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leaders in enteral delivery

NGTCMP001

nasogastric feeding tube **training** & care management plan

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nasogastric feeding tube training and care management plan

introduction

In 2005, The National Patient Safety Agency (NPSA) published a Patient Safety Alert – **'Reducing the harm caused by misplaced nasogastric tubes'.** The report provided guidance for health professionals on checking and confirming that a nasogastric tube had been inserted into the correct place i.e. the stomach.

Since the report in 2005, there have been a further **21 deaths** and **79 cases of harm**, due to feeding into the lungs through misplaced nasogastric tubes, reported to the National Reporting and Learning System (NRLS).

In March 2011, a further Patient Safety Alert was issued. The key aim of the updated alert was to ensure that all patients requiring nasogastric feeding receive **explicit quality of service** and that **all risks are minimised**. This needs to be reflected in all Trust policies, protocols and documentation.

"ensure the safety of enterally fed patients via nasogastric feeding tubes and improve post insertion care given by health care professionals."

aim

The aim of this training and care management plan is to ensure the aims of the 2011 Patient Safety Alert are met and all healthcare professionals using Medicina's nasogastric tubes are educated and trained to a high standard.

This will ensure the safety of enterally fed patients via nasogastric feeding tubes and improve post insertion care.

Objectives

By the end of this training material the learner will be able to:

1. Identify suitable/unsuitable patients for nasogastric tube feeding
2. Select correct length and FR size for individual patients (NEX measurement)
3. Understand how to insert a nasogastric feeding tube through the nasopharyngeal and gastrointestinal tracts
4. Confirm initial placement and perform continual checks to confirm tube position post initial placement and understand the different medications that can affect this.
5. Identify potential reasons for tube dislodgment.
6. Identify patients at high risk of misplaced tubes
7. Identify misplaced tube complications
8. Be able to complete full and legal patient documentation
9. Understand the contraindications of nasogastric tube placement
10. Have knowledge of nasogastric tubes used within the healthcare service.

nasogastric tube feeding

Nasogastric tube feeding is the delivery of a nutritionally complete feed directly into the gut via a nasogastric tube.

Nasogastric tube feeding can be considered in patients who are malnourished or at risk of being malnourished, as defined by any of the following:

- A BMI of less than 18.5kg/m2
- Unintentional weight loss greater than 10% within the last 3-6 months.
- A BMI of less than 20kg/m2 and unintentional weight loss greater than 5% within the last 3-6 months.
- Have eaten little or nothing for more than 5 days and/or are likely to eat little or nothing for the next 5 days or longer

And

- have a poor absorptive capacity, and/or have high nutrient losses and/or have increased nutritional requirements from causes such as catabolism, sepsis, trauma, burns, post-op stress
- Inadequate or unsafe oral intake and a functional, accessible gastrointestinal tract.

(NICE, 2006)

contraindications

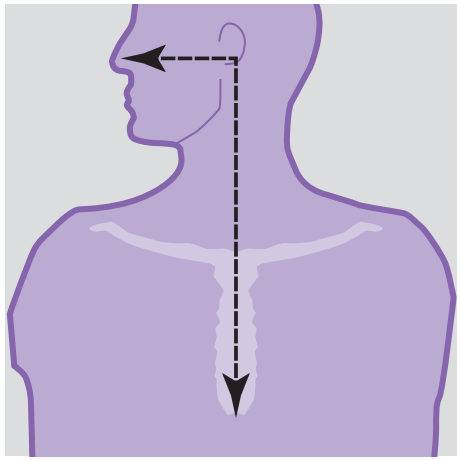
Nasogastric tube feeding should not be considered in the following patients:

1. Maxillo - facial disorders, surgery or trauma
2. Oesophageal tumours or surgery
3. Laryngectomy
4. Patients who have had oro-pharyngeal tumours or surgery
5. Skull fractures
6. Nasal CPAP
7. Unsuitable cervical spinal injuries (involving vertebrae 4 or above)
8. Oesophageal varices

Nasogastric tube feeding should be stopped when the patient is established on adequate oral intake.

tube selection/NEX measurement

The NEX measurement is used to identify the correct tube length specific to each patient. This is done by measuring from the sternum to nose to ear.



The inner diameter of the tube must also be considered, this is determined via the Fr (French) size. This is dependent on the viscosity (thickness) of liquid being passed through the tube.

The tube used must be fully NPSA Compliant and in accordance with the 2005 and 2011 NSPA Safety Alerts. Each tube should be fully radio-opaque (visible on x-ray) and have clear visible depth markings.

medicina polyurethane long-term nasogastric feeding tube range

NG Tube	Size	Length
NGP6/55L	6FR	55cm
NGP6/75L	6FR	75cm
NGP6/85L	6FR	85cm
NGP8/55L	8FR	55cm
NGP8/75L	8FR	75cm
NGP8/85L	8FR	85cm
NGP8/120L	8FR	120cm
NGP10/85L	10FR	85cm
NGP10/120L	10FR	120cm

weighted tubes

available to aid insertion if necessary

NGP8/85WL	8FR	85cm
NGP10/85WL	10FR	85cm

Polyurethane is used due to its softness, improving patient comfort and reducing nasal trauma.

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informed consent

Inserting a nasogastric tube is an invasive procedure. Therefore patient consent must be obtained before insertion.

what is meant by the term informed consent?

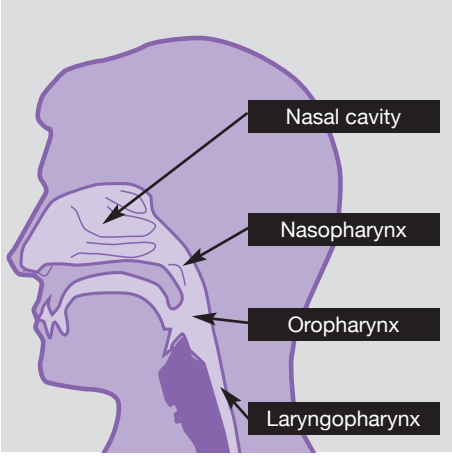
The consent a person gives must meet certain minimal standards.

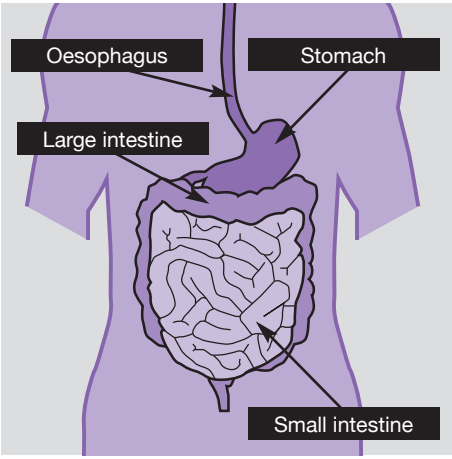
Informed consent can be said to have been given based on a clear appreciation and understanding of the facts, implications and future consequences of an action.

In order to give informed consent the individual concerned must have adequate reasoning faculties and be in possession of all relevant facts at the time consent is given.

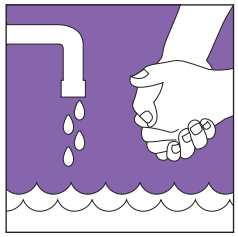
Doctors can act in a patient's best interests if the patient is unable to give consent.

the passage of the nasogastric tube



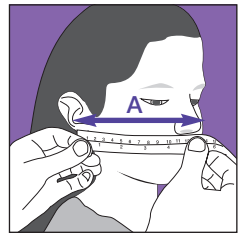


passing of nasogastric tubes and initial placement checks

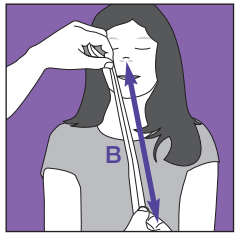

1. Wash hands


2. Prepare equipment and explain procedure

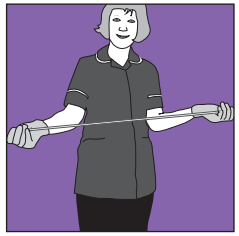

3. Clear nostrils



4. Measure depth **A**

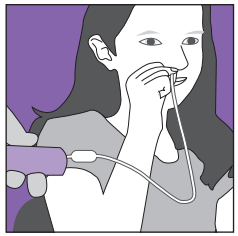


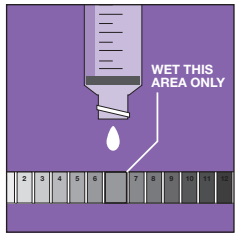
5. Measure depth **B** and then add **A + B** **and note the total depth**


6. Stretch tube

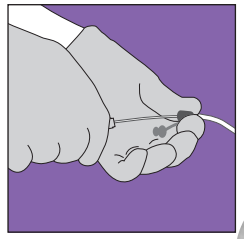

7. Lubricate tip & pass tube


8. Drink or swallow

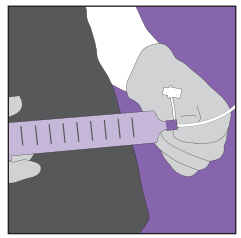

9. Hold tube & aspirate



10. Confirm position


11. Remove guidewire


12. Fix tube onto face


13. Flush tube and check function

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check the position of the naosgastric tube

The nasogastric tube's position must be checked:

• Further to initial placement, tube placement must be confirmed before and after all feeds, medications and flushes are administered.

• This ensures that the tube has remained in the correct position whilst in-situ as it can be common that tubes migrate as a result of coughing, vomiting and patient's dislodging their tubes.

• If misplacement of the feeding tube is not recognised before the infusion of enteral feed commences, this can result in a fatality.

• pH indicator paper must used to test the acidity of gastric aspirate.

The pH paper must comply with NPSA guidelines

• It must be CE marked and intended by the manufacturer to test human gastric aspirate.

• pH reading MUST BE 5.5 or below to confirm gastric tube position and allow safe commencement of feeding. If a safe pH reading cannot be taken further checks can be carried out to confirm placement of tube i.e. X-ray

"pH reading MUST BE 5.5 or below to confirm gastric tube position and allow safe commencement of feeding"

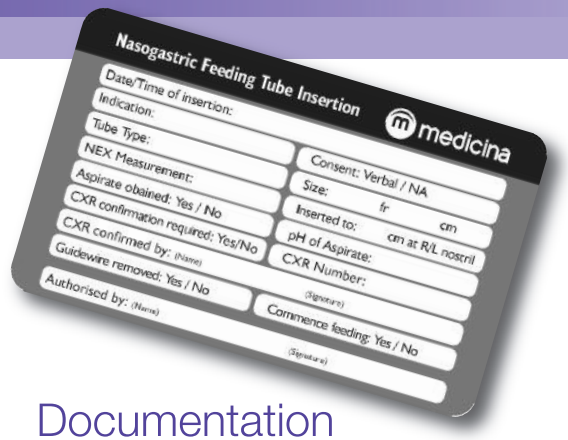
Medications that can elevate the pH level of gastric contents

Some medications can elevate the pH level of the gastric contents in the stomach.

Therefore, for patients who regularly take these medications and also require enteral feeding, initial risk assessments must be carried out (by the appropriate staff). Once identified, actions to be taken must be documented in the medical notes and patient(s) care plan.

The medications that can affect the pH level of gastric contents are:

- Antacids
- H2 antagonists
- Proton Pump Inhibitors (PPI's)



Documentation

Once a tube has been successfully placed, healthcare professionals must provide clear documentation. This will avoid miscommunication between staff.

A checklist should be completed for all patients requiring nasogastric tube placement, on insertion and on all subsequent insertions and it should also be completed before administrations of enteral feed, water flush or medications.

The minimal information required to be documented on this checklist includes:

- Date/time of insertion
- cm at nose tip measurement
- NEX measurement
- pH measurement
- Nurse print and sign

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misplaced tube complications

Accidental insertion of a nasogastric feeding tube into the lungs is a potential serious complication of nasogastric feeding.

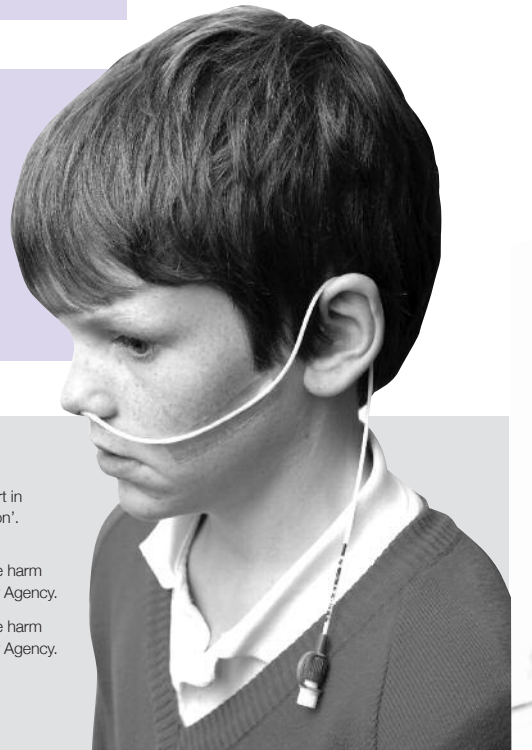
If the tube is not placed in the correct position feed will not pass directly into the stomach and can cause further complications.

The following patients are at increased risk of tube misplacement:

- Sedated patients.
- Endotracheally intubated patient
- Agitated patients
- Patients with a weak cough reflex

The following complications can arise from a misplaced tube:

- Pneumothorax
- Pneumonia
- Empyema



References

National Institute for Health and Care Excellence. 2006. 'Nutrition Support in Adults: Oral Nutrition Support, enteral tube feeding and parenteral nutrition'. [CG32]. London. National Institute for Health and Care Excellence.

National Patient Safety Agency. 2005. Patient Safety Alert – Reducing the harm caused by misplaced nasogastric tubes. London. National Patient Safety Agency.

National Patient Safety Agency. 2011. Patient Safety Alert – Reducing the harm caused by misplaced nasogastric tubes. London. National Patient Safety Agency.

Features of Medicina nasogastric tubes in compliance with NPSA Guidelines

The Medicina NGP range contains 40% barium throughout the tube, therefore is visible from connector to tip, allowing healthcare professionals to clearly see the full tube path on x-ray.

The Medicina tube contains a self-lubricated 40 strand guidewire. Therefore flushing to activate the lubricant to remove the guidewire is not required. This is in compliance with the NPSA/2012/RRR001.

The NPSA 2007 Patient Safety Alert , **'Promoting Safer measurement and administration of liquid medicines via oral and other enteral routes'** showed that there were 33 patient safety incidents involving intravenous administration of liquid oral medicines between 1 January 2005 and 31 May 2006. A further 3 reported deaths occurred between 2001 and 2004.

In response to this alert, Medicina have ensured that all of our enteral products associated with the alert have a dedicated enteral connector to avoid mis-connections with IV products and improve patient safety.

Leaders in enteral delivery