NATIONAL GUIDELINES ON NURSING MANAGEMENT OF NASOGASTRIC TUBE (NGT) IN ADULT PATIENTS

FREQUENTLY ASKED QUESTIONS

General

1. What is the definition of an "adult"?

As there are differing age limits for different legislations, for the purpose of this national guidelines, adults are defined as those who are 18 years old and above according to the Penal Code.

2. Are there any recommended brands of nasogastric tubes or tapes that institutions should use?

As institutions may have their brand preferences and varying contracted vendors, the guidelines will not specify certain brands of NGT or tapes that institutions should use. It is up to individual institution's discretion.

However, certain brands of NGT or tapes do come with marked indications to better assist nurses with their measurements. Institutions may want to consider such factors when purchasing their equipment.

pH Testing

3. The recommended pH value for safe feeding in the guidelines is ≤5.5; however, my institution has a different pH level for safe feeding.

4. My institution uses pH strips that can only measure pH 5 or 6 and not at values of 0.5.

Institutions should continue with their own workflow i.e. to use the pH value of 5 (if equal or less than pH 5.5) and to use the pH value of 6 (if more than pH 5.5).

It would also be useful for institutions to source for pH strips with 0.5 gradation intervals and standardise Group Purchase Orders with partners to use the same type and brand of pH strips.

For reference, the following brands of pH strips with intervals of 0.5 that are being used locally:
1. MQuant®
2. Johnson®

Decision Criteria

5. For the decision criteria, why is the criteria on "aspirate to be more than 10ml and resembles gastric content" considered one criterion instead of two?

It is essential that at the same point of testing, more than 10ml of aspirate can be obtained and the aspirate must also resemble gastric content. This is because some aspirate may still be obtained even if the NGT is in the wrong placement, hence it is important to ensure that the aspirate also resembles gastric content at the same time.

Monitoring of SpO2

6. Is the monitoring of SpO2 a new measure included in the guidelines, and will this be made mandatory?

Yes, the monitoring of SpO2 is a new monitoring measure that has been introduced in the national guidelines. It is a highly recommended practice that can be easily administered to detect any sudden desaturation in oxygen levels when practiced in conjunction with the instillation of water. This would be useful for patients who are unable to express or demonstrate any signs of distress.

7. What is the recommended SpO2 acceptable range for patients with NGT and what constitutes a drop in SpO2 that will be considered sudden desaturation?

The SpO2 range has not been stipulated in the guidelines as nurses need to exercise critical thinking in contextualising the individual patient's condition in the provision of nursing care. For example, the baseline of a patient with chronic obstructive pulmonary disease (COPD) will be different from another patient without. The reading of SpO2 needs to be read in conjunction with other parameters and the presence of any signs or symptoms of a patient in distress.

Auscultation

8. Should Auscultation be recommended as a confirmatory method for establishing NGT placement?

While some guidelines or institutions do not recommend the use of auscultation as the sole confirmatory method for NGT placement, it has been included in the guidelines as one of the confirmatory methods in tandem with other criteria that can be used by trained nurses. Again, clinical staff should not use this as a sole method or consider using it as a first step. It should be used only in addition after deploying the first approach of pH testing, or in community settings where other manoeuvres to obtain NGT aspirate from a patient have failed.

9. Can auscultation be considered in the acute care setting as well, before proceeding with chest X-ray?

Institutions should still follow their own practices, using the national guidelines as an additional reference which sets the minimum standards to obtain. Institution may wish to adopt the practice of auscultation as an adjunct method of tube placement with appropriate workflow to ensure the safety of practice, for example, the procedure should only be carried out correctly and cautiously by trained nurses in conjunction with SpO2 monitoring and no other indications for tube migration.

Additionally, if the burden of obtaining a chest X-ray is assessed to be low, institutions may choose to proceed directly for chest X-ray ahead of auscultation as a modality of establishing the position of the NGT.

Instillation of Water

10. Is the instillation of water a safe procedure that can be carried out?

The instillation of water was developed based on institutions' experience and born out of patients' clinical care needs based on considerations such as availability of chest X-ray and feasibility and safety of patients with repeated X-ray exposures, especially for those with frequent difficulty in obtaining aspirates. The risk of harm to patients is assessed to be low when practiced correctly and cautiously by trained nurses.

11. How can we address the safety concerns regarding the instillation of water?

The instillation of water should be done progressively and slow in intervals of 5 minutes up to 10 ml of water. The water for installation can be either drinking water or sterile water that both are clean and safe. During this time, nurses to monitor for any signs of respiratory distress such as cough, increased respiratory rate, throat secretions and breathlessness.

12. Why is there a need to wait another 30 mins after instillation of water before aspirating again?

There are multiple factors to be considered and it is left to the clinical staff' discretion on the waiting duration from 0 minutes to 30 minutes.

For example, when a clinical staff attempts to aspirate at 5 minutes with no aspiration, it is advisable to wait and aspirate again within 30 minutes' timeframe to allow the gastric fluids to flow to the tip of the tube. The additional wait can also allow for time before deciding to abort the procedure.

Positioning of Patients

13. Can the guidelines specify the duration to position the patient during and after NGT feeding?

Patients should be positioned with a Head of Bed (HOB) elevation of at least 30^{o} during and after NGT feeding unless contraindicated to prevent complications such as silent aspiration. However, the duration to position the patient is dependent on the patient's health condition. While the average recommended duration is 45 minutes to one hour, some patients might be unable to be at HOB of 30^{o} for prolonged periods of time due to reasons such as frailty or pressure injury wounds. Nurses should monitor and adjust the patient's position as needed.

Attempts at NGT insertion

14. My institution protocol does not allow up to 5 maximum attempts on NGT insertion. How many attempts should I follow?

Institutions may set a stricter requirement with a lower number of maximum attempts if preferred. Nurses should follow their institutional protocols as long as it does not exceed the maximum number of 5 attempts as recommended in the national guidelines.

15. In cases where multiple attempts at NGT insertion can be traumatic and stressful especially for elderly patients, how do we ensure safe and dignified care can be provided for the patients?

Nurses should take into consideration a patient's condition such as nutritional status, blood sugar level, diabetes and other critical medications when attempting multiple NGT insertions and review the patient's care plan with the medical team and caregivers if needed. In situations where NGT insertions are difficult for a patient, or where a patient refuses the insertion of NGT, suggest for staff to refer to their institutional policy/protocol to decide on alternative methods that could be more suited for the patient.