ENTERAL FEEDING & MEDICATION ADMINISTRATION

PURPOSE: To outline the management of patients receiving enteral feedings and medication administration.

SUPPORTIVE DATA: Enteral feedings and medications may be administered via the following tubes: Nasogastric tube (NGT), Orogastric tube (OGT), Nasoenteric, Gastrostomy (G-Tube), Jejunostomy (J-Tube), percutaneous endoscopic gastrostomy (PEG), and percutaneous endoscopic gastrojejunostomy (PEGJ). Placement of NGT, OGT and nasojejunal tubes is usually verified by x-ray following insertion prior to use. After placement has been verified by provider and order entered "okay to use" tube may be used for medication/fluid administration or tube feeding.

Specially trained RNs may insert enteral feeding tubes (pre- or post-pyloric) using the Cortrak∗ Enteral Access System (EAS), with a provider order

NGTs and OGTs are the only feeding tubes that may be inserted by RNs and LVNs.

For NICU patients, see Enteral Feeding & Medication Administration – NICU Standard.

Administration Set and Bag
- A closed system comes prepared with feeding present in the bag/bottle
- An open system is a system in which the nurse adds feeding to the bag

ASSESSMENT:

1. Verify the placement and patency of feeding tube:
   - At time of insertion:
     - Mark tube with tape at the naris (nasal tubes) or lip (oral tubes)
     - After placement has been verified by provider which may include an X-ray, or other methods as determined by provider, remove tape and mark tube with permanent marker or colored tape at the naris/lip. Do not use the tube for feeding/medications until the provider has written an order "ok to use".
   - Ensure mark /tape on tube is at the correct location of naris/lip, assess aspirate characteristics and volume:
     - Prior to initiation/ restarting of feeding.
     - Prior to medication administration.
   - Hold feedings/ medications and call provider to confirm placement if:
     - There are signs of displacement into the trachea such as respiratory distress, unexplained coughing or gagging
     - The mark/tape is not at the correct location or is not visible
     - Color of the aspirate is not typical of desired tube location or is not expected considering patient's condition:
       - Gastric aspirate is usually green or clear and colorless with off-white to tan mucus shreds (if not receiving continuous feeding), formula colored/curdled if on tube feeding
       - Small bowel aspirate may be bile stained (ranging from light yellow to brownish green), if not receiving continuous feeding, or formula colored/curdled if on tube feeding
       - Aspirate from a tube displaced in the trachea usually is mucoid in nature
       - Aspirate from a tube displaced in the pleura is usually watery or blood tinged
     - The amount of residual changes as follows:
       - Gastric tube: Inconsistent ability to aspirate fluid may indicate upward displacement to the esophagus
       - Post-pyloric÷ Sharp increase in residual volume may indicate upward displacement into the stomach
         Note: Insert 30 mL of air into enteric tubes before aspirating residual

2. Assess the following a minimum of every 8 hours (every 4 hours-ICU)
   - Bowel sounds

- Insertion site for redness, drainage, inflammation
- Presence of abdominal distention
- Nausea
- Possible migration of G-tube/J-tube
- Visible bowel loops or peristalsis (infant)
- Readiness for nipple feeding (infant)

3. Assess every stool for color, quantity and consistency.
4. Monitor hydration and nutritional status, including:
   - Intake and output a minimum of every 8 hours (every 4 hours- pediatrics; every 2 hours – ICU)
   - Weight - Daily (pediatric and ICU), twice weekly (adult)
   - Monitoring panel very week as ordered

RESIDUAL CHECK:

5. Check residuals if ordered by provider, proceed with the following steps:
   Return aspirated residuals to stomach when:
   - Amount is less than or equal to 500 mL (unless patient shows signs of intolerance, e.g. abdominal distension or vomiting)
   - Amount is greater than 500 mL, return 500 mL, discard the rest, hold feeds, and check residuals every 2 hours x 3. Resume feeds if residuals <500ml.
   - Pediatrics: Amount is individualized
6. Hold feedings as follows:
   - Adults: Amount is greater than 500 mL unless otherwise indicated by a provider order or if there are signs of intolerance regardless of residual amount
   - Pediatrics: Check residuals only if there is evidence of abdominal distention or vomiting. Stop feeding and notify provider
7. Discard aspirated residual when:
   - Contents include concentrated bile/ fecal matter/ blood/ undigested solid food particles
   - Gastric emptying is required (e.g., prior to extubation)

ADMINISTRATION:

8. Obtain tube feeding orders, to include:
   - Name of formula/ breast milk
   - Amount to be infused
   - Rate of infusion or gavage
   - Frequency of intermittent feedings
   - Route of administration
9. Administer feedings through an enteral feeding pump or use gavage feeding technique for intermittent feedings.
10. All enteral formulas requiring mixing should be mixed in the nutrition formula mixing lab (x92365), or designated areas only if lab not available.
    Mix and administer enteral feeding formula immediately. DO NOT pre-mix and refrigerate.
11. Administer all solutions at room temperature (Pediatrics: pre- warm refrigerated/frozen breast milk.
    Note: Breast milk may NOT be warmed in the microwave.
12. Provide pacifier during feeding (infants only).
13. Do not add any feeding or water to administration bag(s) after infusion is started.

MEDICATION ADMINISTRATION:

14. Use liquid/ suspension medication form when available.
15. Prepare medications as follows:
    - Grind tablets to a fine powder and mix with water.
      - Enteric coated or modified release (e.g. sustained or extended release) medications are not to be crushed or administered via feeding tubes.
    - Open capsules and mix powder with water.
    - Dilute liquid medication with water.
16. Pause tube feeding immediately prior to medication administration unless otherwise ordered by the provider.
17. Flush feeding tube with 15mL of water:
    - Before medication administration
    - In between each medication when administering multiple medications
    - After medication administration

    Note: take into consideration if patient on fluid restrictions Restart tube feeding after medication

administration unless otherwise ordered by provider.

18. Hold tube feedings one hour before and after administration of phenytoin or as ordered by the provider.
19. Use only oral syringes/ catheter tip syringe/syringe compatible with NGT/OGT for the administration of medications. **DO NOT** use Luer lock (intravenous catheter type) syringes with any gastrointestinal tube, drain, or connector.

FLUSHING:

20. Flush feeding tube with water (a minimum of 30mL ~~f~~or adults, 5-10 mL for pediatrics) to prevent tube from clogging:
    - Every 4 hours for adults
    - After intermittent/bolus feedings
    - Exception: flush J tubes as ordered
    - Use automated programmable feature on enteral feeding pump to administer routine flushes (unless contraindicated)
21. Do not flush administration set or bag.

INFECTION CONTROL:

22. Perform hand hygiene prior to preparation of enteral formula/breast milk.
23. Swab the enteral container top with alcohol before opening it (cans only).
24. Replace syringe every shift.
25. Clean spilled formula from infusion pump and pole promptly.
26 Hang correct volume :
    - For closed system, replace feeding and administration set every 24 hours
      Maintain closed system; do not open container to remove tube feeding
    - For the open system:
      - **Feedings are not to exceed 8-hour volume (Pediatrics: 4 hours)**
      - Replace administration set and bag every 8 hours for adult and 4 hours for pediatrics/neonates
27. Replace indwelling NGT/OGT once a month.

TUBE MAINTENANCE:

28. Change G-tube, J-tube, PEG and PEGJ dressings a minimum of every 24 hours.
    - Label with date, initial, and time changed.
29. Check the expiration date of enteral formula prior to opening.
    Pediatrics: For the management of breast milk, refer to the Unit Structure Standards.
30. Do not expose feeding bag to extreme heat (e.g., near the window).
31. Provide care daily (every 24 hour) or as needed for OG, NG, or nasoenteric tube to include:
    - Inspect and clean skin
    - Laterally reposition tube
    - Apply fresh tape
    - Dab water-soluble lubricant on the nostrils as needed.

SAFETY:

32. Label enteral feeding set with:
    - Patient's name
    - MRN
    - Date and time of expiration including initials
    - Name of formula/flowrate (bag)
33. Verify that bag is labeled correctly every shift.
34. Elevate head of bed a minimum of 30 degrees, unless contraindicated, may need to place in Reverse Trendelenburg
    Note: Prone positioning is not a contraindication to enteral nutrition.
35. Refrain from using manual pressure to force feeding into tube.
36. Use stretch gauze net over torso to prevent dislodgement of G-Tube if necessary (Pediatrics).
37. Put caps on any additional ports.
38. Provide measures to prevent aspiration, especially when residual is greater than 200 mL (e.g., keep head of bed elevated 30 degrees or greater)
39. Use programmable feature to administer all tube feedings including boluses.
    - Use “flush now” feature to administer water bolus (e.g. free water ordered by the provider) and for flushing after medication
      Exception: May use automated function for special circumstances following consultation with provider, as noted in feeding order ‘comments’ section
    - Use intermittent function to administer bolus feeding.
      - Program for one feeding only at a time
      - Disconnect from patient when bolus is finished. Cover tip (e.g. with cap, new 4x4)

SPECIAL CONSIDERATIONS; PEDIATRICS

- Use automated feature for routine flush (see #21)

40. Emergent use (e.g. Hypoglycemic event); may place NGT/OGT to administer emergent medication after confirmation by provider and order entered "ok to use."

SPECIAL CARE:

41. Drape G-tube/J-tube over a gauze bolster to prevent excessive rotation of tube.
42. Provide oral care a minimum of every 8 hours (every 4 hours-ICU).

CONSULTATION:

43. Consult with provider regarding use of medications to promote motility (e.g. prokinetic drugs (metoclopramide and erythromycin) or changing to a post pyloric tube (e.g. Dobbhoff) for patients with residual of 200-500 mL (if ordered).

44. Consult with provider if tube feeding is placed on hold for a patient who is receiving insulin ("Insulin Pause"). Perform more frequent blood glucose checks as ordered.

REPORTABLE CONDITIONS:

45. Notify provider immediately for the following:

- If tube feeding is placed on hold for a patient receiving insulin
- Abdominal distention or pain
- Absence of bowel sounds
- Nausea, vomiting or diarrhea
- The mark on the tube is not in the correct position or is not visible
- Unexplained gagging, coughing, respiratory distress
- Color of aspirate is not typical of desired tube location or is not expected considering patient's condition
- If patient demonstrates signs of intolerance
- Residuals if ordered in excess of:
  - Adults: 500 mL
  - Pediatrics: Residuals are not routinely checked. If abdominal distension or vomiting present, stop feeding, notify provider
- Clogged feeding tube
- Redness, drainage, or bleeding at insertion site
- Dislodgement

DOCUMENTATION

46. Document in accordance with documentation standards.
47. Document in Orchid – Systems Assessment – Gastrointestinal Tubes Information – add Dynamic Group – label accordingly.
48. Document tube repositioning, tape change, and skin condition when daily tube maintenance is done.

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