Use appropriate NGT placement, measurement, and securing methods
• Use the Nose→Earlobe→Xiphoid process→Midline of the Umbilicus (NEMU) method for determination of NGT insertion length
• Document the centimeter (cm) marking on the tube where it exits the nose or mouth periodically
• In a NGT with a stylet that has been flushed with sterile water, aspirate the entire fill volume of sterile water and discard. A second aspiration is necessary to obtain gastric secretions for pH testing.

Measure gastric pH
• Gastric pH should be the first line method for NGT location verification
• A gastric pH value between 1 – 5.5 without a change in the patient’s clinical status is indicative of gastric placement

Determine a schedule for frequency of NGT location verification. Consider an X-ray for any patient in whom there is any concern about the correct NGT placement, such as:
• Difficulty placing the NGT
• Any patient at high risk of misplacement such as those with known history of facial fractures, neurologic deficit, respiratory concerns, decreased or absent gag reflex, and those who are critically ill
• Any patient whose condition deteriorates shortly after NGT placement

If an X-ray is obtained:
• The X-ray requisition should clearly request “NGT placement verification” or similar language
• The X-ray report should contain a statement of the tube path, the location of the tube tip, confirmation that the tube is positioned in the desired location and is appropriate for use

Videos on Proper Tube Placement: nutritioncare.org/novel

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Patient Considerations

• Given the current clinical status, is this the right time to place an NG tube?
• Do the benefits of the NG tube outweigh the risks?
• There are no facial or airway abnormalities.

Does patient have a high-risk condition that might warrant an X-ray such as:
• Critical illness with intubation
• Decreased and/or absent gag or cough reflex
• Neurologic impairment with decreased level of consciousness
• Sedation and/or chemical paralysis
• Clinical status warrants an X-ray even though pH less than 5 or 5.5

Clinical Indication for X-ray

Candidate for pH

Able to aspirate from NG tube?

Patient receiving continuous feed?

Stop feeding and wait 15-20 minutes

Obtain specimen 0.5 - 1.0 mL

Check pH

Less than or equal to 5.0 or 5.5

Greater than 5.5 (Consider waiting 10 minutes and recheck)

Ok to use NG tube

Clinical indication for X-ray

Flush tube with 2 - 3 mL of air

Able to obtain specimen

Reposition patient onto left side then check in 10-15 minutes

Unable to obtain specimen

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