



## CLINICAL GUIDELINE

# Fine Bore Naso-gastric (NG) Feeding Tubes in Adults, Community HSCP

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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<b>Lead Author:</b>	Claire Stewart
<b>Approval Group:</b>	Primary Care & Community Clinical Governance Forum

### Important Note:

The Intranet version of this document is the only version that is maintained. Any printed copies should therefore be viewed as 'Uncontrolled' and as such, may not necessarily contain the latest updates and amendments.

The NHSGGC Community Health and Social Care Partnerships Enteral Feeding Guidance on fine bore naso-gastric tubes have been produced by the NHSGGC Community Fluid, Food and Nutrition (FFN) Practice Development Team.

This guidance optimises the care of adult patients (over 16 years of age) within NHSGGC Community Health and Social Care Partnerships (HSCP's) including mental health in patient areas receiving artificial nutrition via a fine bore naso-gastric feeding tube. This guidance will impact on all NHSGGC Community Health and Social Care Partnerships trained staff caring for adults with fine bore naso-gastric feeding tubes. This includes community district nurses, community dietitians and trained nurses/ dietitians working in mental health, care homes and hospices. This guidance gives clear instruction and information for safe and effective management of naso-gastric tubes within the NHSGGC Community Health and Social Care partnerships. Improvements in nutrition care should reduce costs and risk associated with sub optimal nutrition.

This guidance has been developed following on from the National Patient Safety Alerts / Compliance (NPSA 2011) and British Association of Parenteral and Enteral Nutrition (BAPEN) Naso-gastric tube insertion Decision Tree (2012).

#### Distribution

Health and Social Care Partnerships Chief Officers  
Senior Nurses within NHSGGC Community Health & Social Care Partnerships  
Mental Health Nursing / Dietetic Leads Senior  
Dietetic colleagues  
Community District Nurse Team Leads  
Community District Nurses Community  
Dietitians  
Trained Health Care Professionals in Care Homes and Hospices NHSGGC  
Community and Mental Health Services Fluid, Food and Nutrition NHSGGC  
webpages

Seek final approval via NHSGGC Clinical Governance Partnership Forum Group

## **Reviewers**

The Fluid, Food and Nutrition Community Practice Development Team would like to thank the following for their contribution in developing this community guidance for trained staff working within NHSGGC Community Health and Social Care Partnerships:

- NHSGGC HSCP Community Enteral Feeding Subgroup
- NHSGGC HSCP Community Home Enteral Feeding Team
- NHSGGC Acute Nutrition Nurses
- NHSGGC (2012) Acute Nutrition Manual (electronic Staffnet version)
- NHSGGC Senior HSCP Community Nursing Leads

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## **Executive Summary**

The Complex Nutritional Care Standards developed by Healthcare Improvement Scotland (2015) define complex nutritional care as “the delivery of nutrition and hydration through tubes and lines, including parenteral and enteral feeding”.

Naso-gastric enteral feeding is a method of delivering nutrients, hydration and medication into the gastrointestinal tract through an artificial flexible tube that can be inserted transnasally into the stomach. It is commonly used for delivery of feed, fluids, medication and drainage of gastric contents. This method of feeding is only necessary/ desirable when a patient’s nutritional needs cannot be met orally for various reasons.

The NHSGGC Community Health and Social Care Partnerships Enteral Feeding Guidance on fine bore naso-gastric feeding tubes has been developed for all registered health care professionals including registered nurses, registered dietitians working within any NHSGGC Community Health and Social Care Partnership area including mental health (with the skills and completed programme of naso-gastric / Enteral Feeding training to care for patients who are fed via a naso-gastric tube) to act as a point of reference and provide guidance around safe and effective clinical practice when working with naso-gastric tubes in all of the NHSGGC Community Health and Social Care Partnership areas. Please note at the end of this document there is a competency framework for NHSGGC Community HSCP registered nurses in the care, management and safe insertion of a fine bore naso-gastric (NG) tube feeding in adults.

The NHSGGC Community Health and Social Care Partnership guidance includes:

- Rationale and procedure for placement of a fine bore naso-gastric feeding tube in adults for enteral feeding within NHSGGC Community Health and Social Care Partnerships.
- Naso-gastric enteral feeding tube decision tree in adults including confirmation of naso-gastric tube placement within NHSGGC Community Health and Social Care Partnerships.
- Troubleshooting for naso-gastric tubes (NG) within NHSGGC Community Health and Social Care Partnerships and guidance surrounding in and out of hours NHSGGC district nursing service in naso-gastric tube replacement.

## **Scope/ Introduction**

This guidance applies to all trained health care professionals working within NHSGGC Community Health and Social Care Partnerships who are required to undertake safe procedure and placement of a fine bore naso-gastric tube in the adult population in the community, thus reducing the risks associated when safely passing a fine bore naso-gastric tube. The procedure relates to the safe insertion and the ongoing management of fine bore naso-gastric tube across all adult (over 16 years of age) patient groups within NHSGGC Community Health and Social Care Partnership areas.

The Healthcare Improvement Scotland (2015) Complex Nutritional Care Standards have been published and specify a minimum set of standards for complex nutritional care in within hospital settings and the community. Standard 2 includes assessment and specifies that each assessment must be person centred and include the relevant clinical information, the nutritional status of the person and this should indicate if a

multidisciplinary assessment was held prior to determine the most appropriate care and treatment for all patients receiving complex nutritional care.

All health care professionals undertaking the safe passing/placement of a fine bore naso-gastric tube should be either registered nurses or registered community extended scope dietitians. At all times care must be taken to ensure the safety of the patient and staff.

## **Rationale**

Before the decision is made to insert a naso-gastric (NG) tube a multidisciplinary risk assessment should be undertaken to identify:

- Is NG feeding appropriate for this patient?
- Is there sufficient knowledge and expertise to test for safe placement of the NG tube

*National Patient Safety Agency (2011), NHSGG&C (2012) Acute Nutrition Manual*

The use of fine bore naso-gastric tubes for enteral nutrition and hydration is common. It is vital that they are passed safely into the stomach and that the position is confirmed on initial placement and prior to subsequent use. Risks have been highlighted where naso-gastric tubes have been misplaced during insertion or moved at a later stage leading to patient harm. Poorly positioned tubes leave vulnerable patients open to the risk of regurgitation and aspiration.

*NPSA (2011) Colagiovanni (1999) cited in NHSGG&C (2012) Acute Nutrition Manual*

Evidence shows that effective patient selection for enteral tube feeding reduces the risk of morbidity and mortality (HIS 2015).

## **Criteria**

Patients living within the NHSGGC Community Health and Social Care Partnership areas (16 years and over) who require assistance with administering their medications, or are experiencing any difficulties with the management of their fine bore naso-gastric tube including safe checking of correct naso-gastric stomach aspirate (pH) or those who may require a new naso-gastric tube to be passed if it is deemed safe to do so.

The Healthcare Improvement Scotland (2015) Complex Nutritional Care Standard 3 refers to enteral tube feeding. "The insertion for enteral tube feeding must be undertaken by staff with the knowledge, skills and experience to carry out the procedure safely following locally agreed protocols" (HIS 2015). It is essential for the trained healthcare professional to have undertaken a period of supervised practice in the insertion of the naso-gastric tube supervised by a recognised practitioner i.e. a qualified healthcare professional who is competent in the insertion of naso-gastric feeding tubes.

## **Professional Accountability Nursing:**

The Code of Professional Standards of Practice and behaviour for nurses and midwives (2015) focuses on prioritising people, preserving the safety of patients and promotes professionalism and trust. In prioritising patients, the Code of Professional Standards of Practice and behaviour for nurse and midwives (2015) expands on the practical fundamentals of care. This includes the essential aspects of caring for a patient, including making sure that a patient has adequate access to nutrition and hydration. As a registered practitioner you should be open and honest and have a duty of candour focusing on the importance of encouraging a learning culture by reporting adverse incidents or near misses that have led to harm.

## **Safety, practicing effectively and training:**

In preserving safety, the code of professional standards of practice and behaviour for nurses and midwives (2015) deems nurses should complete the necessary training before carrying out a new role maintaining accountability and only delegating tasks and duties that are within the other person's scope of competence. As a registered practitioner you are accountable for your own actions and omissions and must always be able to justify your decision making. As a registered nurse you are responsible for keeping your own knowledge and skills up to date, taking part in regular continued professional development opportunities that improve your own individual professional performance and trust in patients. The nursing and midwifery council (2015) require all registered nurses to have reflected upon their professional practice maintaining their own accountability and safety in preparation for their NMC revalidation/ renewal.

Insertion of a naso-gastric tube may be carried out by a healthcare professional that has undergone a period of training under supervision of another registered and competent healthcare professional. The National Patient Safety Alert (2011) 2011/PSA002 backs this up in that any health care professionals involved with naso-gastric tubes should be assessed as competent through sufficient theoretical and practical training. Revalidation within the nursing and midwifery council (2015) includes 35 hours of continuing professional development relevant to your scope of practice and 20 hours of continued professional development through participatory learning sessions.

The number of supervised learning practices required to achieve competence in safe passing of a naso-gastric tube will be determined by the staff member and supervisor, taking into account the staff member's own learning needs (minimum 3 supervised sessions with the supervisor in safe passing of the naso-gastric tube) It is the responsibility of each registered qualified practitioner to ensure competency in the safe passing of a fine bore naso-gastric tubes. Practice related feedback and reflection assist with learning and can contribute towards your nursing and midwifery portfolio or record of achievement (NMC 2015). The care, management and safe insertion of a fine bore naso-gastric (NG) tube feeding in adults is attained within NHS GGC Community Health and Social Care Partnerships (HSCP's) Naso-gastric competency framework at the end of this document.

Healthcare Improvement Scotland (2015) Complex Nutritional Care Standard 6 focuses on staff education and training – all staff have access to complex nutritional care training and education relevant to their role to carry it out safely and effectively.

## **Roles and Responsibility:**

Responsibility for the procedure lies with the registered health care professional undertaking the intervention. The health care professional must ensure that they are competent in understanding and assessing the safe passing or repassing of the fine bore naso-gastric tube only once the health care professional has undergone a period of supervised training from the other competent supervisory health care professional.

Recording of Information and Documentation:

Healthcare Improvement Scotland (HIS 2015) Complex Nutritional Care Standards, Standard 2 Assessment states "All complex nutritional care assessments should be recorded in a documented nutritional care plan, documented in the patient record, used to formulate a plan of nutritional care and be regularly reviewed".

Each nutritional assessment must cover person centred information for example, consent to treatment, clinical information such as insertion date and time, tube make and size, NEX measurements, cm marking of tube at nostril if different from NEX measurement, which nostril is used (left or right), aspirate obtained yes or no, pH value of aspirate obtained and is an x ray required and which care setting the patient is in at home or in another social environment.

Record any naso-gastric intervention or tube information within the current electronic system, current patient record and or nutritional care plan keeping clear and accurate notes relevant to your current practice (NMC 2015).

A documented nutritional care plan includes:

- a) How to access information, advice and support (including out of hours)
- b) Names and contacts of relevant health and social care professionals
- c) Details of the current feeding regimen

## **HIS (2015) Complex Nutritional Care Standard 2 Assessment states that:**

Each competent trained healthcare professional has knowledge of:

- Naso-gastric fine bore feeding tube types
- The use of the pH indicator paper to measure gastric aspirate to monitor gastric contents in the stomach (refer to procedure and guidance notes)
- Disposal of equipment safely as per local policy
- Knowledge of medications and safe passing of medications via naso-gastric tubes as per NHSGGC guidance

**Procedure for Placement of a Fine Bore Naso-gastric Tube in Adults for Enteral Feeding within NHSGGC Community Health & Social Care Partnerships:**

This procedure is not deemed an aerosol generated procedure, however risk access appropriately.

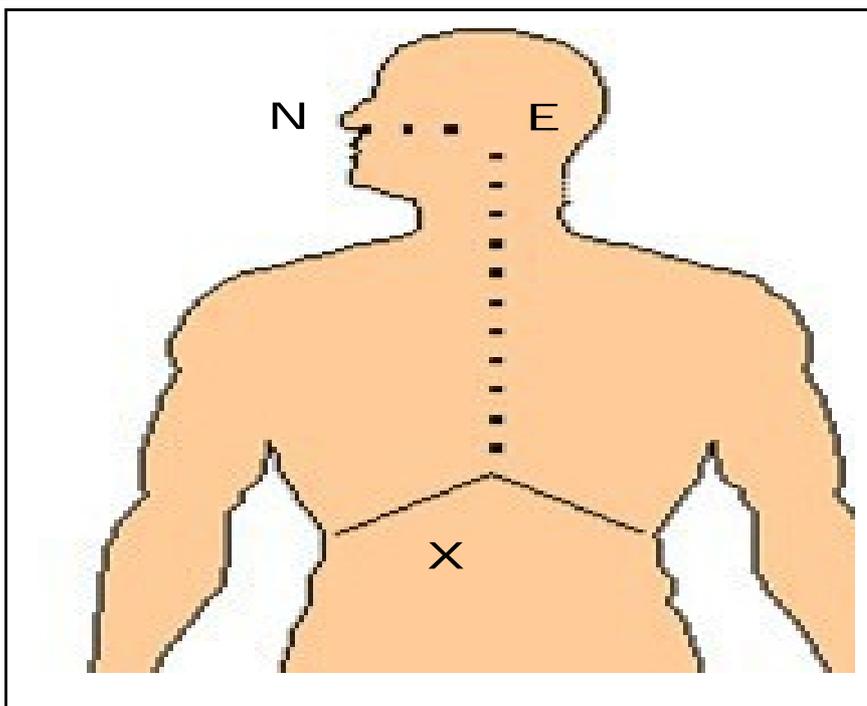
**Equipment Required**

<ul style="list-style-type: none"> <li>• Fine bore naso-gastric feeding tube (Naso-gastric tubes for feeding should be NPSA compliant i.e. fully radio-opaque with visible length markers (NPSA2011))</li> </ul>
<ul style="list-style-type: none"> <li>• CE marked pH indicator strips (to test human gastric aspirate)</li> </ul>
<ul style="list-style-type: none"> <li>• Non-sterile gloves</li> </ul>
<ul style="list-style-type: none"> <li>• Disposable apron</li> </ul>
<ul style="list-style-type: none"> <li>• Purple Enteral 60ml syringe</li> </ul>
<ul style="list-style-type: none"> <li>• Dressing pack</li> </ul>
<ul style="list-style-type: none"> <li>• Tissues</li> </ul>
<ul style="list-style-type: none"> <li>• Drinking fluid and straw (unless contra-indicated)</li> </ul>
<ul style="list-style-type: none"> <li>• Appropriate securing device / fixative tape</li> </ul>
<ul style="list-style-type: none"> <li>• Water for flushing once naso-gastric position is confirmed</li> </ul>

**PROCEDURE:**

Social hand washing and apply hand rub as per local guidelines
1. Assemble equipment
2. Explain the procedure to the patient and obtain verbal consent to proceed
3. Ascertain if patient has known nasal obstruction, e.g. previous fracture, polyps, previous surgery. If patient is palliative or advancing head and neck cancer contact Enteral Feeding Nurses prior to insertion of tube.
4. Check nostrils are clean prior to commencement of procedure. Ask patient if they have preferred nostril or they wish to blow their nose. Discuss with patient nonverbal communication to indicate if they wish to halt procedure.
5. Where possible, assist patient to sit upright with head well supported and chin tilted downwards. The head should not be tilted back as this aids the opening of the airways.

6. Apply hand rub, let dry, then put on an apron and non-sterile gloves.
7. If patient nil by mouth carry out oral hygiene prior to commencement of procedure.
8. Open dressing pack, place the naso-gastric tube and syringe on dressing pack. Pour tap water into galipot and have pH strips accessible. Check naso-gastric tube to ensure the guidewire moves freely within the tube and close all ports, as per manufacturers guidelines
9. If patient nil by mouth carry out oral hygiene prior to commencement of procedure.
10. Measure the length of tube needed to be inserted. Place the tip of the tube on Nose, then to Earlobe and Xiphisternum. This measurement is referred to as the NEX measurement (Nose-Ear-Xiphisternum). The NEX measurement is guidance, the tube may need to be advanced 5-10cm past this measurement.

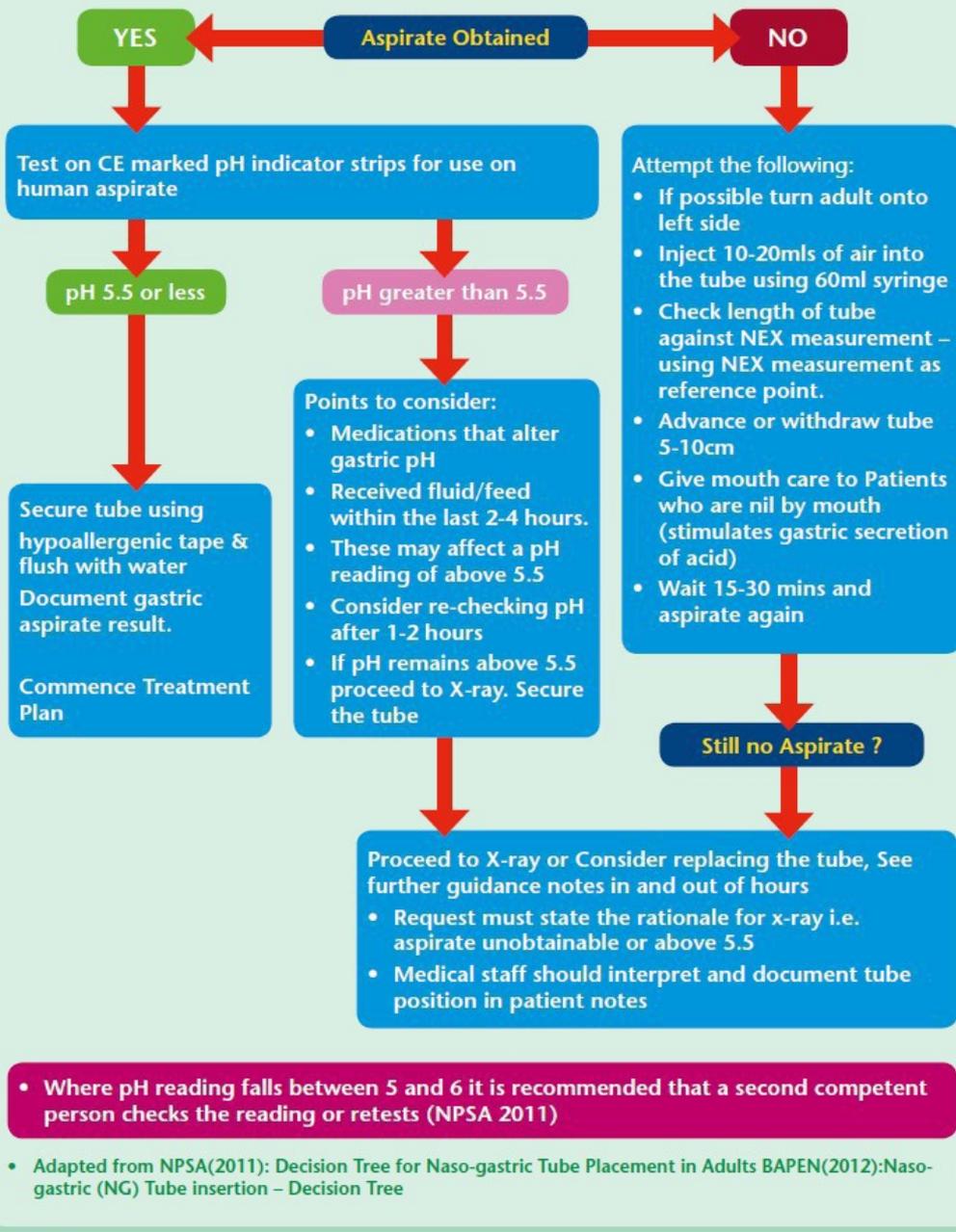


11. Activate lubricant by dipping distal end / tip of tube into tap water. Do not use gel lubricants, NPSA (2011)
NOTE: Throughout the passage of the naso-gastric tube, the patient should be observed for signs of distress, coughing, cyanosis, gasping. Any of these may indicate malposition of tube and the tube should be withdrawn. If any resistance is felt throughout passage of tube, the procedure should be halted.
12. Insert the tip of the tube into the preferred nostril, advance along the floor of the nose to naso-pharynx.
13. As the tube passes down into the naso-pharynx then oropharynx, ask the patient to keep chin/ head slightly tilted forward, at this stage ask them to close their mouth and move their tongue around. If patient managing oral fluids offer the patient a sip of water.
14. Advance the tube until the pre noted NEX measurement. The tube may need to be advanced 5-10cm further.
15. Check the patient's mouth and ask patient to open their mouth to ensure tube is not coiled in mouth. If it is, then withdraw until coil is not visible. Re advance tube until the pre-noted length (NEX measurement) is at the nostril.
16. Remove guidewire. Do not reinsert guide wire when the nasogastric tube is in the patient (NPSA 2011)
17. Secure the naso-gastric tube using hypoallergenic tape until position of the tube is confirmed to be in the stomach.
18. DO NOT FLUSH TUBE until gastric placement is CONFIRMED.
19. Use a 60ml syringe to obtain aspirate and use pH strips to check the pH is 5.5 or below. If out with this range please follow the decision tree below.
20. After confirmation, flush tube with 10mls of water. Close connections on tube as per manufacturer's guidelines.
21. Dispose of waste according to local policy
22. Social hand wash / gel
23. Document fully in the Nutritional care plan/ naso-gastric Feeding Tube Care Plan/ Community Nursing Index System or electronic patient record. Document the following: <ul style="list-style-type: none"> <li>• Patient agreement / consent to treatment</li> <li>• Insertion date and time</li> <li>• Tube make and size</li> <li>• NEX Measurements</li> <li>• Cm marking of tube at nostril (if different from NEX measurements)</li> <li>• Which nostril has been used (left or right)</li> <li>• Aspirate obtained Yes/No</li> <li>• pH value of aspirate obtained</li> <li>• If X-ray is required</li> </ul>

**Health and Social Care Community Partnerships Naso-gastric Enteral Feeding Tube Decision Tree in Adults. Confirmation of Naso-gastric Tube Placement**



Please use the following flow chart in NHSGG&C HSCP (Community Partnerships areas with guidance notes).



MIS 280185

## **Methods of Confirmation of fine bore naso-gastric tubes:**

Following the National Patient Safety Alert 2011/PSA002 - "Reducing the Harm Caused by Misplaced Naso-gastric Feeding Tubes in Adults, Children and Infants" the preferred frontline method for checking tip position of fine bore naso-gastric tubes is aspiration of gastric content, checked to be pH less than or equal to 5.5 with pH paper. X ray remains the second line test

### **1) Aspiration of Gastric Contents:**

pH testing is used as the first line method of confirming gastric placement. This is achieved by obtaining aspirate from the naso-gastric tube using a 60ml enteral syringe and checking the pH of the aspirate on pH indicator paper. A pH less than or equal to 5.5 is a reliable confirmation that the tube is not in the lungs and confirms gastric placement.

A pH of greater than 5.5 requires further points to consider within NHSGGC Community HSCP Areas:

If no aspirate obtained refer to NHSGGC Community Health and Social care Partnerships Community fine bore naso-gastric decision tree in adult's confirmation of tube placement first (page 13)

Alternatively, you can further refer to the troubleshooting guide for naso-gastric tubes placement in the NHSGGC Community Health and Social Care Partnerships guidance (pages 17 & 18).

### **2) X-ray**

Is only used as a second line test when no aspirate can be obtained or pH indicator strips have failed to confirm the correct position of the tube.

The NPSA (2016) patient safety alert Naso-gastric tube misplacement advice strengthens this as "Checking tube placement before use via pH testing of aspirate and, when necessary, x ray imaging, is essential in preventing harm"

The x ray request form should clearly be signed by a registered medical practitioner / GP stating the purpose of the x ray is to confirm the position of the naso-gastric tube for enteral feeding and pH documented on the request form. The x ray will be interpreted by the acute hospital medical staff and the radiologist.

**Confirmation of the Naso-gastric tube position in adults (over 16 years of age) in NHSGGC Community Health and Social Care Partnerships must be:**

- After initial insertion and any re-insertion
- Before administering each feed and before giving any medication or water.
- Following episodes of vomiting, retching or coughing spasms
- Where there is a suggestion of tube displacement (for example loose tape or external portion of naso-gastric tube appears longer and is not identical to the recorded length on insertion/ changed in length
- In the presence of any new or unexplained respiratory symptoms or reduction in oxygen saturation.

*Adapted from NHSGG&C (2012) Acute Nutrition Manual*

**NHSGGC Community HSCP Areas: Troubleshooting with Naso-gastric tubes  
Guidance**

<b>Trouble shooting</b>	
<b>If no aspirate is obtained</b>	<b>Rationale</b>
Always use a large 60ml enteral syringe	Small syringes have too much draw and produce too much pressure thus can split the tube (BPNG 2003).
Check the tube is inserted the correct distance.	The tube may be sitting in the oesophagus which can increase the risk of aspiration. OR Excessive amounts of tube in the stomach can coil.
If possible, turn the adult patient onto their left side.	The tip of the tube may not be in the 'pool' of gastric juices and repositioning may move the tip of the tube.
Inject 10-20ml air into the tube using a 60ml syringe. Check length of tube against NEX measurement - using NEX measurement as reference point. Advance or withdraw tube 5-10cm.	The end of the tube may be stuck to the stomach wall and this may release it.
Give mouth care to patients who are NBM. Give a small drink, if swallowing is intact and oral intake is permitted.	To stimulate gastric acid secretion
Wait 15-30 minutes and try again to aspirate	This may allow time for gastric acid build up
Still no aspirate? Discuss with the enteral Feeding Nurses and if out of hours contact NHS 24 GP, as discussion with A&E will be required.	
If a pH > 5.5 obtained: Refer to NHSGGC Community Enteral Feeding fine bore naso-gastric tube decision tree in Adults page 13 and the further points below:	

If a pH 5-6 has been obtained it is recommended that a second competent person checks the reading or retests (NPSA 2011).	
Check if the tube appears to have moved by visual check of tube distance marker.	Tube may have been dislodged and the tip may now be in the oesophagus or lung. Visual checks will not be sufficient to support or confirm this but may add to the clinical picture.
Consider recent fluid/feed tube activity which may neutralise gastric acidity. If person has just had a feed or is on continuous feeds the milk in the stomach can increase the pH of stomach thus may become alkaline. Enteral feeds act to neutralise gastric acid content and if aspirate is taken within an hour of stopping feed it may provide a higher pH than 5.5. If necessary and clinical acceptable, withhold intake and re-check in 1 - 2 hours. If pH remains above 5.5 proceed to X-ray. Secure tube.	Tube feeds usually have a neutral pH which may give a false negative result.

<p>Check medicines before feeding. Some medicines raise the gastric pH, the pH may not fall below 5.5 even when the naso-gastric tube is correctly placed, for example</p> <ul style="list-style-type: none"> <li>• Proton Pump Inhibitors – Omeprazole, Lanzoprazole</li> <li>• Antacids – Magnesium hydroxide, alucaps, magnesium carbonate</li> <li>• Alginates – Gaviscon, Rennie</li> <li>• H2 Antagonists – Cimitidine, Ranitidine</li> </ul>	<p>Discuss with medical staff/ GP/ Community Pharmacist</p> <p>See <b>Appendix 2 p24 Common Drug / Feed Interactions (NHSGGC Acute Nutrition Manual)</b></p>
<p>Consider a <b>chest x ray if pH remains above 5.5 within normal working hours Monday to Friday 9 until 5pm. See guidance below if x ray required in an out of hours (OOH) period or overnight</b></p>	<p>NB The x ray can only confirm the position of the naso-gastric tube at the time of the x ray</p>

Please **follow the same guidance** on naso-gastric tubes for NHSGGC Community Health and Social Care Partnerships within the **NHSGGC (2012) Acute Nutrition Manual** on the following:

- Nursing Management of Fine Bore Naso-gastric Tube (Appendix 1)
- Common Drug – feed interactions (Appendix 2)
- Removing Fine Bore Naso-gastric tubes (Appendix 3)

Guidance Notes NHSGGC Community HSCP's District Nursing Service:  
**(Out of Hours District Nursing Naso-gastric Tube Replacement)**

**Within all NHSGGC Community Health and Social care Partnerships areas the guidance below applies:**

In 2011 the National Patient Safety agency stated that,

**“The placement of naso-gastric tubes should not occur at times when there is insufficient support available to accurately confirm placement (insufficient support may not be available at night or in an Out of Hours period (NPSA 2011, PSA 002). They identify the procedure as HIGH RISK.”**

As a response to the National Patient Safety Alert NPSA/2011/ PSA002, NHS Greater Glasgow and Clyde does not recommend the insertion of naso-gastric tubes as stated below:

**“The insertion of naso-gastric tubes for feeding out with standard working hours of 9am – 5pm, and the radiological assessment of position of these tubes out of hours should be by exception only.”**

Healthcare Improvement Scotland (2015) Complex Nutritional Care Standards, Standard 3 Enteral Tube Feeding supports this by recommending a locally agreed enteral tube feeding protocol is in place which takes into account alerts and guidance from the relevant national patient safety agency and is reviewed at least annually.

**For health care professionals within NHSGGC Community Health and Social Care Partnership areas including Out of Hours periods (OOH):**

Firstly, consult the documented plan of nutritional care, Healthcare Improvement Scotland (2015) Complex Nutritional Care Standard, Standard 2 – Assessment:

Consult the documented plan of nutritional care:

- a) Including how to access information, advice and support (including out of hours period)
- b) Include relevant names and contacts of relevant health and social care professionals
- c) Details of the current feeding regimen

After consulting the current nutritional care plan, if the patient is unable to meet their nutritional requirements and or requires essential medications e.g. parkinson's, epilepsy, diabetic or acute pain medication, consider the following points:

- if a patient is receiving a continuous naso-gastric feed overnight or bolus feed and is unable to maintain their own adequate nutritional intake from food, oral nutritional supplements or who cannot be deemed to eat, or drink safely thus remains (Nil by mouth) e.g. a diabetic patient. If the patient requires essential medications for their condition through their naso-gastric tube this **will be considered an emergency in an Out of Hours period.**
- Contact **NHS24 GP Professional line: telephone number - 0141 616 6222** or further verbal advice only and ambulance if necessary. **Otherwise the reinsertion of the fine bore naso-gastric tube or confirmation of position of naso-gastric tube should wait until daytime working hours (9am until 5pm).**
- The next working day refer client back to patient's own GP / community District Nurse for future nutritional care planning, if possible, attempt to insert a new fine bore naso-gastric tube only if competent to do so or request an x ray as per NHSGGC Community HSCP community procedure for placement and community decision tree guidance (Page 14). If you require any further assistance seek further advice from the Community NHSGGC HSCP Home Enteral Feeding team based at Pollock Health Centre, Glasgow telephone number 0141 531 6858.

## REFERENCES:

- British Association of Parenteral and Enteral Nutrition (BAPEN, National Nurses Nutrition Group NNG) (2012) Naso Gastric (NG) Tube Insertion – Decision Tree  
{Online} July 2019. [BAPEN Principles of Good Nutritional Practice - Decision Trees](#)  
{Accessed: 12th of July 2019}
- British Pharmaceutical Nutrition Group BPNG (2003) Administering drugs via enteral feeding tubes BAPEN
- Colagiovanni, L (1999) Taking the Tube Nursing Times Supplement, 95 (21) 63-66.
- Greater Glasgow & Clyde (2012) Short life working group to implement recommendations from NPSA 2011/Psa002 – Reducing the harm caused by misplaced naso gastric feeding tubes in adults, children and infants.
- Healthcare Improvement Scotland (2015) Complex Nutritional Care Standards Available from [COMPLEXNUTRITION STANF DEC2015.pdf](#)  
{Accessed: 13<sup>th</sup> January 2023}
- National Health Service Greater Glasgow & Clyde (2012) Acute Nutrition Resource Manual Available from [NHSGGC Nutrition Resource Manual \(scot.nhs.uk\)](#)  
{Accessed: 13<sup>th</sup> January 2023}
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- National Patient Safety Agency Rapid Response Report (2012): Harm from flushing of nasogastric tubes before confirmation of placement Available from [120322\\_RRR\\_harmfromflushing\\_FINAL.pdf](#)  
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{Accessed: 13<sup>th</sup> January 2023}
- Nursing and Midwifery Council (2015) The Code: Professional standards of practice and behaviour for Nurses and Midwives Available from <https://www.nmc.org.uk/standards/code/>  
{Accessed: 13<sup>th</sup> January 2023}
- The NEWT Guidelines (2017) for administration of medication to patients with enteral feeding tubes or swallowing difficulties as cited in the NHSGGC Acute Nutritional Resource Manual Section 5 Enteral Nutrition Part 3

7.2 [NHSGGC Nutrition Resource Manual: Section 5 Part 3 \(scot.nhs.uk\)](https://www.scot.nhs.uk)  
{Accessed: 13<sup>th</sup> January 2023}

## Appendix 1: Nursing Management of Fine Bore Naso-gastric Tubes.

**Aim: To ensure fine bore tube remains patent and in position safely, causing no distress to the patient.**

Nursing Procedure	Rationale	Method
Nasal hygiene	To allow nostrils to remain unblocked.  To prevent pressure sore	Gently clean area. Encourage patient to blow nose if necessary. Change position of tube exit site ensuring tape not pulling tube too tightly
Oral Hygiene	Patient often mouth breathes with naso-gastric tube in situ, mouth and lips can quickly become dry. If patient on nil by mouth then saliva not produced as regularly.	Regular oral hygiene with mouth washes. Artificial saliva spray may be indicated. Water based lubricant to lips to prevent crusting. Encourage patient to brush teeth and gums regularly.
Facial Cleansing	Area around tube often neglected for fear of disturbing tube. Excess oils can be secreted making it difficult to secure tape.	Removal of tape and normal face washing, avoiding moisturiser where tape to be applied. Shaving as normal for men.
Changing tape	Tape can lose its adherence qualities. Skin condition below tape should be checked.	Carefully remove all old tape before applying new, changing location of tape where possible.
Care of Nasal Bridle	To ensure bridle remains in place without causing irritation or sores to the columella.	Daily recording of care on nutritional care plan.
Flushing for Maintenance	To ensure that tube remains patent.	Tube should be flushed before and after any use or disconnection.
Checking position of tube	To ensure tip of tube remains in Stomach	Follow appropriate decision tree guidance
Administration of Medication	Enteral feeding tubes are becoming increasingly common as a route for drug administration. Safe administration to ensure correct dosage and route utilised is imperative.	A 60ml Oral/enteral syringe should be used for enteral administration of medication. A smaller syringe may produce too much pressure and split the tube. BPNG (2003)

*Acute Nutrition Manual (2012)*

## Appendix 2: Common Drug / Feed Interactions:

When administering drugs via feeding tubes, interactions with feeds need to be considered and advice obtained from a pharmacist. Some drugs require to be taken on an empty stomach and the absorption of others is reduced by enteral feeds or binding to tubing. This can result in altered clinical response or sub-therapeutic drug levels and closer monitoring may be required. A break in feeding may be required to ensure adequate absorption. Using once daily administration wherever possible will minimise the risk of poor absorption and reduce the frequency of stopping enteral feeds.

The following table lists some common drug-feed interactions. This list is not exhaustive. For the most up to date guidance please discuss with your local community pharmacist.

Drug	Interaction	Guidance
Antacids	Antacids containing Magnesium, calcium or aluminium interact with feed, causing tube blockage	Consider alternative antacid
Carbamazepine	Binding on tubing and can interact with feed	Dilute with equal volumes of sterile water. Monitor carbamazepine levels
Ciprofloxacin	Interacts with feed	Stop feed 1 hour before and after administration consider alternative route or antibiotic
Digoxin	Absorption may be affected by fibre containing feeds	Discuss with local pharmacy and dietetics and monitor levels
Flucloxacillin Penicillin V	Should be taken on an empty stomach	Stop feed 1 hour before and after administration. Consider alternative route or antibiotic
Phenytoin	Binding on tubing and interacts with feed	Stop feed 2 hours before and after phenytoin administration. Monitor phenytoin levels. Consider IV short term. Note 100mgs phenytoin tablet/ capsule =90mgs phenytoin suspension
Wafarin	May interact with feed (depends on Vitamin K content)	Stop 1 hour before and after wafarin administration. Monitor INR. Consider short term substitution for low Molecular Heparin (LMWH)
Sucralfate	Forms an insoluble complex that can block tubes	Stop feed for 1 hour before and after sucralfate administration. Caution in seriously ill patients due to risk of bezoar formation

*NEWT Guidelines and White and Bradnam (2015) Also in Acute Nutrition Resource Manual (2012)*

### **Appendix 3: Removing fine bore naso-gastric tubes.**

When removing a fine bore naso-gastric feeding tube the following steps should be taken:

- Social hand wash
- Explain the procedure to the patient and obtain consent prior to the procedure
- Remove any tape or securing device
- The tube should be pinched to prevent flow of tube contents into The oesophagus on removal
  - Ask patient to take deep breath, relax
  - Remove the tube by taking out
  - Dispose of tube and any equipment according to NHSGGC policy
  - Document

*Acute Nutrition Manual (2012)*

NHSGGC Community Health & Social Care Partnerships (HSCP's)

## **Competency Framework – The Care, Management and Safe Insertion of Fine Bore Naso-Gastric Feeding Tubes (NG) in Adults within NHSGGC Community Health & Social Care Partnerships (HSCP's) for Registered Nurses**

### **Purpose**

This document will provide a record of the Registered Nurse's clinical performance indicating when competency in the care, management and safe insertion of a fine bore naso-gastric (NG) tube feeding in adults is attained within NHSGGC Community Health and Social Care Partnerships (HSCP's). This is in conjunction with the NHSGGC HSCP Community Enteral feeding guidance document on passing of fine bore NG feeding tubes in adults within NHSGGC Community Health & Social Care Partnerships ([accessed here](#)). **This framework is for NHSGGC trained registered nurses only.**

### **Definition of Competence**

Competence is a simultaneous integration of the knowledge, judgement, skills, experience and attitudes that are required for performance in a designated role and setting (Roach, 1992).

### **Completion**

The registered nurse (named below) is responsible for the timely completion of this document. Once completed the registered nurse will be deemed competent in the care, management and safe insertion of adults receiving fine bore naso-gastric tube (NG) feeding within NHSGGC HSCP's, a record of achievement in all relevant competencies must be completed and signed by both the registered nurse and the trained assessor. It is recommended that this competency framework is used in conjunction with the NHSGGC HSCP Community Enteral feeding guidance document on passing of fine bore NG feeding tubes within NHSGGC Community Health & Social Care Partnerships ([accessed here](#))

## Assessment

During the assessment period, competency will be determined by: discussion, questioning and direct observation of practice by a designated trainer / assessor. An assessor should be someone who is currently clinically competent in the safe insertion and management of fine bore naso-gastric feeding tubes

	Name	Designation	Base
<b>Registered Nurse Details:</b>			
<b>Designated Trainer / Assessor Details</b>			

### Competency Level Guidelines

In order to meet your learning needs and enable you to develop your clinical skills in this area, the following rating scale will be used when assessing your competence.

Rating	Level of Competence
1	Has attended theoretical session. Has only observed practice. Cannot perform this procedure unsupervised
2	Can link theory to practice. Has assisted in this area. Still requires close guidance
3	Can link theory to practice. Required direct supervision in this area and still requires prompting and guidance
4	Links theory to practice. Safely undertakes this procedure and delivers care to the patient throughout the procedure as per guidelines, with no prompting and guidance. Can perform this procedure without supervision and / or assistance. All steps are performed in order and correctly
5	Links theory to practice and is able to use initiative in response to adverse effects or technical problems during and after procedure,

can demonstrate and explain this area of practice to others.

Adapted from Steinaker and Bell (1979): *The Experiential Taxonomy: A new approach to teaching and learning*, London Academic Press.

For registered nurses, the time to achieve competence will be dependent upon your opportunities to practice. If this is limited within your own clinical area you should liaise with your line manager and your designated trained assessor to access further opportunities to practice.

To achieve and demonstrate your competence in the care, management and safe insertion of an adult receiving a fine bore naso- gastric feeding tube you will have to meet with your assessor regularly to discuss and practice the procedure. Assessors must be registered trained nurses /qualified practitioners who are familiar with the safe care and insertion of fine bore naso-gastric feeding tubes within NHSGGC HSCP's. The number of supervised learning practices required to achieve competence in the safe passing of a fine bore NG feeding tube will be determined by the Registered Nurse and the assessor, taking into account the staff member's own learning needs (minimum 3 supervised sessions with the assessor in the safe passing of the fine bore naso-gastric tubes). It is the responsibility of each registered nurse to ensure competency in the safe passing of the fine bore naso-gastric feeding tubes within NHSGGC HSCP's. Practice related feedback and reflection assist with learning and can contribute towards your nursing and midwifery portfolio or record of achievement (NMC 2015).

By the end of the assessment period, the Registered Nurse is expected to have achieved competency level 5 in order to be deemed competent. The most important aspect of this assessment is the patient's safety - ensuring this is always maintained .

Once your competence has been confirmed by your assessor you should retain the completed booklet in their Personal Development File. Thereafter it is your responsibility to review your practice on an annual basis and seek further training if required.

The aim of the assessment process will be to ensure the **understanding of the rationale** for the use of **fine bore naso-gastric feeding tubes within NHSGGC Community Health & Social Care Partnerships:**

- To be able to demonstrate an understanding of the potential risks and contraindications associated with the use of fine bore naso-gastric feeding tubes and how to minimise and respond to these within all areas of NHSGGC Community Health and Social Care Partnerships (HSCP's)
- To be able to demonstrate competency in the insertion and subsequent care of naso- gastric feeding tubes within NHSGGC Community HSCP promoting safe, best and effective practice at all times.

When undertaking instruction and assessment and before signing the certificate of competence assessors should use the following competencies to satisfy themselves that the relevant Registered Nurse can:

- Demonstrate the knowledge of the Healthcare Improvement Scotland (2014) Complex Food, Fluid and Nutritional Care Standards and NHSGGC Community HSCP policy for safe insertion and care of a fine bore NG feeding tube in adults
- Demonstrate the ability to carry out the procedure competently
- Identifies problems and deals with them appropriately
- Demonstrated correct documentation of the procedure in line with NMC (2015) Code of Professional Standards and Behaviour for nurses and midwives

**Summary Table to Record Levels Achieved in Competencies by Registered Nurse at Assessment Episodes**

The Registered Nurse should demonstrate completion of online training on the Flocare Infinity Enteral feeding pump and provide copy of certificate:



Nutricia Flocare -  
Flocare Infinity.mht

Online training on the Flocare Infinity Enteral feeding pump complete?	Date online Training complete:	Copy of Certificate Provided?
Yes / No		Yes / No

**Competency Statements 1-19** – The Registered Nurse will be able to insert a fine bore NG feeding tube following the NHSGGC Community Health and Social Partnerships (HSCP) policy for the care, management and safe insertion of fine bore NG feeding tubes and remove the NG tube effectively

<b>The Care, management and safe insertion of Naso-gastric feeding tube within NHSGGC Community HSCP's</b>		<b>Episode 1</b>	<b>Episode 2</b>	<b>Episode 3</b>
		Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale
<b>The Registered Nurse will be able to:</b>				
1	Demonstrate knowledge of the NHSGGC Community (HSCP) policy for the care, management and safe insertion of a fine bore naso- gastric (NG) feeding tubes in adults within a Community HSCP setting ( <a href="#">accessed here</a> )			
2	Can effectively discuss the procedure with patients/ carer and is aware of the NHSGGC Consent Policy whilst gaining and documenting consent including Adults with Incapacity (Scotland ) Act 2000 (AWI)/ Power of Attorney (POA)			
3	Demonstrates knowledge and understands the rationale and clinical indications for the care, management and safe insertion / use of a fine bore NG feeding tube in adults within in			

<b>The Care, management and safe insertion of Nasogastric feeding tube within NHSGGC Community HSCP's</b>		<b>Episode 1</b>	<b>Episode 2</b>	<b>Episode 3</b>
		Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale
	NHSGGC Community HSCP's			
4	Outlines complications and any contraindications for the care, management and safe insertion / use of a fine bore NG feeding tube in adults within NHSGCC Community HSCP's			
5	Lists, identifies and prepares all equipment required for the care, management and safe insertion of the fine bore NG feeding tube for adults within NHSGGC Community HSCP's			
6	Demonstrates the five steps for good hand hygiene			
7	Demonstrates how to correctly position the patient for the procedure			
8	Demonstrates how to correctly measure the Nose/ E Ear/ X Xiphisternum (NEX) Process			
9	Demonstrates the safe insertion of how to insert a			

<b>The Care, management and safe insertion of Nasogastric feeding tube within NHSGGC Community HSCP's</b>		<b>Episode 1</b>	<b>Episode 2</b>	<b>Episode 3</b>
		Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale
	NG feeding tube correctly in adults following NHSGGC Community HSCP procedure for the safe insertion of fine bore NG feeding tubes within Community HSCP's			
10	Demonstrates the appropriate skills in assessing the correct position of the fine bore NG tube at placement using pH indicator strips to test human gastric aspirate within Community HSCP's			
11	Can describe the safe and appropriate steps to take if unable to obtain gastric aspirate or pH value is greater than 5.5			
12	Can describe the appropriate steps to take if the pH readings fall between pH ranges 5 to 6.			
13	Can understand the reasons why and when a chest X ray is needed to confirm the position of NG feeding tube in adults			
14	Demonstrates how to safely secure a fine bore NG feeding tube and is able to care for the NG			

<b>The Care, management and safe insertion of Nasogastric feeding tube within NHSGGC Community HSCP's</b>		<b>Episode 1</b>	<b>Episode 2</b>	<b>Episode 3</b>
		Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale
	feeding tube including any nasal or oral hygiene required/ changing the tape to secure tube if required			
15	Demonstrate safe removal and disposal of guidewire from an NG feeding tube as per NHSGGC HSCP Procedure for the safe insertion and care of NG feeding tubes within Community HSCP's			
16	Follow NHSGGC policy for the safe disposal of waste			
17	Demonstrates an understanding of medications prescribed for the administration via the fine bore NG feeding tube in adults and the importance of administering flushes pre/post feeding and administration of medications			
18	Can demonstrate all information is documented and written legibly in patients notes/ or recorded electronically on the NHSGGC Community Nursing Information System (CNIS) and as per NHSGGC Community HSCP's Policy for the care, management and safe insertion of fine bore NG feeding tubes - meeting the requirements of both the NHSGGC and the NMC record keeping guidelines			

<b>The Care, management and safe insertion of Naso-gastric feeding tube within NHSGGC Community HSCP's</b>		<b>Episode 1</b>	<b>Episode 2</b>	<b>Episode 3</b>
		Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale	Registered Nurse & Assessor Date & Initial with 1-5 competence rating scale
19	Can recognise own limitations and knows when to call for senior assistance / report back to senior lead nurse, discuss with GP or in an Out of hours period is able to consult the NHSGGC Community (HSCP) policy for the care, management and safe insertion fine bore NG tubes in adults within the NHSGGC Community setting ( <a href="#">accessed here</a> )			