### **Guideline for**





#### **Background**

- Insertion of Nasogastric (NG) or orogastric tubes (OG) is common in Critical Care for the administration of medications and enteral feed.
- Ensuring NG/OG tubes are correctly sited prior to use is crucial to avoid the potentially life-threatening complications associated with administration of feed or medications into the respiratory tract. This is a well recognised 'never event'<sup>1</sup>.

#### How should the position of an NG/OG tube be confirmed?

- Patients in Critical Care are often obtunded and at greater risk of aspiration of gastric content into the respiratory tract.
- As a consequence of this, and following recent guidance from BAPEN<sup>2</sup>, pH of
  aspirates obtained from an NG/OG tube should NOT be used to confirm the
  placement of these tubes in any patient in Critical Care.
- All patients in Critical Care who have an NG/OG tube inserted, must have a chest x-ray to confirm the position of the NG/OG tube prior to use.
- It must be noted in the chest x-ray request that the x-ray is for purposes of checking position of the NG/OG tube, so that appropriate radiographs are obtained.
- The chest x-ray MUST be interpreted using 'the four criteria' (see below) and this interpretation MUST be documented using the structured documentation tool within the \ngicu TRAK shortcode.
- The chest x-ray must be reviewed by 2 individuals competent in interpretation of chest x-rays (a Doctor or Advanced Critical Care Practitioner who has successfully completed the NHS Lothian "Chest x-ray Confirmation of Nasogastric Tube Placement in Critical Care" module).
- Please review the flow chart on page 2 for instructions on how to safely confirm correct NG/OG tube placement before 1<sup>st</sup> use.
- Check length at the nostril daily and document on invasive devices chart

#### **Practical points**

• To limit the radiation dose to patients, where possible, x-rays for the purposes of confirming NG tube placement should be coordinated with other x-ray's for the patient e.g. CVC or ET tube position x-rays.

# Flow Chart for Confirmation of Nasogastric/Orogastric Tubes in Critical Care

• Nasogastric/Orogastric tube inserted in Critical Care patient • Request chest x-ray **specifically** to check NG/OG tube position •Ensure the following prior to intrepretation of chest x-ray: •1) Correct patient •2) Most recent CXR being viewed (i.e review date + time) •3) Check the patient to ensure there is only one NG/OG tube in situ •4) Ensure NG tube is NOT a surgically placed device (e.g. post-op ILOG) - this guideline does NOT apply in these circumstances •Chest x-ray reviewed by 2 individuals competent in chest x-ray interpretation using 'the four criteria': •1) Does the tube follow the path of the oesophagus/avoid the contours of the bronchi? •2) Does the tube bisect the carina or bronchi? •3) Does it cross the diaphragm in the midline? •4) Is the tip visible below the left hemidiaphragm? Document and communicate: •Use TRAK short code \icung to document interpretation of x-ray Complete the invasive devices chart •Communicate with bedside nurse regarding safety to use •Document length at nostril daily on invasive devices chart

If in doubt about whether an NG/OG tube is in the correct position on x-ray, do NOT use the tube and seek senior advice

## **References**

- 1) HSIB. Placement of Nasogastric Tubes [internet]. Farnborough: HSIB; 2020. Available from: <a href="https://www.hsib.org.uk/documents/268/HSIB">https://www.hsib.org.uk/documents/268/HSIB</a> Placement of na sogastric tubes Report V07.pdf
- 2) BAPEN. A Position Paper on Nasogastric Tube Safety: "Time to put safety first" [internet]. Astwood Bank Redditch: BAPEN; 2020. Available from: <a href="https://www.bapen.org.uk/pdfs/ngsig/a-position-paper-on-nasogastric-tube-safety.pdf">https://www.bapen.org.uk/pdfs/ngsig/a-position-paper-on-nasogastric-tube-safety.pdf</a>

Title: Confirmation of Nasogastric Tube Position

Authors: A Hastings, J Service, M Blackstock, J Merriweather, S Gossner, C Barker, G

Renwick, S Brunner, S Gillon.

Status Draft/Final: Final Approved by: QIT

Written: July 2021

Reviewed: Next review: July 2024