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University Health Board



# **Clinical Policy**

## **for the Insertion and Maintenance of**

### **Nasogastric (or Orogastric)**

### **Feeding (and Drainage) Tubes in Adults**

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# 1. Introduction

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This policy revision has been designed to guide all ABMUHB Healthcare Professionals in the safe insertion and maintenance of nasogastric or orogastric feeding, and drainage tubes in adults.

Similar safety checks and clinical considerations apply to orogastric tubes and nasogastric tubes. For ease of reading this policy will usually just refer to 'nasogastric tubes or NGT' except where there is a difference.

The policy has been updated in response to the latest in a series of patient safety alerts raising the concern of misplaced nasogastric tubes. It has been developed around the recommendations from these alerts, Health Board Risk Assessments and in conjunction with the NHS Improvement Resource Set, 'Initial placement checks for nasogastric and orogastric tubes' (2016).

First recognised as a patient safety issue by the National Patient Safety Agency (NPSA) in 2005, three further alerts were issued between 2011 and 2017, the latest entitled 'Nasogastric tube misplacement: continuing risk of death and severe harm' (2017).

This series of alerts show the enormity of the problem continues to exist, and that further clarity around the insertion of nasogastric feeding or drainage tubes is essential in increasing clinical governance and patient safety. The patient safety alerts and NHS Improvement tools (2016) focus on implementation of;

- Use of safe equipment
- Competency based training for all healthcare professionals involved in this task, for both insertion of and maintenance of a feeding tube, and interpreting x-rays to confirm tube tip position
- Clear and comprehensive documentation of clinical assessment and undertaking of clinical procedures
- Evidence of ongoing audit to review practice

Introducing feed, fluid or medication into the respiratory tract or pleura via a misplaced nasogastric tube is a Never Event. Never Events are considered '*wholly preventable where guidance or safety recommendations that provide strong systemic protective barriers are available at a national level, and should have been implemented by all healthcare providers*'. The (2017) patient safety alert states '*checking tube placement before use via pH testing of aspirate and, when necessary, x-ray imaging, is essential in preventing harm*'. Misplaced nasogastric tubes leading to death or severe harm are 'Never Events' and require incident reporting through Datix.

There is clear evidence from national incident reporting that deaths are still occurring from misplaced nasogastric feeding tubes, a feeding tube can become misplaced into the lungs during insertion, or move out of the stomach at a later stage and therefore it is essential to have clear guidance on monitoring tube position each and every time it is accessed. Any flush could cause aspiration pneumonia if the tube is misplaced 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 inaccurate pH readings.

Due to the evidence of harm, all staff responsible for checking initial placement of nasogastric tubes must be aware that;

- a. NOTHING should be introduced down the tube before gastric placement has been confirmed
- b. DO NOT FLUSH the tube before gastric placement has been confirmed
- c. Xray confirmation is NOT a first line check for nasogastric tube tip position, obtaining a gastric aspirate and pH check is first line
- d. All Healthcare Professionals involved with nasogastric tube position checks should be assessed as competent. Competency training should include theoretical and practical training.

- e. Guidewires should be removed to help aid gastric aspiration to confirm tube tip position, tubes are fully radio-opaque so can be seen on xray without the guidewire.
- f. Those inserting tubes should be a competent practitioner and able to confirm tube tip position initially and on an ongoing basis.

## 2.Scope

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This Health board wide policy applies to all competent healthcare professionals inserting and/or maintaining nasogastric feeding tubes in adult patients in ABMUHB. A competent practitioner is one who has the appropriate knowledge and skills to insert and monitor use of a nasogastric tube for feeding or drainage. A competency based training package has been developed alongside this policy and it is expected that only staff who have completed this training will be responsible for insertion or monitoring of nasogastric tubes. This policy is applicable to all adult patients in ABMUHB who require feeding via a nasogastric feeding tube, it is expected that the healthcare professionals looking after patients with nasogastric tubes understand this policy and follow its guidance including all required documentation.

A nasogastric tube inserted for drainage only, requires the same insertion procedure and tube tip confirmation as one for feeding, see [#Appendix1](#) and placement procedure in section 5 of this document. Drainage tube insertion should be clearly documented on the nasogastric tube care bundle and all gastric drainage to be recorded on the fluid balance chart.

A clear assessment and a clinical management plan must be carried out if there is a decision to change use from a drainage to feeding tube (or vice versa). The decision making process must be clearly documented on the appropriate care bundle in [#Appendix3](#).

For any nasogastric **feeding** tubes inserted, this policy should be adhered to for the verification of tube position. NG tubes that are placed under direct visualisation or palpation must still be checked using the pH aspirate test **prior to use** (or x-ray if pH is above 5.5) as there is a risk that the tube may have moved subsequent to placement or that the tip of the tube may be in the oesophagus rather than the stomach.

This policy should be used in conjunction with other relevant ABMUHB Policies which can be found on COIN;

- Microbiological guidelines for enteral feeding
- Administration of Drugs via Enteral Feeding Tubes Policy
- Unblocking tubes policy

A multidisciplinary task and finish group has developed this policy, responsibility for the ongoing management, implementation, training and audit of this policy is held by NMB, corporate nursing and the medical director with delegation to the delivery units.

Each Service Delivery Unit will identify the clinical areas that will care for patients and identify staff who undertake the insertion and maintenance of nasogastric tube competency training. Each Service Delivery

Unit will ensure that there are adequate trained and competent staff in the clinical area, ward or department to ensure the provision of appropriate and safe 24 hour care.

### 5.3. Clinical Decision Making

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The NPSA alert from 2011 and the NHS Improvement Resource set from 2016, asks us to clearly justify our clinical actions when considering nasogastric tube placement. Not all tubes are placed for feeding; the rationale and urgency for tube placement will vary with the indication. Initiation of tube feeding is not an emergency, competent HCP's should be considering the following and fully documenting on the care bundles;

- **Is nasogastric tube feeding the right decision for this patient?**

The decision to insert a nasogastric tube for feeding must be made following careful assessment of the risks and benefits by **at least two** competent health professionals to include the senior doctor responsible for the patient's care (2011). The tube insertion bundle ([#Appendix1](#)) must be completed prior to commencing a feed regimen. Rationale, justification and consent should be clearly documented in the care bundle and referenced in the medical notes.

- **Is this the right time to initiate nasogastric tube feeding?**

While nasogastric feeding or administration of medication or fluid via a nasogastric tube can be crucial in the treatment of some conditions, the benefits are not always balanced against the risks of tube insertion. Placement of a nasogastric tube should not occur when there is insufficient support available to accurately confirm placement, consideration must be made and documented if this procedure is essential.

- **Is there sufficient knowledge/expertise available to test for safe placement of the nasogastric tube?**

If there is a lack of experienced support available to confirm nasogastric tube placement (for example at night or on a weekend) then, non-urgent placement should be delayed until that support is available (i.e the following morning or wait until Monday). The rationale for any decisions made must be recorded in the care bundle and referenced in the medical records. The insertion care bundle and decision tree (appendices 1 & 4) should be followed to support clinical decisions.

Any individual involved with nasogastric tube insertion must have been assessed as competent through theoretical and practical learning. pH testing is used as the first line test method, with pH of 5.5 or less as the safe range, each test and test result is documented on the nasogastric maintenance bundle (appendix 2) kept in the patient's bed end notes. X-ray is used **only** when no aspirate can be obtained or pH indicator strip has failed to confirm a pH of 5.5 or less.

## 4. Duties and Responsibilities

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### Clinical Staff

Nasogastric tubes must be inserted and maintained by a competent practitioner in accordance with this Policy. Healthcare Professionals are responsible for documenting any actions using the nasogastric insertion bundle and maintenance care bundles ([#Appendix1](#), [#Appendix2](#)).

The healthcare professional placing the tube should be competent ([#Appendix4](#)) to carry out the task and is responsible for verifying the position of a nasogastric tube tip. If aspirate has not been obtained the trouble shooting guide in appendix 5 should be followed alongside the decision tree. Confirmation of an appropriate pH on insertion, should be checked and confirmed by 2 competent healthcare professionals.

If aspiration of the tube has failed to confirm gastric placement, an x-ray should be requested and must clearly state that the purpose of the x-ray is to establish the position of the nasogastric tube tip for the purpose of feeding.

X-ray Interpretation or report should state the following, all 4 criteria should be met in order to correctly identify the nasogastric tube (NGT) as being in the stomach:

1. The NGT follows the oesophagus and avoids the contours of the bronchi
2. The NGT clearly bisects the carina or main bronchi
3. The NGT crosses the diaphragm in the midline
4. The NGT tip is clearly visible below the left hemi-diaphragm

This information is available as a label which can be found in [#Appendix7](#)

**To confirm gastric position of the nasogastric tube, ask:**

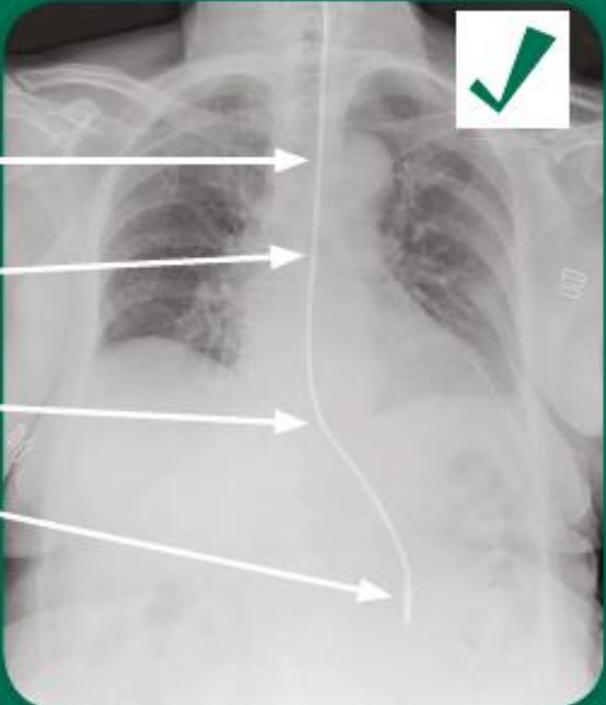
Does the tube path follow the oesophagus/avoid the contours of the bronchi?

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.**



Between 0800 – 1600 hrs the healthcare professional requesting x-ray is either competent to interpret the x-ray themselves or responsible for ensuring a competent practitioner is available to review the x-ray on PACS. This professional needs to document in the medical notes that all four of the above criteria can be observed, the tip of the nasogastric tube is within the stomach and safe to use for feeding.

If an x-ray is required to verify NG tube position after 1600 hrs, or at weekends, a competent professional must be available to interpret the x-ray and document on the care bundle in the patients' medical notes that the NG tube is within the stomach and safe to use for feeding.

If the NG is suspected to be in the lung by a radiographer in radiology, it must be communicated **immediately** to the ward and/or referring team so the x-ray can be fully interpreted and appropriate action can be taken to remove the tube.

### **Radiology Department**

Radiographers are responsible for ensuring that the nasogastric tube can be clearly seen on any x-ray to be used to confirm nasogastric tube position. Limitations of using x-rays for nasogastric tube tip confirmation are;

- Potential for misinterpretation
- Radiation exposure
- Loss of feeding time
- Increased handling of unwell patients
- Access to x-rays difficult in the community setting
- Any patients with altered anatomy

X-ray films will be uploaded onto PACS for review, the xray must be interpreted by a healthcare professional who has carried out competency based training to interpret xrays. If the NG is suspected to be in the lung by a radiographer in radiology, it must be communicated immediately to the ward and/or referring team so the x-ray can be fully interpreted and appropriate action can be taken to remove the tube.

### **Competency Training**

Medical and Therapy Directors, Senior Radiologists, Modern Matrons, Ward Managers and Clinical Unit Managers should ensure staff are aware of this policy and that it is adhered to at ward level, in theatres and critical care areas. They are responsible for ensuring staff complete competencies to the required level.

A competency based training programme has been developed and supported by the Nursing and Midwifery Board. The training comprises theoretical and practical assessments, this document includes the practical competency sign off sheets in [#Appendix4](#).

## 5. Nasogastric Tube Insertion Procedure

**\*This insertion procedure is relevant for either feeding or drainage nasogastric tubes until the point of position checking**

<b>Equipment for Procedure:</b>	Disposable plastic apron
Clean Tray or trolley	Non-sterile gloves
1 x ENFit compatible nasogastric tube	tape/dressing
1 x 50ml ENFit enteral syringe	pH Indicator strips
1 x glass of freshly drawn drinking water and straw (if allowed to drink)	Water for flushing when tube position confirmed in stomach
Clinical waste bag	Nasogastric tube insertion documentation bundle

Action	Rationale
Confirm discussion has taken place in line with policy and care bundle, document outcome in bundle	As per recommendations of NPSA documents To ensure NG insertion is in the patient's best interests
If patient does not have capacity (or is unconscious) to consent to treatment a best interests decision must be made and treatment in best interests.	To ensure NG insertion is in the patient's best interests
Provide Privacy	To maintain dignity
Explain procedure to conscious patient to their level of understanding	To counsel, obtain patient consent and co-operation
Where possible the patient should be sitting in a semi-upright position supported with pillows. For the semi-conscious patient it is often easier to be in a lying in a supine or lateral position.	This position can allow easier swallowing, Insertion can be facilitated without any neck extension.
Check nose and mouth to ensure both are clear and for any signs of obstruction or history from patient. Check nasal patency by sniff with each nostril occluded in turn.	To aid passage of NGT. Patient may have deviated nasal septum or history of trauma.
Check that the guidewire moves freely and then secure the guidewire into the end of the NG tube.	To stiffen and aid insertion of tube
Assemble required equipment, select appropriate tube (8Fr 85-92cm is a standard, adult feeding tube range). Wash hands, apply gloves and apron.	To ensure a clean procedure is maintained throughout maintaining infection control.
Consider size of tube required.	For example feeding tubes are usually 8Fr, wider bore tubes may be beneficial for drainage. Clinical indication may require a different sized tube.
Estimate the length of the tube to be inserted into stomach by measuring Nose to Earlobe to Xiphisternum (NEX measurement, <a href="#">#Appendix7</a> ). Note the cm marking on the tube	Length of tube is a marker to correct placement into the stomach. For example If not inserted enough could be above cardiac sphincter and increased risk of aspiration.

Lubricate the NG tube by immersing end of tube in drinking tap water. Do not immerse the entire tube in water	This will facilitate easy passage when inserting the tube.
Insert the tube into the clearest nostril and slide backwards and inwards along the floor of the nose to the nasopharynx approx. 10-12cm and STOP If any obstruction is felt withdraw tube slightly and try again at a slightly different angle	There are two distinct stages when passing the tube a. Nose → pharynx → stop and swallow b. Pharynx → stomach
If the patient can swallow coincide passing NGT with swallowing a sip of drinking tap water	The passing of the NGT can be co-ordinated with observing for laryngeal movement. During this phase, the epiglottis covers the airway and NGT can pass into oesophagus.
If you are unsuccessful repeat above procedure in other nostril. Do not repeat procedure more than 3 times	One nostril may be clearer than the other
Once at appropriate measurement secure NGT in place using fixation tape/dressing across side of face. Do not apply tape to the nose	To prevent displacement of tube post insertion
Note increment on NGT at point of entry into nostril	To match pre-insertion NEX measurement (appendix 7)
*Remove guidewire at this point if the tube has one	To improve potential to obtain gastric aspirate. To stop potential displacement after tube has already been position checked.
<b>DO NOT INSERT ANY FLUID INTO THE TUBE; GASTRIC PLACEMENT HAS NOT YET BEEN CONFIRMED</b>	
Using a 50ml enteral syringe aspirate the NGT. Withdraw the plunger on syringe to obtain a small air gap. Attach syringe to NGT and slowly withdraw plunger to obtain gastric aspirate.	pH indicator strips should be Health Board approved and in line with NPSA guidance. Litmus paper <b>must not be used</b> as it does not indicate the degree of acidity
Put gastric aspirate onto pH testing strip, use manufacturers guidelines to accurately read the result. Confirm this with a colleague, both staff should document findings on the insertion bundle	A pH of 5.5 and below indicates gastric (acid) placement
Ensure all sections of the insertion bundle have been completed and documented	To ensure safety and maintain compliance to the nasogastric insertion policy
<b>PH OF 5.5 OR LESS MEANS NGT IN STOMACH, SAFE TO USE - X-RAY IS NOT REQUIRED</b>	
Flush NGT with 10mls of drinking tap water	NG tube should only be flushed once gastric placement has been confirmed
If unable to obtain aspirate or pH is above 5.5 do not use the NG tube	Gastric placement of NG tube has not been confirmed and it is unsafe to use the NG tube
If unable to obtain aspirate or pH is above 5.5 try the following: Inject 20ml of air into the NG tube	This clears tube of debris and forces the end of the tube away from the stomach mucosa
Consider changing the patients position e.g. from sitting to lying, or lying on left side	To change the fluid level in the stomach as this may enable aspirate to be obtained
Consider length of NGT, consider withdrawing tube 5cms	Tip of tube may not be in fluid pool in the stomach, withdrawing tube may allow aspirate to be obtained by enabling tip of tube to fall in gastric fluid pool

If steps above attempted and an aspirate of 5.5 or less cannot be obtained, repeat steps after 15mins and repeat again after a further 15mins.	Repositioning patient an allowing time will increase chance of gaining an aspirate.
If still no positive tube tip confirmation, an x-ray will be required to verify the position of the NG tube prior to its use	X-ray will provide confirmation of position of the NGT tip, only at the time it is taken.
<b>Patients in Community Hospitals must return into the acute setting for all xrays</b>	
The x-ray form must clearly state that the purpose of the x-ray is to 'establish the position of the nasogastric tube tip' for the purpose of feeding	On a standard chest x-ray, the film may not go down far enough to see the tip of the NG tube
Post x-ray a competent healthcare professional must review the x-ray on PACS and document in the patients' medical notes that the NGT is safe to use for feeding, prior to its use. ( <a href="#">#Appendix6</a> )	To provide clear documentation in the patient medical notes that the tube is safe to use by a healthcare professional who has completed their competencies for interpreting x-rays
Defer x-ray unless a competent clinician is available to interpret the x-ray	Evidence from Never Events reports suggest that there are increased risks with x-ray checking at night due to a lack of senior support
Document the insertion procedure in the NG bundle.	Recording the procedure is a Health Board requirement and NPSA recommendation.

A nasogastric tube may be used for feeding or for drainage, if the reason for use changes it is imperative that the consideration, discussion and consent is readdressed and documented on the appropriate bundle ([#Appendix3](#)).

The clinical team should be aware of the different types of nasogastric tubes available, ensure that a tube is used which is fit for purpose and has a review plan in place, a list of different enteral feeding tubes and ancillaries can be found in appendix 8. Ongoing maintenance of that tube should be recorded on the correct bundle, healthcare professionals should be aware that different tube types have different time frames for use, i.e. feeding tubes 28 days, drainage tubes only 7 days.

**On disconnection of feed or medication flush NGT with water as per dietetic regime or local protocol, following this flush the NGT with 10ml air. This step is to ensure that water would not be the first thing aspirated on subsequent tube position checking.**

## 6a Ongoing Monitoring of NGT Position

As the healthcare professional caring for the patient with an NGT it is your responsibility to ensure the tube is in the correct position for each episode of use.

Tube tip position should be checked by a competent healthcare professional and must be documented on the NGT Monitoring Bundle:-

WHEN TO POSITION CHECK	RATIONALE
1. Before each feed, or bolus feed, or drug administration. Consider how many episodes the tube is accessed per 24hrs. Medication given immediately following a bolus feed would count as one episode but any time delay between would count as 2 episodes and therefore require 2 checks.	To confirm correct position prior to use.
2. At least once every 24 hrs when continuous feeds are used (a maximum of 20hrs feeding should be done at any one time, with 4 hr rest). If pH is greater than 5.5 consider x-ray.	To ensure tube has not displaced and to confirm correct position prior to use.
3. If the patient complains of discomfort or feed reflux into the mouth or tracheostomy.	To ensure tube has not displaced. Tube may be coiled in back of throat.
4. After vomiting or violent retching.	To ensure tube has not displaced.
5. After severe coughing bouts, respiratory distress or any change in breathing.	To ensure tube has not displaced. Check back of throat to ensure that tube is not coiled.
6. After endotracheal or tracheostomy tube suctioning at ward level.	To ensure tube has not displaced. Check back of throat to ensure that tube is not coiled.
7. If tube has obviously displaced on checking measurement.	To ensure tube has not displaced.
8. Following a patient slip/trip/fall	To ensure tube has not displaced
9. For a patient who transfers to or leaves the ward while NGT feed running, check increment at nose and stop feed if any concerns	To reduce potential risk of tube displacement
10. If a patient has been disconnected from their feed for any reason i.e to go to the toilet or receive physiotherapy, the tube position must be checked	To ensure tube has not displaced and to confirm correct position prior to use.

In addition to above a **visual check** of measurement at nostril is recommended in the following situations;

- On changing a bag of feed if patient on continuous feeding
- On administration of medication if patient on continuous feeding
- When moving/turning/transferring the patient if on continuous feeding

**If any of the visual checks indicate that the tube has moved then a pH test must be carried out.**

## 6b Troubleshooting Guide (not to be used on initial placement of NG)

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It is recognised that obtaining aspirate for ongoing checking may at times be difficult. Despite trying all above techniques and you are still unable to get an aspirate pH 5.5 or below, a clinical decision should be made as to whether the tube is safe to use in conjunction with the NG monitoring bundle. Caution must be taken with patients who are on any antacid medications.

Refer to appendix 5 to assist in **your** decision-making.

ACTION	RATIONALE
1. Check that a competent practitioner has followed the process for tube verification on insertion and the following is completed on the care bundle for insertion.	To ensure correct procedure has been followed on initial insertion.
2. Review NG monitoring bundle	To aid clinical judgment and guide decision whether tube is safe to use
3. Obtain patient history: Check measurement at nose, has patient vomited, violently coughed, or complained of feed reflux? Look in patients mouth to check if tube is coiled at back of throat	To check if tube has moved. To ensure tube has not displaced. If measurement is the same at the nose, no vomiting or violent coughing, tube not coiled in throat - assume tube position is unchanged.
4. Only if tube position has not moved and patient has not vomited, Inject 10mls air, wait 15-20 mins, then attempt to aspirate gastric contents using a 10ml enteral syringe.	To stimulate the gastric wall to aid gastric secretion production.

## 6c Care of NGT

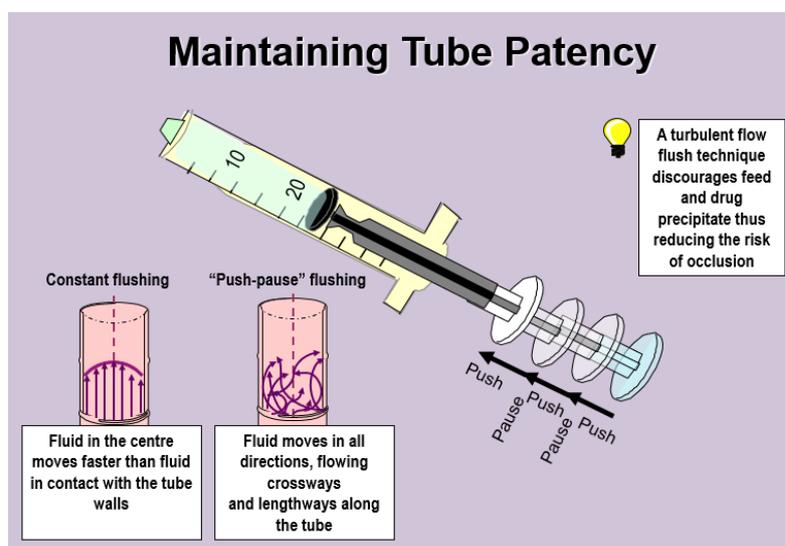
Please ensure monitoring care bundle is completed daily; this will highlight any concerns about the tube and skin care. If any concerns raised at all, liaise with senior nurse and/or medical team for appropriate action or signposting to alternative healthcare professionals.

Please remember this policy should be used in conjunction with other relevant ABMUHB Policies which can be found on COIN;

- Microbiological guidelines for enteral feeding
- Administration of Drugs via Enteral Feeding Tubes Policy
- Unblocking tubes policy

### Maintaining Patency:-

ACTION	RATIONALE
Flush tube with water before and after feed using a 50ml ENFit enteral syringe with a push-pause technique as per dietetic feeding regime. If fluid restricted may need to reduce these amounts.	To ensure tube does not become blocked. The push-pause technique causes turbulence in the tube which may move debris from the inner lumen of the NG tube. See diagram below
If continuous feeding flush after each 500ml bottle change.	To maintain tube patency
Where possible medications should be given in liquid / dispersible form.	To ensure fluid in 24hr period does not exceed restrictions. To maintain tube patency
If feed in progress tube MUST be flushed with water prior to giving medications via the tube with 50ml water.	To aid administration of medication via the NGT and stop interactions within the NGT
Medications to be given individually with a 10ml water flush in between.	To reduce the risk of tube blockage.
Flush tube with freshly drawn drinking water at end of medications and prior to recommencing feed.	To reduce the risk of tube blockage and interaction between chemical components.



### Skin Care:-

ACTION	RATIONALE
Check that tape securing tube is intact and not in need of replacement.	To ensure tube is safely secured in position.
Check around nostril for any signs of pressure necrosis. An adverse incident form needs to be completed if any pressure necrosis is found	Tape may need to be changed to secure tube in a different position.
Tape should be placed across patients cheek	To safely secure tube in position
If patient is NBM ensure mouth care is maintained 2 hourly.	To ensure oral hygiene is maintained reducing risk of infections. In conjunction with the oral care bundle.

## 7. Nasogastric tubes for drainage

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A tube initially placed for drainage should follow the same insertion care bundle as for feeding tubes ([#Appendix1](#)). In section 5 of the policy complete the tube insertion procedure to the point of position checking.

Following appropriate insertion of the tube into the stomach you would expect gastric aspirate to collect in a drainage bag attached to the tube. All gastric aspirate must be measured and recorded on a fluid balance chart. Should you need to change the use of tube from drainage to feeding please ensure you complete the change of use care bundle in [#Appendix3](#)

## 8. Compliance

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Within each Service Delivery Unit an audit should be undertaken at least annually of ongoing compliance and should be carried out by multi-disciplinary team members involved in the development and use of this policy. Following the audit, the results should be discussed within the local quality and safety committee.

This policy will require urgent review if there are any related never events and as a matter of course if there are any further patient Safety Alerts through NHS Improvement. This in turn will be addressed in any awareness and competency training packages.

Future updates should be carried out by a multi-disciplinary task and finish group 3 yearly or as required to maintain clinical governance.

## 9. Quick Reference Guide

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For quick reference, the guide below is a summary of actions required. This does not negate the need to be aware of and follow the detail of this policy.

1. Before a decision is made to insert a nasogastric tube, an assessment is undertaken to identify if nasogastric feeding is appropriate for the patient, and the rationale for any decisions is recorded in the patients' medical notes.
2. Nasogastric feeding tubes should be used for short-term (4-6 weeks) enteral feeding in patients with a functioning gastrointestinal tract.
3. Nasogastric tubes used for feeding, medication and fluid administration are contracted items and should be radio-opaque throughout their length and have externally visible length markings in 1cm increments.
4. NG tube insertion must be documented in the patients' notes and on the Nasogastric (NG) Feeding Tube Confirmation of Placement Documentation and Care Bundle for Adult patients (NG Care Bundle) see Appendix 2 at the bedside.
5. Aspirate with a pH of 5.5 or below should be obtained to confirm gastric placement prior to using the tube each and every time it is accessed.
6. NG tubes must not be flushed or have anything introduced into them until gastric placement has been confirmed. Internal guidewires must not be flushed with water prior to insertion and do not need to remain insitu for x-ray.
7. NG tubes must be checked (using the pH aspirate test) at the bedside for correct position prior to each use, if there is any indication that the NG tube may have moved, and at least every 24hrs when in continuous use. This is to be documented on the NG Care Bundle.
8. Do not use sterile water to flush NG tubes as this has a pH of 4.5 and could lead to a false positive pH reading. Drinking tap water should be used.
9. X-ray should only be used on initial insertion if aspirate obtained has a pH of above 5.5 or if aspirate cannot be obtained.
10. If x-ray is required to check NG tube position this should be requested between the hours of 0800 – 16.00 (Mon to Fri).
11. Between 0800 -16.00 hrs (Mon to Fri) radiology will not report the x-ray direct onto PACS and must be reported to the requester immediately.
12. A practitioner who is competent to interpret xrays must document in the patient's medical notes that the NG tube is safe to be used for feeding, prior to the NG being used.
13. If x-ray required after 1600 hrs(Mon –Fri), or at weekends, an appropriately competency trained professional from the referring medical team must be available to review the x-ray and document in the patients' medical notes that the NG tube is in the stomach and safe to use for feeding. If NG is found to be in the lung it must be reported to the requester immediately. HCP must have completed NG x-ray interpretation competency training.

## 9. Definitions

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**Competent Health Care Professionals to insert nasogastric tube:** HCP members of staff (including doctors, nurses and midwives) must be competent for tube insertion. Insertion must be recorded on the tube insertion bundle (appendix 1) each time a new nasogastric or orogastric tube is inserted.

**Nasogastric feeding:** The administration of artificial nutrition via a tube placed via the nose with the distal tip ending in the stomach. Feeding via a nasogastric tube is usually a short-term intervention (4-6 weeks). A route for longer-term enteral access should be considered if enteral nutrition support is required for longer than this.

**Orogastric feeding:** The administration of artificial nutrition via a tube placed via the mouth opening with the distal tip ending in the stomach. Type of tube used would be the same as for a nasogastric feeding tube.

**Enteral tube feeding:** the delivery of artificial nutrition, containing protein, carbohydrate, fat, water, minerals and vitamins, prepared for administration into the stomach, duodenum or jejunum.

**Nasogastric or orogastric drainage tube:** A drainage tube inserted either naso or orogastrically to enable drainage of stomach contents. Tubes for this purpose can be licensed for different requirements, some for suction or drainage only and often have a short life span <7-10 days, and some are multifunctional for both drainage and feeding but life span is affected by how it is to be used.

**Insertion of a nasogastric feeding or drainage tube:** The first occasion of a new nasogastric tube placement. The ABMUHB nasogastric tube insertion bundle should be used alongside this policy (appendix 1), for the initial placement and tube tip position check documentation.

**Maintenance of a nasogastric tube:** Correct checking of tube tip position, and maintaining the patency of that tube. Tube tip positioning must be checked each time the tube is accessed to administer anything via it, by a competency level 3 practitioner or above. On-going management including skin care, checking tube position must be recorded on the NG bundle.

**ENFit:** ENFit® is the new ISO 80369-3 standard for enteral feeding tube connectors. Syringes should be labelled as suitable for enteral use; you should not be able to connect an IV connection or any adaptors to the feeding sets that make them IV compatible. The connection is only interchangeable with its own system. Ends of feeding tubes, giving sets (that deliver feed to feeding tubes via a feeding pump), syringes and any other enteral ancillaries should all be ENFit compatible (GEDSA, 2014).

**Nasogastric tubes (NGT):** Nasogastric tubes vary in diameter (typically 4-16Fr), length of tube (typically 40-120cm) and the material they are made of (PVC or polyurethane), some have a guidewire and some do not. The length of the tube is measured in cm's starting at the distal tip (stomach end = "0" cm's), measurements should be seen along the length of the tube. Tubes are designed to suit different requirements to include suction, drainage and feeding. The material, diameter or length make them suitable for the task they are designed for.

- PVC is a very short-term use material typically 7-14 days, in adults the tubes tend to be 'wide bore' (greater than 12fr) and may be used for suction or drainage, they

don't often come with a guidewire as they are made of a fairly stiff plastic and are often no longer than 80-90cm in total length reaching only the stomach. **They should not be used for feeding and some may not be ENFit compatible.** Some PVC tubes have no radio-opacity and some have a very thin stripe throughout the length of the tube.

- Polyurethane has longer usage typically 4-6 weeks, In adults tubes tend to be 'fine-bore' (8-10fr) and are commonly used as feeding tubes. Most tubes come with a guidewire and are fully radio-opaque throughout their length. In adults a tube to reach the stomach may be 75-95cm long, anything longer may be designed to reach and feed into the jejunum. Tubes made of polyurethane but used for drainage only have a significantly shorter life, only 7 days used in this way.

**In ABMU, for adults the standard feeding tube is an 8Fr 85-92cm, nasogastric feeding tube.** It has identifiable cm markings and is radio-opaque throughout its entire length with or without the guidewire insitu. In clinical areas where a shorter-term tube is required (<14 days) a different tube is available for use. Both tube ranges and ancillaries are on contract and are available through Bridgend Stores, see appendix 8 for order details.

**Gastric Aspirate/pH test:** Fluid obtained from the stomach via the NGT using an ENFit enteral syringe. Aspirate is then checked for pH using the recommended pH indicator testing strips CE marked for gastric or in vitro use or as Health Board approved. A pH of <5.5 indicates gastric tube tip position and therefore safe to feed.

**Pump feeding:** Use of a feeding pump to deliver feed over a period of time, typically no more than 20hours if fed into the stomach. Occasionally referred to as 'continuous' feeding. May be appropriate for patients who cannot tolerate large volumes of feed.

**Bolus feed:** Administering a volume of feed at regular intervals either with gravity, a syringe with plunger, by using a gravity set or can be done using a short period of time and high rate on a feeding pump. Breaks between feeds may be given to suit patient needs. Always clarify if you are unsure of the appropriate technique.

**Radiology:** Use of medical imaging to identify, diagnose and/or treat conditions in the body. For the purposes of this policy x-ray may be used as a secondary test to confirm the correct placement of a nasogastric or orogastric feeding tube when position has not been possible to confirm by pH checking.

**X-ray:** An x-ray is a form of radiation that can pass through the body to produce an image that can be 'read' or interpreted to answer a clinical question or investigation. X-rays for confirming position of a nasogastric or orogastric feeding tube should always be carried out as a secondary test if a positive outcome from pH checking cannot be obtained. A request for this type of imagery should state that the purpose is for checking tube tip position and the image should be reported on by a HCP competent to interpret x-rays and should clearly state the 4 criteria to correctly identify a safe tube tip position.

**Dietitian:** Dietitians are qualified health professionals that assess, diagnose and treat dietary and nutritional problems at an individual level. The Dietitian will assess and advise on a suitable feeding

regime dependants on patient needs and clinical condition. A dietitian will contribute and make decisions as part of the MDT.

**Speech and Language Therapist:** A qualified health professional that will assess for dysphagia by undertaking a swallowing assessment. They will advise if the patient is at risk of aspiration or needs to be placed nil by mouth and may require a nasogastric tube. A speech therapist will contribute and make decisions as part of the MDT.

**Routine:** A regular process or course of action

**Planned:** Following an expected process

**Urgent:** Where the risk in delay of action, is considered to be detrimental to the treatment of the patient.

**Emergency:** A serious situation or occurrence that happens unexpectedly and demands immediate action.

## 10. References

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- ABMU Health Board (2015) Consent policy
- Stroud, M. Duncan, H & Nightingale, J. (2003) Guidelines for Enteral Feeding in Adult Hospital Patients. *Gut*, 52 (suppl. Vii), Vii-Vii 12.
- Burham,P. (2000). A Guide to Nasogastric Tube Insertion.*Nursing Times Plus* 96 (8), 6-7.
- Reid, W. (2002). Clinical Governance: Implementing a Change in Workplace Practice. Nasogastric Tube Placement. *Professional Nurse*, 17 (12), 734-737.
- Cannaby, A. Evans, L. & Freeman, A. (2002). Nursing Care of Patients with Nasogastric Feeding Tubes. *British Journal of Nursing*, 11 (6), 366-372.
- Chrestensen, M. (2001). Bedside Methods of Determining Nasogastric Tube Placement: A literature Review. *Nursing in Critical Care* 6(4), 192-199.
- Colagiovanni, L. (1999) Taking the Tube. *Nursing Times* 95 (21), 63-71.
- Colagiovanni, L. (2000). Preventing and Clearing Blocked Feeding Tubes. *Nursing Times Plus*, 96 (17), 3-4.
- Ellett, M.L.C. (2004). What is known about methods of correctly placing gastric tubes in adults and children? *Gastroenterology Nursing*, Vol 27 (6) 253-259.
- GEDSA (2014) Reducing the risk of medical device tubing misconnections. Staying Connected.<http://stayconnected.org/wp-content/uploads/2016/09/ESPEN-Presentation.pdf>
- Metheny, n. & Tiler, M.G. (2001). Assessing Placement of Feeding Tubes.*American Journal of Nursing*, 101 (5), 36 – 45
- Great British National Patient Safety Agency (2005). Reducing the harm caused by Misplaced Nasogastric Feeding Tubes.
- Great Britain. National Patient Safety Agency (2007). Promoting safer measurement and administration of liquid medicines via oral and enteral routes.
- Great Britain. National Patient Safety Agency (2011). PSA002: Reducing the harm caused by misplaced nasogastric feeding tubes in adults, children and infants.
- Great Britain. National Patient Safety Agency (2012). Rapid Response Report NPSA/2012/RRR001: Harm from flushing of nasogastric tubes before confirmation of placement.<http://www.nrls.npsa.nhs.uk/resources/?EntryId45=133441>
- Great Britain. National Patient Safety Agency (2017).PSA008 /May 2017:Nasogastric tube misplacement: continuing risk of death and severe harm.
- Portsmouth NHS Trust (2005). Administration of Drugs to Adult Patients with Feeding Tubes. *Drug Therapy Guideline* No 52.01, p1-25.
- Metheny, N. et al. (2005) Indicators of Tubesite during Feedings.*Journal of Neuroscience Nursing*, 37 (b), 320-325.
- NHS Resource Set (2016) <https://improvement.nhs.uk/resources/resource-set-initial-placement-checks-nasogastric-and-oro-gastric-tubes/>
- Taylor, S & Clemente, R. (2005). Confirmation of nasogastric tube position by pH testing. *Journal of Human Nutrition and Dietetics*, 18, 371-375.

- Great Britain. National Institute for Health and Clinical Excellence. (2006). Nutrition Support in Adults (Clinical Guideline 32) London: NICE.
- Pickering, K. (2003). The administration of drugs via enteral feeding tubes. *Nursing Times*. 99 (46) 46-48.

## Is a Nasogastric tube the right decision for this patient?

to be completed by the consultant/authorised deputy

& senior nurse involved in the decision



Bwrdd Iechyd Prifysgol  
Abertawe Bro Morgannwg  
University Health Board



Patients Name	
Hospital Number	Date of Birth

Clinical Assessment	Yes	No
Does the patient have any suspicion of an oesophageal fistula?		
Does the patient have a basal skull fracture?		
Does the patient have a pharyngeal pouch?		
is the patient receiving Non-Invasive Ventilation?		
Does the patient have a hiatus hernia?		
Is there any suspicion of upper GI abnormality?		
Is the patient comatose/semi-comatose?		
Is the patients clotting out of normal range and high risk of bleeding?		
Is there a history of nasal septum defects or polyps?		
Is there a history of nose bleeds?		
Is there a history of non-compliance (pulling out IV devices, resistance to care)?		

If yes to any of the above, nasogastric insertion may carry significant risk. If there is suspicion that insertion is risky, discussions with or referral to the following must be completed.

	Yes	No	Referral to, please tick below	Print Name:
Respiratory Team				
ENT Team				Signature:
Upper GI Specialists				

Only proceed with further assessment if specialist team not required

### Capacity and Nasogastric Tube Therapy Assessment

We confirm that the above assessments have been undertaken and this patient requires NG tube for;

Feeding	Fluids	Medication	Drainage
---------	--------	------------	----------

Please tick and accept any potential risks that remain, additional risks identified beyond the above assessments are;

The intended benefits are;

The risks and benefits have been explained and the patient fully understands these and is able to provide informed consent. The clinical need and requirement for nasogastric therapy will be reviewed by the consulting team within 1 week (as a minimum).

Date for review (maximum 1 week):

Any nasogastric tube literature provided to the patient	Yes	No
---	-----	----

Consultant (or nominated deputy)	GMC Number
Signature	Date
Senior RGN Name	NMC PIN
Signature	Date



### Informing tube insertion

Patients Name	
Hospital Number	
Date of Birth	

Consent	Yes	No
Patient has consented for nasogastric tube placement, consent recorded in medical notes		
Patient lacks capacity, best interests decision made, documented on form 4 or medical notes		
Consent authorised under Lasting Power of Attorney, documented in medical notes		

**Please consider availability of specialist staff able to confirm tube tip position, is this the right time to place an NG tube?**

#### Insertion Preparation - Follow NG Policy for full procedure

	Yes	No
Any allergies		
Pt in semi-upright position		
Radio-opaque NG tube		
Personal Protective Equipment		
ENFit syringe available		
Check expiry date on NG		
Tube lubrication as per manufacturers instruction		
CE marked pH indicator strips for gastric aspirate		

#### Insertion Technique - Follow NG Policy for full procedure

NEX (Nose - Ear - Xiphoid) measurement (cm)		Note cm marking of tube at nose when secur	
Nostril used on insertion	Left	Right	
Aspirate Obtained	Yes	No	pH of aspirate
<i>if 1st aspiration inconclusive wait 15mins and reaspirate</i>			pH of aspirate
Xray required	No	Yes	
<i>Xray only carried out Monday-Friday 08:00-16:00 routinely</i>			

Please attached NG tube sticker/barcode here	Tube secured with

#### pH check must be verified by 2 members of staff to include the tube inserter

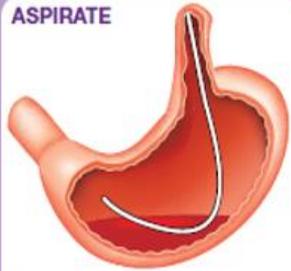
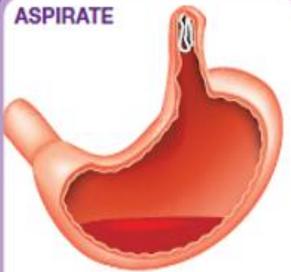
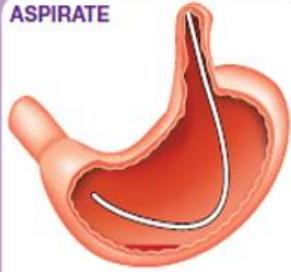
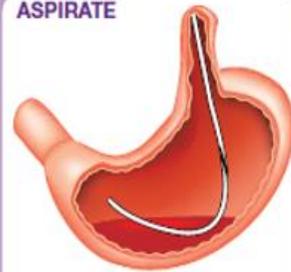
Name		Signature	
Role	Inserter - competency level 3	Date	Time
Name		Signature	
Role	Checker - competency level 2	Date	Time



## Troubleshoot Guide to Obtain Gastric Aspirate

If unable to obtain aspirate on first attempt, try these tips, if still unable to obtain aspirate attempt to do in another 15-30 minutes.

Action	Rationale
Check competent practitioner has followed process for tube verification on insertion	To ensure correct and safe process followed
Review NGT Monitoring Care Bundle	To aid clinical judgment and guide decision whether tube is safe to use
Obtain patient history: Check measurement at nose, has patient vomited, violently coughed, or complained of feed reflux? Look in patients mouth to check if tube is coiled at back of throat	To check if tube has moved. To ensure tube has not displaced. If measurement is the same at the nose, no vomiting or violent coughing, tube not coiled in throat - assume tube position is unchanged.
Only if tube position has not moved and patient has not vomited, Inject 10mls air, wait 15-20mins, then attempt to aspirate gastric contents using a 10ml enteral syringe.	To stimulate the gastric wall to aid gastric secretion production.

<p><b>Tube may be above fluid level</b></p> <p><b>ASPIRATE</b></p>  <p>Turn patient onto their side This may allow the tip of the nasogastric tube to enter the gastric fluid pool.<sup>1</sup></p>	<p><b>Tube may be in the small bowel</b></p> <p><b>ASPIRATE</b></p>  <p>pH will normally be 6-8 and bile will usually be present. Withdraw tube in 2-3cm increments testing at each increments up to 20cm.</p>	<p><b>Tube may be occluded in Mucosa</b></p> <p><b>ASPIRATE</b></p>  <p>Advance or withdraw tube 5cm or aspirate with smaller syringe. Change patients position to alternative side. Refer to local policy!</p>
<p><b>Tube may be in Oesophagus</b></p> <p><b>ASPIRATE</b></p>  <p>Advance the tube by 1-2cm for infants and children or 10-20cm for adults advancing the tube may allow it to pass into the stomach if it is in the oesophagus. Refer to local policy!<sup>1</sup></p>	<p><b>There may be no fluid in the stomach</b></p> <p><b>ASPIRATE</b></p>  <p>Having injected air and tried smaller syringe wait 15-30 minutes, change patients position to alternative side.</p>	<p><b>Tube may be occluded</b></p> <p><b>ASPIRATE</b></p>  <p>Tube may be kinked or occluded with debris. Inject air (1-5ml for children, 10-20ml for adults) using a 20ml or 50ml syringe and try again. Refer to local policy!<sup>1</sup></p>

This is NOT a testing procedure: DO NOT carry out auscultation of air ('whoosh' test) to test tube position. Advice does not replace local policy!<sup>1</sup>

## Appendix 3 – NGT Change of use care bundle

### Nasogastric Change of Use Documentation

To be used when changing from a nasogastric drainage to a feeding tube



To be completed by the consultant/authorised deputy, & senior nurse involved in the decision



Patients Name		
Hospital Number		Date of Birth

### Capacity and Nasogastric Tube Therapy Assessment

Gastric drainage is no longer required and this patient requires a change in use of NG tube to provide; *please tick*

Feeding	Fluids	Medication
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please tick and accept any potential risks that remain, additional risks identified beyond the above

The intended benefits are;

### Consent

	Yes	No
The patient is conscious	<input type="checkbox"/>	<input type="checkbox"/>
The patient is unconscious	<input type="checkbox"/>	<input type="checkbox"/>
Patient consented for nasogastric tube placement, consent recorded in medical notes	<input type="checkbox"/>	<input type="checkbox"/>
Lacking capacity, best interests decision made, documented on form 4 or medical notes	<input type="checkbox"/>	<input type="checkbox"/>
Consent authorised under Lasting Power of Attourney, documented in medical notes	<input type="checkbox"/>	<input type="checkbox"/>

The risks and benefits have been explained or considered by the team. The clinical need and requirement for nasogastric therapy will be reviewed by the consulting team within 1 week (as a

Date for review (maximum 1 week)

Consultant (or nominated deputy)		GMC Number	
Signature		Date	

Senior RGN Name		NMC PIN	
Signature		Date	

Appendix 4 – NGT Competency Sign Off Sheet

**Knowledge**

1. Read the ABMU Health Board Policy – Insertion and Maintenance of Nasogastric (or Orogastric) Feeding tubes in Adults
2. Complete Online Training Package and have certificate confirming result
3. Outline in the box below the reasons for a capacity assessment and best interests decision making:

4. Identify the cautions and contra-indications to NG feeding tube insertion

Performance Criteria	Assessment Method	Level Achieved	Date	Assessor
<b>The Participant will be able to:</b>				
<b>1. Demonstrate the knowledge and understanding of why a NGT is necessary and what is requires to maintain safety and minimise associated risks</b>				
1. Articulate the necessary assessments required in order for a patient to proceed to NGT placement including the <ul style="list-style-type: none"> <li>a. Roles and responsibilities</li> <li>b. Risks</li> <li>c. Timing of insertion.</li> <li>d. Skills and knowledge required of those involved in the decision making</li> </ul>	Questioning			
2. Discuss the legal and ethical implications surrounding insertion of a nasogastric tube in the context of <ul style="list-style-type: none"> <li>a. consent and mental capacity</li> <li>b. Futility</li> <li>c. living will/ LPA for medical decisions</li> </ul>	Questioning			
3. Demonstrate knowledge of current ABMUHB NGT policy and procedure, how and where to access these and other relevant resources to support up to date knowledge and practice	Questioning			
4. Articulate knowledge of anatomy and physiology in relation to nasogastric tube insertion	Questioning			
5. Articulate the absolute and relative contraindications to NGT insertion	Questioning			

<b>2. Demonstrate the ability to insert a NG tube in accordance with ABMUHB policy and guidelines</b>				
<b>Performance Criteria</b>	<b>Assessment Method</b>	<b>Level Achieved</b>	<b>Date</b>	<b>Assessor</b>
1. Able to identify the appropriate pre requisites and assessments required pre insertion <ul style="list-style-type: none"> <li>a. 2 competent HCP one of which is a senior member of the medical team responsible for the pts care</li> <li>b. Consent and mental capacity is documented along with the realistic aims of NGT as a treatment</li> <li>c. Any risks are fully outlined in the medical notes and acknowledged by the medical team and explained to the patients (and family where applicable) e.g. any altered anatomy; hiatus hernia, head and neck or oesophageal/gastric lesions tumours or dysfunction , dysphagia and receiving modified texture diet, confused patient and may pull NGT</li> </ul>	Questioning & or observation			
2. Ensure appropriate method of consent is achieved for <ul style="list-style-type: none"> <li>a. those able to provide informed consent to treatment</li> <li>b. those unable to provide informed consent to treatment</li> </ul>	Observation & Documentation			
3. Demonstrate correct preparation of patient <ul style="list-style-type: none"> <li>a. Positioning</li> <li>b. Oral and nasal hygiene</li> <li>c. Psychosocial support</li> <li>d. equipment and patients' environment</li> </ul>	Observation  Questioning and Discussion			

**2. Demonstrate the ability to insert a NG tube in accordance with ABMUHB policy and guidelines (continued)**

Performance Criteria	Assessment Method	Level Achieved	Date	Assessor
4. Select the appropriate equipment required and importance of the characteristics/ actions required for <ul style="list-style-type: none"> <li>a. Selection of NGT (size and material)</li> <li>b. Enteral syringes</li> <li>c. pH sticks</li> <li>d. Water</li> <li>e. Securing tape / Bridle</li> </ul>	Questioning			
5. Follow ABMUHB procedure to insert nasogastric tube	Observation			
6. Demonstrate procedure for checking correct placement of nasogastric tube following insertion. Articulate the relevance of <ul style="list-style-type: none"> <li>a. NEX measurement and limitation mark at nasal entrance</li> <li>b. pH</li> </ul>	Observation Questioning			
7. Demonstrate or articulate procedure for troubleshooting/ obtaining confirmation of correct placement of nasogastric tube following insertion. Articulate the relevance of <ul style="list-style-type: none"> <li>a. NEX measurement and limitation mark at nasal entrance</li> <li>b. pH</li> <li>c. colour and appearance of aspirate</li> <li>d. volume of aspirate</li> <li>e. flushing with air</li> <li>f. repositioning patient</li> <li>g. length of time expected to undertake troubleshooting activities</li> <li>h. oral intake</li> </ul>	Observation & Documentation Or Questioning & Documentation			

**2. Demonstrate the ability to insert a NG tube in accordance with ABMUHB policy and guidelines (continued)**

Performance Criteria	Assessment Method	Level Achieved	Date	Assessor
8. Articulate the process of requesting imaging to assist in determining the position of the NGT a. Who can request b. What is requested c. What documentation should be transferred from the check chart/sticker to the x-ray request	Documentation Questioning			
9. Articulate the expected entries within the documentation within the medical notes (should no formal X-ray report be available)	Observation / Documentation			
10. Demonstrate appropriate care of skin	Observation			
11. Demonstrate correct documentation of procedure and use of Nasogastric Care Bundles (for insertion and ongoing care)	Observation			
12. Demonstrate knowledge of who to contact in the event of inability to confirm tube placement or other problems beyond competency	Observation &/or questioning			
13. Demonstrate ability to maintain patency of NGT feeds and/or when medications are required and where the associated relevant information around enteral tube feed medication can be accessed	Observation &/or questioning			

<b>3. Demonstrate knowledge and skills surrounding wider aspects of nutritional support and the All Wales Nutrition Pathway</b>				
Discuss potential indications / underlying conditions that may indicate artificial enteral feeding is necessary	Questioning			
Identify range of methods that can provide enteral nutritional support	Questioning			
Articulate how and when patients are screened and or assessed for malnutrition and how the those who require nutritional support are identified and supported	Questioning			
Discuss the ethical and legal implications of nutritional support	Questioning			
Describe the different feeding regimens / approaches than can be used and articulate the risks and benefits of such feeding regimens	Questioning			
Describe the process for reporting any adverse incidents	Questioning			

I confirm that I have I am confident and competent in nasogastric tube therapy and am able to safely be involved in the associated assessments and practice associated in NGT insertion and aftercare

Registered Nurse \_\_\_\_\_ Signature \_\_\_\_\_ Status \_\_\_\_\_ Date \_\_\_\_\_

I confirm that I have assessed the above named Registered Nurse and can verify that he/she demonstrates competency in

Assessor \_\_\_\_\_ Signature \_\_\_\_\_ Status \_\_\_\_\_ Date \_\_\_\_\_

**Assessment feedback form**

<b>Date started:</b>		<b>Date assessed:</b>	
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<b>Assessor's feedback</b>			
<b>Add candidate to competency register</b> <input type="checkbox"/>			
Assessor to include details on discussions:			

<b>Has the learner achieved this competency?</b>	<b>Yes</b>		<b>No</b>	
--	------------	--	-----------	--

<b>Learner's comments</b>

<b>Assessor's signature:</b>		<b>Date:</b>	
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<b>Learner's signature:</b>		<b>Date:</b>	
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**Nasogastric  
Feeding Tube Insertion  
Decision Tree  
In Adults**



Ensure appropriate clinical decision making has taken place and is documented on the insertion bundle

Place nasogastric tube as per procedure

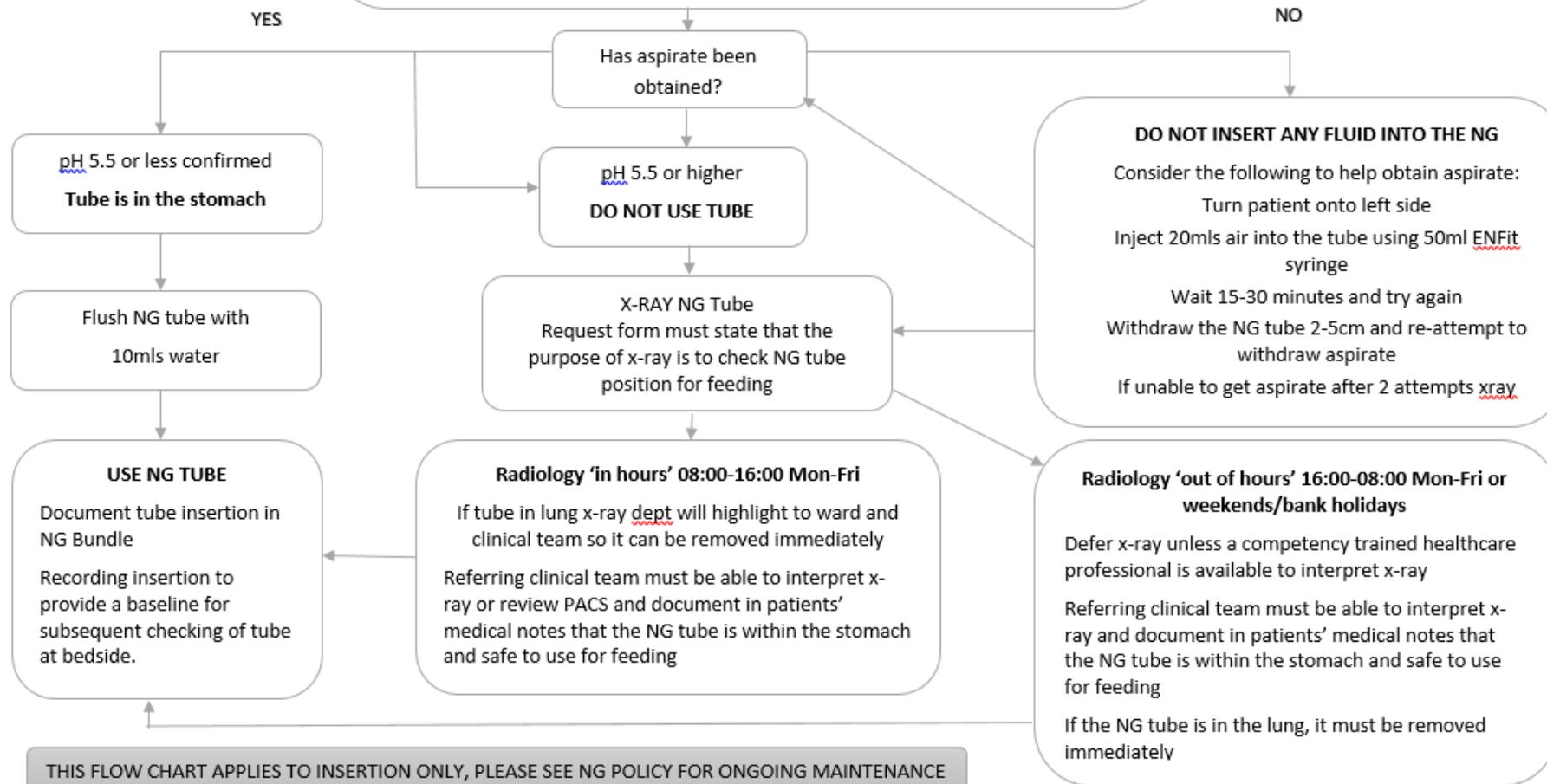
Secure tube to patients face with appropriate fixation, note cm measurement at nostril

Remove guidewire from tube

Aspirate nasogastric tube using 50ml ENFit enteral syringe and 2-9 pH indicator paper

Document all of above on Insertion Care Bundle

**DO NOT FLUSH NG TUBE UNTIL GASTRIC PLACEMENT HAS BEEN CONFIRMED**



## Appendix 6 – NGT X-ray Outcome Label



Competent HCP interpreting x-ray to complete 4 check points below and

Patient Name:  
Hospital No:

Date:  
Ward:

X-ray to establish the position of nasogastric tube for the purpose of feeding, where pH indicator paper has failed to confirm tube tip position

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.

Interpreting HCP:

Signature:



Competent HCP interpreting x-ray to complete 4 check points below and

Patient Name:  
Hospital No:

Date:  
Ward:

X-ray to establish the position of nasogastric tube for the purpose of feeding, where pH indicator paper has failed to confirm tube tip position

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.

Interpreting HCP:

Signature:



Competent HCP interpreting x-ray to complete 4 check points below and

Patient Name:  
Hospital No:

Date:  
Ward:

X-ray to establish the position of nasogastric tube for the purpose of feeding, where pH indicator paper has failed to confirm tube tip position

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.

Interpreting HCP:

Signature:



Competent HCP interpreting x-ray to complete 4 check points below and

Patient Name:  
Hospital No:

Date:  
Ward:

X-ray to establish the position of nasogastric tube for the purpose of feeding, where pH indicator paper has failed to confirm tube tip position

To confirm gastric position of the nasogastric tube, ask:

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- 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.

Interpreting HCP:

Signature:



Competent HCP interpreting x-ray to complete 4 check points below and

Patient Name:  
Hospital No:

Date:  
Ward:

X-ray to establish the position of nasogastric tube for the purpose of feeding, where pH indicator paper has failed to confirm tube tip position

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.

Interpreting HCP:

Signature:



Competent HCP interpreting x-ray to complete 4 check points below and

Patient Name:  
Hospital No:

Date:  
Ward:

X-ray to establish the position of nasogastric tube for the purpose of feeding, where pH indicator paper has failed to confirm tube tip position

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?

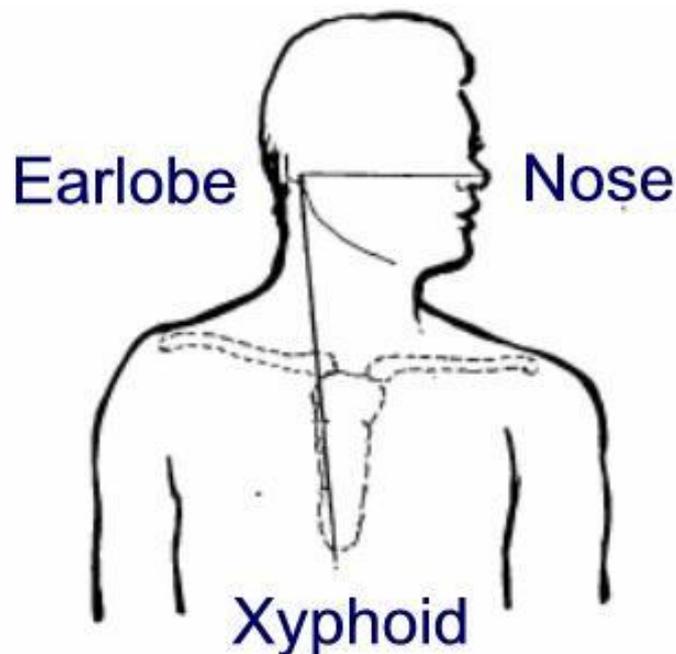
Proceed to feed only if all criteria are met. If in any doubt repeat x-ray or call for senior help.

Interpreting HCP:

Signature:

### Nose Earlobe Xiphisternum Measurement

1. Position the patient sitting upright with their neck straight
2. Don gloves
3. Measure the desired length of NG tube to be inserted:
  - Measured from the bridge of the nose to the ear lobe
  - Then down to 5cm below the xiphisternum



By following the above procedure you will have an estimated insertion length of NGT, note the cm marking on the tube. Insert the NGT following the competency based procedure to the noted measurement at entrance of the nose.

If you cannot obtain a gastric aspirate on first insertion you have around 5cm of tube that could be withdrawn to ensure the distal tip of the tube is sitting within the gastric secretions of the stomach.

## Appendix 8 - Enteral Consumables on Catalogue

Description	Brand Name	Product Code	UOM
<b>NGT with Guidewire, recommended for feeding only (28 days)</b>			
8FR x 85CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	SFT8-85	Each
10FR X 85CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	SFT10-85	Each
8FR X 120CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	SFT8-120	Each
<b>NGT No Guidewire, can be used for feeding (28 days) OR Drainage (7 days)</b>			
8FR X 80CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	DFT8-80	BOX50
10FR X 100CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	DFT10-100	BOX50
12FR X 100CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	DFT12-100	BOX50
14FR X 100CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	DFT14-100	BOX50
16FR X 100CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	DFT16-100	BOX50
18FR X 100CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	DFT18-100	BOX50
20FR X 100CM SINGLE USE ENFIT NGT	ENTRAL via Avanos	DFT20-100	BOX50
<b>Single Use Syringes (Acute hospital use or immunocompromised only)</b>			
1ml ENFit Syringe	GB UK on Cat	FWC406	BOX100
2.5ml ENFit Syringe	GB UK on CAT	FWC407	BOX100
5ml ENFit Syringe	GB UK on CAT	FWC408	BOX100
10ml ENFit Syringe	GB UK on CAT	FWC405	BOX100
20ml ENFit Syringe	GB UK on CAT	FWC410	BOX100
60ml ENFit Syringe	GB UK on CAT	FWC409	BOX60
<b>ENFit Drainage Bags</b>			
BAG DRAINAGE NASOGASTRIC 100ML ENFIT	ENTRAL via Avanos	DBE-100	BOX50
BAG DRAINAGE NASOGASTRIC 250ML ENFIT	ENTRAL via Avanos	DBE-250	BOX50
BAG DRAINAGE NASOGASTRIC 500ML ENFIT	ENTRAL via Avanos	DBE-500	BOX50
<b>Abbott Feeding Sets and Containers</b>			
FreeGo Giving Set (to use with FreeGo Pump)	Abbott on CAT	FSB150	Each
500ml Flexitainer (for water)	Abbott on CAT	FSW060	Each
1000ml Flexitainer (for water)	Abbott on CAT	FSW526	Each
<b>Medicine Bottle Adaptors (for use with low volume 1 &amp; 2.5ml syringes)</b>			
14-16mm ENFit syringe to medicine bottle adaptor	GB UK on CAT	BAISO2	BOX100
17-20mm ENFit syringe to medicine bottle adaptor	GB UK on CAT	BAISO3	BOX100
24-26mm ENFit syringe to medicine bottle adaptor	GB UK on CAT	BAISO4	BOX100
Universal ENFit syringe to medicine bottle adaptor	GB UK on CAT	SBAISO	BOX50
<b>pH Indicator strips 2-9</b>	<b>VWR on CAT</b>	<b>FWM035</b>	<b>BOX100</b>