks will be considered for inclusion in the appropriate risk registers

7.1 Monitoring of the Local Safety Standards for Invasive procedures (LocSSIPs) of Insertion of an NG Tube

The Trust LocSSIP for Insertion of an NG Tube also has the following monitoring section:

Monitoring/audit arrangements	Methodology	Reporting		
		Presented by	Committee	Frequency
Monthly point prevalence audit via Auditr	Ward staff will complete the NG audit on the same day every month, the results will be presented monthly	Head of Nursing Clinical Standards	Safety & Quality	Monthly
Random spot check audits	Patients with an NG will be identified on RealTime. Spot check audit using Auditr tool will be completed.	Head of Nursing Clinical Standards	Safety & Quality	Quarterly
Bi-annual audit of time from X-ray request to time of X-ray	Report generated from X-ray data base	Head of Nursing Clinical Standards	Safety & Quality committee	Bi-annually

8.0 REFERENCES

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3. Hanna G. *Improving the safety of nasogastric feeding tube insertion. Developing guidelines for the safe verification of feeding tube position - a decision analysis approach*. A Report for the NHS Patient Safety Research Portfolio, July 2010. www.haps.bham.ac.uk/publichealth/psrp/documents/PS048_Improving_the_safety_of_nasogastric_feeding_tube_insertion_REVISED_Hanna_et_al.pdf
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8. Nursing care of the surgical patient. Integrated Publishing. Available online at: www.tpub.com/content/armymedical/md0915/md09150075.htm
9. Shalmovitz GZ and Shah NR. Nasogastric tube. *Emedicine 2010*. Available online at: http://emedicine.medscape.com/article/80925-overview.

9.0 GUIDANCE:

- Patient safety alert – Reducing harm caused by misplaced nasogastric feeding tubes, 2005, available at http://www.nrls.npsa.nhs.uk/resources/?entryid45=59794

- Patient safety alert – Reducing harm caused by misplaced naso and orogastric feeding tubes in babies under the care of neonatal units, 2005, available at http://www.nrls.npsa.nhs.uk/resources/?entryid45=59798&q=0%c2%acnasogastric%c2%ac

- Reducing the harm caused by misplaced naso-gastric feeding tubes in adults, children and infants, 2011, available at http://www.nrls.npsa.nhs.uk/resources/?entryid45=129640&p=2

- Harm from flushing of naso-gastric tubes before confirmation of placement, 2012. available at http://www.nrls.npsa.nhs.uk/resources/?entryid45=133441

- Patient safety alert on placement devices for nasogastric tube insertion - http://www.england.nhs.uk/2013/12/05/psa-ng-tube/

10.0 ASSOCIATED DOCUMENTATION

1. Infection Control Policy
2. LocSIPP Insertion of a Nasogastric tube