SUBJECT: **ADMINISTERING ENTERAL FEEDINGS / MEDICATIONS**

Policy No.: C146
Effective Date 3/1994

Purpose of Procedure: To provide guidelines for nurses administering enteral feedings and medications.

Physician's Order Required: Yes. Physician/Licensed Independent Practitioner's (LIP) order must include: route, type, amount, frequency, rate (if continuous), and when to hold feeding based on amount of aspirated gastric contents. Upon admission from an outside facility or new NGT insertion, Physician/LIP will verify placement with x-ray and an order will be written allowing the use of the tube.

Performed By: RNs, LVNs, Affiliating Nursing Students under the supervision of an RN

Equipment Required:

For continuous feeding: Feeding pump, bag, enteral formula/solution, drinking water, 60ml catheter tip syringe, 4X4's, tape, clean gloves.

For intermittent feeding: 60ml catheter tip syringe, enteral formula/solution, 4X4's, tape, clean gloves, catheter plug, drinking water.
KEY POINT: Consider using bottled water for highly immuno-compromised patients, critically ill elderly patients, and infants under 12 months.

Policy Statements:

1. **Initial placement of any new or reinserted NG tube must be confirmed by radiologic imaging**. Order by physician/LIP is required prior to using the tube.
2. Feeding bags are to be completely empty prior to adding newly opened formula.
3. Formula may be hung for no longer than 4 hours after opening.
4. Bags are to be flushed with drinking water before filling with additional formula.
5. All feeding equipment must be changed daily.
6. No water, colorants, medication or other substances are to be added directly to the formula.
7. 4X4's when used around tube sites are to be changed every shift and PRN.
8. Gastric residual is checked at least:
    - Every 4 hours during continuous feedings
    - Prior to every feeding for intermittent feedings
    - Prior to administering medication
9. Gastric residual is returned to stomach through syringe using gravity after measurement unless otherwise ordered by the physician.
10. If continuous feeding needs to be routinely interrupted, provider and dietician must be notified.

KEY POINT: Interruption in feeding reduces the total calorie intake per day.

Nasogastric Tube (NGT):

A. Securement

a. It is recommended to secure the NGT after insertion using the nasal bridle
b. Nasal bridle is contraindicated for patients with:
    - Nasal airway abnormality, an obstruction or both
    - Facial or cranial fractures
    - Thrombocytopenia

- Graft vomer bone
- Post septoplasty
- Patients who may pull on the bridle hard enough to cause injury

KEY POINT: Should a patient be likely, based on condition or mental status, to continuously pull on the feeding tube or nasal bridle it is recommended to secure the feeding tube via alternate means to minimize potential injury or tube displacement.

c. Procedural Steps

Insertion Procedure:

1. Gather all the supplies
2. Explain the procedure to patient and family
3. Place the patient in a supine position
4. Perform hand hygiene and don appropriate PPE
5. Lubricate the nasal bridle retrieval probe and the catheter
6. Insert the retrieval probe into the nostril opposite the existing nasogastric feeding tube until the first rib is at the bottom of the nostril
7. Insert the nasal bridle catheter into the patient's opposite nostril to enable the magnets to meet. Pull back the nasal bridle stylet about ½ inch until the magnets connect.
8. After the magnet connection is made, remove the stylet completely from the bridle catheter and discard
9. Withdraw the retrieval probe slowly and allow the nasal bridle catheter to advance through the patient's nose. Continue until the two black markings on the bridle catheter are completely pulled up and at least a couple of inches outside the opposite nostril, creating a loop or bridle around the vomer bone.
10. Cut and dispose of the bridle catheter section containing the magnets, black markings and the blue probe
11. Slide the clip up bridle catheter and into position. Place the clip about ½ inch or one finger's width from the patient's nostril. Secure clip by firmly snapping closed.
12. Tie the two stands of bridle catheter together in a simple knot below the clip. Cut the excess bridle catheter.

KEY POINT: Hydrocolloid dressing is recommended to be placed under nasal bridle to prevent pressure injuries where the bridle is making contact with the nose.

Removal Instructions:

1. Cut only one strand of bridle catheter and open the clip. Gently pull on the opened clip to remove the bridle catheter from nose.

B. <u>Placement Verification</u>

1. Verify the placement and patency of feeding tube:

a. At the time of Insertion:
   - Tube will be marked with tape at the level of the nares
   - Upon placement verification via x-ray by a physician/LIP, the tape will be removed and the tube marked with permanent marker at the entry point

b. Subsequent NGT use:
   - Withdraw stomach contents and assess characteristics and volume
   - Ensure that the mark is at the location of the nares

c. Hold feedings and medications and request x-ray verification by Physician/LIP if any of the following are noted:
   - Unexplained gagging, coughing or respiratory distress
   - The mark is not at the correct location
   - Aspirate characteristics are not typical of stomach contents

Procedural Steps:

A. <u>Continuous Feeding</u>

1. Gather and prepare all equipment and supplies.

2. Inspect seal and reservoirs of formula/solution containers for damage prior to use.
3. Confirm feeding rate and formula with the order in the patient's medical record.
4. Confirm patient's identity using at least two patient identifiers.
5. Perform hand hygiene and don clean gloves.
6. Introduce yourself and explain the procedure to the patient.
7. Elevate head of bed at least 30 degrees.
8. Pour prescribed formula/solution into administration bag.
   KEY POINT: Formula/solution should be at room temperature
9. Prime tubing and clamp. Hang the bag on the IV pole.
10. Confirm placement of the enteral tube.
11. If the total amount of gastric residual is greater than 250mLs or the amount specified by the physician is reached, return aspirate, continue feeding and notify the physician.
12. If gastric residual is 500mLs or more, return 500mLs of aspirate, hold feeding and notify physician.
    KEY POINT: Amount of aspirate for children depends on size and weight of child. Refer to physician's recommendation.
13. After checking gastric residual, flush tube with sufficient amount of drinking water to clear tubing, or amount and frequency as ordered by physician.
    KEY POINT: Rate of flow may be adjusted by raising or lowering the syringe.
14. Attach administration set to the enteral feeding pump and connect to patient's tube.
15. Unclamp tubing and regulate flow to prescribed rate.
16. Label bag with patient's name, solution, amount date and time and rate of flow.
17. Clean, date and label syringe, store away from potential source of contamination.
18. Secure tube to prevent tubing dislodgement.
19. Remove gloves, discard, and perform hand hygiene.
20. Maintain patient head elevated at least 30 degrees to prevent aspiration.
21. Document the procedure in Electronic Health Record (EHR).

B. <u>Intermittent Feeding</u>

1. Gather and prepare all equipment and supplies.
2. Inspect seal and reservoirs of formula/solution containers for damage prior to use.
3. Confirm feeding rate and formula with the order in the patient's medical record.
4. Confirm patient's identity using at least two patient identifiers.
5. Perform hand hygiene and don clean gloves.
6. Introduce yourself and explain procedure to patient.
7. Elevate head of bed at least 30 degrees.
8. Place towel or pad under the patient's feeding tube to prevent soiling of the gown or linen.
9. Confirm placement of the enteral tube and check residual.
10. After checking gastric residual, flush tube with sufficient amount of drinking water to clear tubing, or amount and frequency as ordered by physician.
11. If the total amount of gastric residual is greater than the amount specified by the physician, return aspirate and notify the physician.
12. Pinch tube, detach syringe and remove the plunger, and attach the open barrel of 60ml syringe to tube.
13. Pour the prescribed formula/solution into syringe barrel and allow to flow slowly and gently, refilling syringe with formula/solution when it is 3/4 empty until dose is completed.
    KEY POINT: Rate of flow may be adjusted by raising or lowering syringe.
14. Flush the tubing with sufficient amount of drinking water, or amount specified by physician, to clear the tubing.
15. Pinch the tube and remove syringe.
16. Clamp the tube using catheter plug.
17. Secure tube to prevent tubing from being accidentally dislodged.
18. Remove towel or discard pad.
19. Clean, date and label syringe, store away from potential source of contamination.
20. Remove gloves, discard, and perform hand hygiene.
21. Maintain patient head elevated at least 30 degrees to prevent aspiration.

22. Document the procedure in EHR.

C. Medication Administration

1. Gather and prepare all prescribed medication, supplies and equipment. (Refer to Policy C152 – Medication Management Guidelines)
2. Confirm correct medication to the order in the patient's medical record. (Refer to Policy C152 – Medication Management Guidelines)
3. Perform hand hygiene and don clean gloves.
4. Confirm patient's identity using at least two patient identifiers.
5. Introduce yourself and explain procedure to patient.
6. Elevate head of bed at least 30 degrees.
7. Confirm placement of the enteral tube.
8. If feeding is running, stop feeding first and flush the tube with drinking water.
   KEY POINT: Medications that need to be given on an empty stomach for effective absorption, feeding may need to be withheld per doctor's order before and after medication administration.
9. Pinch tube, detach syringe and remove the plunger, and attach the open barrel of 60ml syringe to tube.
10. Prepare each prescribed medication and administer each medication separately into the syringe barrel and allow to flow slowly and gently until each dose is completed.
    KEY POINT: Use elixirs if available. Otherwise crush the medication (as applicable) as fine as possible and mix with a small amount of water to dissolve completely.
11. Flush the tubing between each medication administration and after with sufficient drinking water.
    KEY POINT: Avoid mixing different medication to prevent the risk of drug to drug or drug to chemical incompatibilities, tube obstruction and altered therapeutic drug response.
12. Pinch the tube and remove syringe.
13. Clamp the tube using catheter plug or restart enteral feeding.
14. Secure tube to prevent tubing from being accidentally dislodged.
15. Clean, date and label syringe, store away from potential source of contamination.
16. Remove gloves, discard, and perform hand hygiene.
17. Maintain patient head elevated at least 30 degrees to prevent aspiration.
18. Document the procedure in EHR.

PATIENT/FAMILY EDUCATION:

1. Before procedure, teach patient/family what to expect before, during, and after procedure.
2. If the patient is on intermittent feedings, inform the patient/family of the feeding schedule.
3. Where appropriate, teach the patient and/or family:
   a. Purpose of enteral feedings
   b. Enteral feeding procedure

DOCUMENTATION:

1. Document amount of formula/solution and liquids given.
2. Document amount of residual and if enteral feeding was held.
3. Document output.
4. Patient Education.
5. Medications given in the Medication Administration Record.

Revised by: Roumayne David, BSN, RN

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