DBHDS

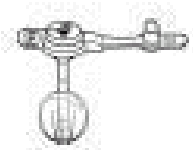
Virginia Department of
Behavioral Health and
Developmental Services

PREPARING TO ADMINISTER MEDICATION

via GASTROSTOMY TUBE

Submitted to the Board of Nursing

May 21, 2013



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COMMONWEALTH of VIRGINIA

DEPARTMENT OF
BEHAVIORAL HEALTH AND DEVELOPMENTAL SERVICES

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Memorandum

June 28, 2013

TO: Trainers of Staff at Facilities Licensed by DBHDS
Providers of Services Licensed by DBHDS

FR: Les Saltzberg, Ph.D., Director Office of Licensing *Les Saltzberg, Ph.D.*

RE: Changes effective July 1, 2013 to the training and provision of medications via percutaneous gastrostomy tubes process and the use of epi-pens and glucagon.

I. Medication Administration via percutaneous gastrostomy tube (g-tube)

The 2013 General Assembly of Virginia passed House Bill 1759 which amended § 54.1-3408.L. of the Code of Virginia with the following paragraph:

In addition, this section shall not prevent a person who has successfully completed a training program for the administration of drugs via percutaneous gastrostomy tube approved by the Board of Nursing and been evaluated by a registered nurse as having demonstrated competency in administration of drugs via percutaneous gastrostomy tube from administering drugs to a person receiving services from a program licensed by the Department of Behavioral Health and Developmental Services to such person via percutaneous gastrostomy tube. The continued competency of a person to administer drugs via percutaneous gastrostomy tube shall be evaluated semiannually by a registered nurse.

The effective date of this legislation is July 1, 2013. The legislation included an enactment clause requiring the Board of Nursing to promulgate regulations to implement the provisions within 280 days of its enactment. **A committee of Department of Behavioral Health and Developmental Services (DBHDS) staff and representatives of the provider community developed the attached curriculum which fulfills the requirement of the new language.** This training module is a 6-hour addition to the 32-hour medication administration program currently approved in nursing regulations and used by DBHDS for training staff.

The draft regulations are in process to the Governor's office for review and approval. Until the regulations are signed by the Governor, individuals can receive the training but actual administration may not begin until the regulations take effect.

Current Medication Aides who have completed certification of Medication Management for Agents authorized under the Drug Control Act shall enroll in this course to update certification if they will be providing services to individuals with percutaneous gastrostomy tubes. This module may be added onto the overall 32-hour training for a total of 38-hours, or as a stand alone 6-hour training for those who have already completed the 32-hour training, as part of the certification of Medication Management for Agents authorized under the Drug Control Act. (Per 18VAC90-20-390)

II. Medication Administration of Insulin, Glucagon, and Epinephrine

The 2013 General Assembly of Virginia passed House Bill 1444 which amended §§ 8.01-225 and 54.1-3408 of the Code of Virginia to add providers licensed by the Department of Behavioral Health and Developmental Services (DBHDS) to those already approved to provide the administration of insulin, glucagon, and epinephrine to individuals receiving services in an emergency situation without being liable for civil damages.

The code currently allows employees of a school board who have received appropriate training to provide these medications in an emergency situation. These amendments expand the code to cover these additional providers licensed by DBHDS.

This change must also go before the Board of Nursing for a regulatory change. It will be presented at the July 17th meeting. There is existing Board-approved curriculum available for this training.

Curriculum Documents

Trainers may access the both curricula are on the Office of Licensing web page. http://www.dbhds.virginia.gov/OL-default.htm

- Curriculum: 6-hour Training: Medication Administration via Percutaneous Gastrostomy Tube (G-Tube)
- Curriculum: Administration of Glucagon and Epinephrine
- Curriculum: Administration of Insulin

Changes in the Training Process

Providers interested in providing the medication administration via percutaneous gastrostomy tube as part of their current service delivery, are required to have staff trained in the additional 6-hour module for medication administration via percutaneous gastrostomy tube.

Providers shall continue to place certificates of proof of training (the current 32-hour medication administration program and the additional 6-hour module) in staff's personnel files for inspection. **In addition, providers must now have available for inspection, the documentation that shows the semiannual demonstration of competency (staff person's ability to administer drugs via g-tube) to a registered nurse in the staff's personnel files.**

The Office of Licensing staff are available to address any concerns providers may have regarding these regulatory changes, (804) 786 1747 or by e-mailing your licensing specialist.

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****NOTE: APPENDIX B, C AND D ARE SUGGESTIONS FOR TRAINERS TO DEVELOP THEIR OWN***

i. DEFINITIONS

Aspirate: To remove an abnormal accumulation of (a liquid or gas) from the body by suction (aspiration).

Aspiration: The act of inhaling fluid or a foreign body into the bronchi and lungs, often after vomiting.

Aspiration Pneumonia: Resulting from the inhalation of foreign material, usually food particles or vomit, into the bronchi; pneumonia developing secondary to the presence in the airways of fluid, blood, saliva, or gastric contents.

Bioavailability: The degree to which a drug or other substance becomes available to the target tissue after administration.

Competency: The ability to perform activities within an occupation; to function as expected for employment; and the ability to do a job under a variety of conditions, including the ability to cope with contingencies.

Contraindications: A condition or factor that serves as a reason to withhold a certain medical treatment.

Gastrostomy tube ("G-tube"): A tube that is placed directly into the stomach through an abdominal wall incision for administration of food, fluids, and medications. The most common type is a percutaneous endoscopic gastrostomy tube.

Internal bumper: The G-tube may have a balloon or mushroom shaped cap at the end of the tube to prevent the tube from falling out.

Jejunostomy tube ("percutaneous endoscopic jejunostomy" (PEJ) or "J-Tube"): A tube placed directly into the small intestine that may not be used by Medication Aides to administer medications.

Medication Aide: An unlicensed staff person employed in a program licensed by the Department of Behavioral Health and Developmental Services (DBHDS) that has been trained and deemed competent to administer medications by G-tubes.

Medical Personnel: Staff that may be a RN, LPN, MD, PA, NP who is contracted by a program licensed by the Department of Behavioral Health and Developmental Services (DBHDS) to assume the role and function of providing medical triage, health care oversight and guidance or urgent and emergency medical situations**.**

Microencapsulated: a process in which tiny particles or droplets of a substance are separately encapsulated for controlled release: used to prolong the action of drugs, solidify liquids, etc.

Percutaneous: Refers to the access modality of a medical procedure. Performed through the skin, such as a biopsy; aspiration of fluid from a space below the skin with a needle, catheter, and syringe; or instillation of a fluid in a cavity or space by similar means.

Reflux: A backward flow of the stomach and duodenal contents into the esophagus.

Residual: Remaining in an organ or part following normal discharge or expulsion.

Residue: That which remains after removal of one or more substances.

Stoma: An artificial opening made in an organ of the body, especially an opening in the colon or ileum made via the abdomen.

Transgastric jejunal feeding tube ("G-J tube"): A feeding tube placed through the stomach into the jejunum that has dual ports to access both the stomach and the small intestine. The gastrostomy port of this tube is the only port that may be used by Medication Aides to administer medications.

ii. INTRODUCTION

The 2013 General Assembly of Virginia passed House Bill 1759 which amended § 54.1-3408.L. of the Code of Virginia with the following paragraph:

> *In addition, this section shall not prevent a person who has successfully completed a training program for the administration of drugs via percutaneous gastrostomy tube approved by the Board of Nursing and been evaluated by a registered nurse as having demonstrated competency in administration of drugs via percutaneous gastrostomy tube from administering drugs to a person receiving services from a program licensed by the Department of Behavioral Health and Developmental Services to such person via percutaneous gastrostomy tube. The continued competency of a person to administer drugs via percutaneous gastrostomy tube shall be evaluated semiannually by a registered nurse.*

The legislation included an enactment clause requiring the Board of Nursing to promulgate regulations to implement the provisions within 280 days of its enactment. This document fulfills the requirement of the new language.

Instructor:
The Instructor for this module is a licensed medical professional that has current certification as a Trainer for Medication Management program authorized under the Drug Control Act (Code of Virginia § 54.1-3408 (L)) and Regulations of the Board of Nursing (18VAC90-20-380).

- **Class Size –** 10 Students maximum

Pre-requisite for Student:
Current Medication Aides who have completed certification by a Medication Management Trainer authorized under the Drug Control Act, 18VAC90-20-370, shall enroll in this course to update their certification. Medication Aides shall complete this module as part of the certification provided by a Medication Management Trainer.

This module builds on the basic skills acquired during the Medication Management Training Program and subsequent demonstration of competency.

Purpose:
The purpose of this module is to familiarize Medication Aides with the use of percutaneous gastrostomy tubes (G) and to provide training on how to safely administer medications through a percutaneous gastrostomy tube.

Module Timeline:
Class Time – (4) Four hours
On-site Competency – (2) Two hours minimum

Requirements for Certification:
Certification will be granted by successful completion of module for G- tube and related medication administration. Requirements include:

1. Pass the Written Test for this module with 85% accuracy.
2. Skills Competency Demonstration:

a. Care and maintenance of the G- tube and stoma site;
b. Administer prescribed medication per G- tube;
c. Recognize and resolve common complications associated with use of G-tube; and,
d. Correct placement and positioning.

3. Supervised Practice of Medication Administration via G-tube:
   a. Trainee is required to demonstrate competency within 30 days of completion of the classroom training; and,
   b. This will include a minimum of three (3) observations by a licensed Registered Nurse, (RN), of a student performing the tasks with an individual who has a G-tube.

Maintaining Certification:

1. The Staff administering medications by a gastrostomy tube must attend a semi-annual Refresher Module with competencies, instructed by an RN.
2. Demonstrate ongoing competency by verbalizing key content of this module and demonstrating accurate technique for administration of medication through a G-tube.
3. If there is a lapse in completion of the Refresher Module, the staff whose certification has expired may not be assigned to related tasks until requirement is met within 30 days from expiration date.
4. After 60 days since certification lapse, the Initial training module and competency requirements must be repeated.

H. GENERAL INFORMATION

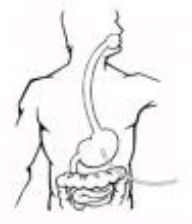
Performance Objective:
Given information and demonstration of tasks the student will return demonstrate the basic facts about the purpose, use and stoma care related to gastrostomy tubes.

A. PURPOSE OF PERCUTANEOUS GASTROSTOMY (G-) TUBES

1. The gastrostomy tube is a temporary or permanent means of feeding an individual when the normal passage of food into the stomach is altered by a physical blockage or the swallowing process is impaired.

2. An individual cannot take in adequate food or liquids by mouth to sustain normal growth and development.

3. Neurological or medical conditions such as:
   - Anorexia
   - Cerebral Palsy
   - Craniofacial abnormalities
   - Dementia
   - Diseases such as Cystic Fibrosis
   - Impaired absorption of nutrients from the small intestines
   - Impaired swallowing: swallowing involves voluntary and involuntary control
   - Increased metabolic need
   - Medication side effects
   - Muscular Dystrophy
   - Oral or esophageal cancer
   - Pain
   - Stroke
   - Others



<u>POSITIONING FOR MEDICATION ADMINISTRATION</u>

After confirmed proper placement of the tube, positioning the individual is the most important factor to prevent complications. Instructions for correct positioning from Physician's Orders must be followed at all times. Many individuals must remain in the prescribed position for up to two hours after receiving medication administration to prevent complications such as a reflux or aspiration pneumonia which can lead to permanent lung damage or death.

Always follow positioning instructions. Positioning an individual in an elevated position of 30-45 degrees in bed or in an upright position in a chair increases the movement of stomach contents from the stomach into the intestines. Individuals must never be placed into a flat position which will increase the chances of reflux and aspiration pneumonia. Physician orders might require that an individual may be positioned on their right side with their head elevated 30- 45 degrees to enhance stomach emptying.

Components of G-Tubes

1. Feeding Adapter: This connects the tube to the feeding administration set.
2. Balloon Inflation Port: This port is used to inflate a balloon which secures the tube in place internally.

3. Double Lumen Adapter: Some tubes have two (2) or more lumens (ports) to them. Typically, these tubes combine a gastrostomy tube with a jejunostomy tube. Medication will be given in one lumen and nutrition in the other. These types of tubes should be clearly marked with a permanent marker.
4. Bolster: Plastic disk that secures the tube externally.

B. DESCRIPTION OF G-TUBES

1. Basic Gastrostomy Tube

a. A gastrostomy tube is catheter that is made of rubber, latex or silicone.
b. It is available in a variety of sizes (e.g.: 14FR - 24FR).
c. A deflated balloon is located in the end of the tube that is inserted into the stoma (surgical opening). Once the tube is inserted, the balloon is inflated to prevent the G-tube from coming out.
d. An anchor is threaded onto the tube prior to insertion to prevent migration of the tube and minimize movement of the tube.

2. Low Profile Gastrostomy Tube

a. A low profile gastrostomy tube is a small skin level gastrostomy tube made of silicone.
b. There is an inflatable balloon at one end, and a “flip top” cap at the other end.
c. This tube lies flat against the abdomen of the person.
d. Tubing is attached to the low profile gastrostomy tube when the individual is fed or is to receive medication.
e. The size and circumference will be printed on the tube, (For example: 18Fr., which is the circumference of the tube.) A button tube will also have the length printed in cm.

Non-balloon type tubes, such as a Malecot or Bard Button, need to be removed and reinserted by a physician. They usually require some sedation or mild analgesics and the use of endoscopic techniques. Non-balloon tubes can be long or low profile. They tend to last 2-5 years but must be removed and replaced endoscopically by a physician.

Examples of balloon type bolsters include the Foley or Corpack (which has an internal bolster filled with water). Another example is the MIC-key low profile button (with a water filled internal bolster). These can be replaced by competently trained RNs that can assess the tube for proper placement and continued use. These tubes are generally stable for six (6) months to a year on average.

C. TECHNIQUE TO VERIFY THE PLACEMENT OF THE TUBE / CHECK FOR RESIDUALS

1. Upon opening the G-tube, air may escape immediately. Hold the tube away from you as some gastric content may escape forcefully out of the tube.
2. Longer tubes have markings on the side of the tube. Check to make sure the marking is at the correct point. The nurse will mark the original marking on the G-tube and record.
3. Connect the 60 ml syringe to the tube port of entry. Gently pull back on the plunger until you no longer obtain fluid and observe for stomach content. This will be the residual amount. Proper placement is insured if stomach contents are present. Gently return the fluid into the stomach. If the stomach content is 100ml or more call medical personnel unless directed otherwise by the

ordering physician. (Refer to section III. Interventions for Complications Related to Gastrostomy Tubes)

4. If the Residual amount is 100ml or more than the amount ordered for the individual, do not proceed with the medication administration. Notify medical personnel for further instruction.

Prior to Administering Medication:

- Check for proper identification of the person.
- Clear the tubing of any residue.
- Check for patency by flushing the tube with 30ml of warm tap (faucet) water (NOT HOT)
- The warm water should flow freely without the use of a plunger. (Refer to section III. Interventions for Complications Related to Gastrostomy Tubes)

VENTING A GASTROSTOMY TUBE

If an individual's stomach becomes hard and swollen after feedings, venting (burping) the tube may help. This burping may be done before feedings or intermittently between feedings if excess air and gas are in the stomach.

1. Wash hands.
2. Gather materials: water, syringe and gloves.
3. Position resident upright; at least at a 30 – 45 degree angle (see physicians' orders).
4. Provide privacy.
5. Put on gloves then gently pull the G-tube out from under clothing. Expose the skin only to gain access to vent the tube.
6. Clamp or pinch off tube and open the feeding port.
7. Attach 60ml syringe to gastrostomy tube opening.
8. Withdraw or aspirate to check for stomach contents-note color and amount in syringe. If aspirate is more than what is in the individual's physician orders, call medical personnel.
9. Push contents gently back into stomach, clamp off tube, remove syringe and remove plunger from syringe.
10. Attach syringe to tube opening again and pour 30 ml of water into the syringe.
11. Hold syringe/tubing even or slightly below stomach level so that the water does not run into stomach when tube is unclamped.
12. Hold syringe so the opening is directed away from you and the resident.
13. Unclamp the tube (vent tube) so air may escape for 1-5 minutes or as instructed by medical personnel.
14. After venting the tube, allow the water to flow into the tube.
15. Clamp as soon as water has been instilled. Close the feeding port.
16. Clean up supplies and work area. Wash hands.
17. Document on the medication administration record (MAR) that tube was vented.

D. TUBE REPLACEMENT

- A replacement tube should be available at all times for each individual.
- Medical personnel will evaluate the need for G-tube replacement as per agency policy.
- G-tubes that are not functioning properly will be changed by licensed medical personnel.

If a tube is inadvertently pulled out:

1. Staff will cleanse the area with soap and water then cover the stoma with clean gauze to prevent drainage of gastric content on to the skin.

2. Notify the medical personnel immediately regarding the status of the G-tube for directions
3. If the individual is directed to the Emergency Department: Be sure to take the replacement G-tube with the individual to the Emergency Department

Stoma Inspection

The stoma is the surgical opening into the stomach where the tube is inserted.

Skin around the stoma site should be washed with soap and water on a daily basis. Skin protecting ointment may be used around the site as ordered by medical personnel. Do not place tape on the skin; place tape onto the dressing only. If granulation tissue develops around the stoma site Home Staff should notify medical personnel for assessment of the skin condition and provide further instructions. If the area around the Stoma is red, warm to touch or painful to touch, medical personnel should be called for further evaluation and treatment.

Medications may be administered safely if granulation (over growth tissue) is noted around the stoma site. (Also known as Hyperplasia.)

Redness, swelling and warmth around the stoma site should be reported to medical staff for further evaluation and follow up.

Gauze or special bumpers maybe placed around the G-tube to help protect the skin as ordered by medical staff. These items should be checked at each medication administration pass to be sure they are clean and dry.

E. INFECTION CONTROL

Hand hygiene is a general term that refers to a method of removing germs from the hands so they cannot be transmitted to anyone else. The two most common types of hand hygiene are hand washing with soap and water and using an alcohol-based hand rub.

- Perform hand hygiene thoroughly before you begin to prepare medication.
- Apply Personal Protective Equipment. Gloves should be changed between each individual; perform hand hygiene each time gloves are removed.

Care of Equipment and Supplies for G- Tubes

- Immediately after completing the administration of medication all supplies are to be cleaned.
- Mild soap and water is used then rinse the equipment with warm water.
- Gravity Bags should have water placed in them and allow water to run through the tubing.
- Extension tubes if used should be removed from the G-tube button and washed.
- IV poles and pumps should be wiped down after each use. Medication maybe difficult to clean if dried on equipment.
- Syringes and extension tubes should be changed weekly and stored in the individual's personal container to air dry.

Cleaning the Equipment:

- Rinse the feeding bag with warm water. Be sure to flush all water out of the tubing and leave open to air to dry.
- Wash the syringe and measuring cup in warm soapy water.
- Rinse and dry.
- Replace items on tray covered with a paper towel or clean cloth, then place in individually labeled bins.

- Cover with paper towel or clean cloth. Store in a clean area.
  Alternative: Syringes may be put back in their original container labeled with the individual's first name, last name, initial and date.

When to Change Equipment:

- Syringes and extension tubes should be changed weekly
- Medication cups and syringes for measuring medication should be changed two (2) times a week. If you are unable to visualize the numbers on the syringe or medication cup, discard these items

F. PHYSICIANS ORDERS FOR MEDICATION, FLUIDS

A current physician's order is to include the following:

1. Right Person.
2. Right Medication.
3. Right Dose.
4. Right Route (G-tube).
5. Right Time.
6. Right Position.
7. Medication may be crushed only by physician's order.
8. Acceptable amount of residuals.

G. ROLE OF THE NURSE

The RN or LPN, with demonstrated competency, is involved in the process of administration of Medication via G-tubes by certified staff in a program licensed by DBHDS. The duties of the nurse include:

1. Training

a. Provide Initial Module for Medication Administration via G-tube.
b. Complete On-site Observations and On-site ongoing training.
c. Facilitate bi-annual Competency Class.
d. Provide Remedial Instruction for staff deficiencies.

2. Oversight

a. Verify Staff Initial Competencies for tasks related to the G-tube
b. The RN or LPN provides quarterly:
   i. Assessment of the individual who has a G-tube.
   ii. Verify the integrity of the tube.
   iii. Observation of non-licensed staff provides supports using the G-tube.
   iv. Reviews related documentation.
   v. Make determination of safe practice techniques during use of a G-tube.
   vi. In the event of unsafe practices, the nurse has the authority to intervene.

3. Tube Replacement

a. The RN or LPN, with demonstrated competency, may replace a tube with a balloon type internal bolster
b. Tubes with internal solid bumper require an endoscopic procedure for re-insertion by a physician.

4. Resource for Ongoing Support and Guidance

II. MEDICATION ADMINISTRATION VIA GASTROSTOMY TUBE

Performance Objective:
Student will demonstrate tasks required before, during and after medication administration via gastrostomy tube with an RN.

GENERAL GUIDELINES:

1. Follow all procedures for preparation of medication/infection control for administration according to Medication Administration regulations and procedures.
2. Familiarize yourself with the individual's medical history and meal-time guidelines.
3. Turn off pump to stop continuous feeding 1-2 hours prior to medication administration if medication is associated with incompatibility or with the nutritional formula. Turn off continuous nutritional feedings for 30 minutes prior to administration if the medication should be given on an empty stomach.
4. **Physician's Order:** A current physician's order is required for the administration of any medication via G- tube. Tablets that must be crushed prior to administration via feeding tube require a specific order related to crushing.

MEDICATION-RELATED GUIDELINES:

1. Dosage Forms for G-tube Medication Administration
   - Liquid Preparations
     Administer liquid with proper dilution.
     Immediate-Release Tablets
     Administer immediate-release tablets after crushing and mixing with warm water.
   - Immediate-Release Capsules
     Administer immediate-release capsules after crushing capsule contents and mixing with warm water.
   - Gelatin Capsules
     Punch a pinhole in the capsule and squeeze out the contents and mix with warm water.

2. Crushing Medications

Unless directed by a physician's order, DO NOT crush enteric coated, sustained-release, enzyme-specific, buccal or sublingual tablets or capsules.

GASTROINTESTINAL CONSIDERATIONS

3. Incompatibility of Medications With Enteral Solutions
   - Enteral nutritional feedings may alter the bioavailability of some medications. DO NOT ADD medications to an enteral nutritional feeding formula or to an empty nutritional container unless ordered by a physician.
   - Some medications are considered physically incompatible with enteral nutritional formulas because they may precipitate and clog the tube: e.g. Crushed ibuprofen tablets, ferrous sulfate, aluminum hydroxide.

SPECIFIC PRODUCT CONSIDERATIONS

4. Sustained-release formulations: (a term applied to a drug that is designed to deliver a dose of a medication over an extended period.)
   - Generally are denoted by the following suffixes: CC, CD, CR, ER, LA, SA, SR, XR, XT, XL.

The pellets inside SOME microencapsulated dosage forms may be poured down the tube after being removed from the capsule, provided that the pellets are not crushed. Medications administered in this manner by physician order include: *AVINZA,DEPAKOTE SPRINKLE, EFFEXOR XR, TOPAMAX SPRINKLE, MICRO K, KADIAN*.

BULK FORMING LAXATIVES

Bulk forming laxatives, such as Psyllium (e.g. Metamucil) should NOT be administered through feeding tubes. (Refer to the Physician's Orders.) These products form a semi solid mass that may occlude the tube.

MEDICATION ADMINISTRATION VIA GASTROSTOMY TUBE PROCEDURE:

1. Assemble necessary equipment:
   a. Medication to be administered.
   b. 60ml syringe with catheter tip.
   c. Pill crusher or mortar and pestle.
   d. Warm tap water for dissolving medications.
   e. Warm tap water for flushing enteral tube or water for irrigation as recommended. Enough water for pre and post flushes.
   f. Clamp
   g. Gloves

2. Prepare medications for administration:
   a. Crush immediate-release tablets into a fine powder then dissolve in 5ml of warm water, or prescribed amount.
   b. Open immediate-release capsules, crush contents into a fine powder and dissolve in 5ml of warm water or prescribed amount.
   c. Dilute liquid medications with 5ml of warm water prescribed amount.
   d. Gelatin capsules, punch a pinhole in the capsule and squeeze out the contents, mix with 5ml of warm water or prescribed amount.
   e. **DO NOT** crush sustained-release capsules and enteric coated capsules unless directed by physicians order.
   f. Shake suspension vigorously before pouring and crush pills finely before mixing with water or other liquid
   g. Prepare and administer medications separately

3. Establish privacy for the individual (but avoid the bathroom).
4. Explain the procedure to the individual.
5. Position individual in correct position.
6. If feeding is in progress, clamp or pinch G-tube before unplugging or disconnecting.
7. Place plug or hang feeding bag tubing so that they remain free from contamination.
8. If a pump is being used for continuous infusion, turn it off.
9. Check for proper tube placement by aspiration of stomach contents.
10. Check gastric contents for residual feeding.
11. Return residual contents to the stomach. If more than 100ml return residual and call medical personnel.
12. Remove plunger from the 60ml syringe and connect syringe to clamped tubing.

13. Insert tip of syringe barrel (which has been separated from plunger) into the tube while continuing to pinch off the tube.
14. Put prescribed amount of water in syringe and flush tubing using gravity flow. Clamp tubing after the syringe is empty, allowing water to remain in the tube.
15. Pour dissolved/diluted medication in syringe and unclamp tubing, allowing medication to flow by gravity.
16. Flush tubing with 30ml of water or prescribed amount. (If administering more than one medication, flush with 5ml of water or prescribed amount, between each medication.)
17. If administering more than one medication administer clear liquids first, then dissolved tabs and thick liquids last.
18. End medication administration with 30ml (or other instructed amount) water flush.
19. Pinch off the tube just prior to syringe being completely emptied and detach syringe.
20. Reinsert plug/re-clamp G-tube.
21. Maintain individual in upright position for 30 minutes or as ordered by a physician.
22. Restart continuous feeding, if appropriate. If it is a medication with incompatibility issues, leave pump off for 1-2 hours after medication administration.

23. Documentation:
    - Medication given, dosage, time and date, route, amount of dilutent and amount of flush.
    - Verification of tube placement.
    - Amount of residual gastric content.
    - NOTIFY medical personnel if residual volume is MORE THAN 100ml or other amounts prescribed by the physician.
    - Individual's response to the procedure.
    - **DO NOT** attempt to clear clogged enteral tubes with carbonated beverages, juices etc. Water should be used to clear the tube.
    - If the individual refuses the procedure, the reason(s) why and intervention taken.

III. INTERVENTIONS FOR COMPLICATIONS RELATED TO GASTROSTOMY TUBES

REASONS TO CONTACT MEDICAL PERSONNEL:

A. Medication Aide will contact medical personnel for the following:
1. The feedings are not being tolerated (signs: diarrhea, stomach is hard or swollen, vomiting, cramping).
2. There are signs of infection around the stoma site such as redness, swelling or drainage.
3. There are signs that the tube has migrated: obvious shortening of the tube and intestinal cramping, retching or vomiting.
4. If stomach fluids from the gastrostomy tube or the stoma have drained onto the resident's skin the fluids will irritate the skin. The affected area should be cleansed thoroughly with soap and warm water and dried immediately. The longer the fluids are in contact with the skin the greater the irritation will be. Report any irritation to nursing staff.
5. If the tube is blocked preventing the flow of fluids.
6. Any abnormal findings (unusual for the individual) or concerns for example: coffee ground material, tube dislodged, or difficulty breathing may constitute an emergency

B. Medical personnel will contact the physician for the following:
1. Any of the above, as needed.
2. The tube needs to be removed or replaced and a standing order has not been written.
3. Any difficulty in reinserting tube.

4. If the stoma is less than 6 months old, an X-ray must be taken to verify tube placement prior to use of the tube.

POTENTIAL PROBLEMS OR COMPLICATIONS

It is always better to PREVENT than treat a problem, but if any of the following occur, do not panic.

TUBE COMES COMPLETELY OUT	
Possible Causes	➢ Individual pulls on the tube ➢ Inadvertently gets caught during a transfer ➢ The balloon bolster deflates or bursts
Action to Take	1. After washing area with soap and water and drying it, cover the area with gauze to prevent leakage of gastric content onto the skin of the individual. 2. Contact medical personnel. **3.** Do not use the tube for any reason until medical personnel has reinserted a new tube and assessed that it is in the correct place. This is done because a stoma will begin to close. After 2 hours a smaller size tube may be needed and after 4 hours the stoma may close completely.
Prevention	➢ Secure under clothing when not in use. ➢ Disconnect the tube from feedings during transfers or when not in use.

TUBE APPEARS DISCOLORED OR IS DAMAGED	
Possible Causes	➢ The tube is old and needs to be replaced. ➢ The tube is not being flushed correctly before and after every medication administration. ➢ Possible infection around stoma site (thrush, etc.). ➢ Medications are being mixed together or being added to nutritional products.
Action to Take	1. Arrange to have the tube replaced. Replacement tubes should be available on site for each individual. If it is a tube that must be replaced using endoscopy carry the replacement tube to the hospital. 2. Review proper water flushing after medications. Be sure all staff understand the appropriate amount of flush and when it needs to be done. **3.** Follow physicians orders for application infection specific medication around the stoma site.
Prevention	➢ Medical Personnel will observe the G-tube quarterly or as by manufacturer with each medication administration observation and make arrangements for G-tube replacement. ➢ Flush the tube with water after all medication administration.

BLOCKED TUBE	
Possible Causes	➢ Not flushing the tube after every nutrition and medication administration. ➢ Not crushing medication completely and allowing to dissolve in warm water. ➢ Attempting to instill thicker nutrition such as pureed food through the tube. ➢ A small diameter (French) tube. ➢ Mixing medications that are not compatible. ➢ Mixing medications with nutritional products.
Action to Take	1. Attempt to unclog the tube using warm water to flush. 2. Pinch (Milk or Strip) the tube from top to bottom to attempt to dislodge any medication that is stuck in the tube. 3. Rotate the tube. 4. Reposition the individual on their right side when possible and wait 15 minutes. 5. Contact medical personnel if unable to unclog the G-tube. 6. Medical Personnel to insert a new tube or contact the physician for tubes that need to be replaced with an endoscopic procedure.
Prevention	➢ Always flush with warm water before and after medication administration. Warm water clears the tube more efficiently than cold water. ➢ Flush the tube IMMEDIATELY with 30ml of water if a feeding must be interrupted (stopped) before the water flush has been given to prevent clogging. Resume the feeding as soon as possible. ➢ Place tubing in upward position on upper abdomen or chest; NEVER put tubing in the incontinence product area. ➢ ALWAYS cap tubes and syringes to prevent cross contamination and insure labels are intact. ➢ Always use liquid medication when available. ➢ Ensure tablets are crushed as finely as possible and given time to dissolve in warm water. ➢ Must have physicians' order to crush medications. ➢ Never mix medications together or mix in with formula/feeding.

LEAKAGE AROUND THE SITE	
Possible Causes	➢ Balloon is deflated. ➢ The diameter of the tube is smaller than the diameter of the stoma. ➢ The tube has migrated into the intestines. ➢ Formula or flushes are being given too quickly.
Action to Take	1. Notify medical personnel to re-inflate the balloon or replace the tube if the balloon no longer functions properly. 2. Medical personnel may arrange for a new tube that is a larger diameter or shorter length button depending on the cause of the leakage. 3. Gently pull up on the tube until you feel resistance from the internal

	bolster. Then slide down the external bolster so it is up almost against the skin.
Prevention	➢ When assessing the tube the medical personnel should also check the integrity of the balloon. ➢ If the tube does not have marking on it from the manufacturer, a permanent marker can be used to mark the proper position of the tube. The length of the tube outside the stomach should be documented in the individual's medication record at the time of insertion.

SKIN IRRITATION, CHRONIC LEAKAGE OR BLEEDING AROUND THE STOMA	
Possible Causes	➢ Leakage of stomach content. ➢ Not cleaning and drying around the stoma site daily and as needed. ➢ Stomach may need to be vented because of excess gas in the stomach. ➢ Individual may have gained or lost weight making the fit of the tube compromised.
Action to Take	1. A foam dressing or gauze may be applied around the stoma to absorb excess fluid. 2. The area around the stoma should be washed with soap and water and dried on a daily basis and whenever the area has become moist. A skin barrier ointment may be applied daily as well if ordered by the physician. 3. If the abdomen appears bloated the tube should be vented to release excess gas and decrease the pressure on the tube. 4. If the individual has gained or lost weight of 10 pounds arrangements should be made to change the tube.
Prevention	➢ Check that the cap on the tube is closed securely and not inadvertently leaking. ➢ Keep the skin clean and dry with skin barrier ointment as ordered by the physician to prevent deterioration of the skin around the stoma. ➢ Rotate the tube 360 degrees daily. ➢ Venting of the tube can be done before and after medication administration to prevent the buildup of gas in the stomach. ➢ If the tube has been in place longer than 10 years and the individual has moderate to severe scoliosis the gastroenterologist or surgeon may need to be consulted in regards to changing the placement of the stoma. A wound nurse may also need to be consulted to treat skin that has a large open area of irritation secondary to chronic drainage or this chronic leakage.

GRANULATION	
Possible Causes	➢ Granulation may often occur 6-8 weeks post operatively of new tube placements. ➢ If the tube has been in place longer than 6-8 weeks, there may be too much movement of the tube.
Action to Take	1. Often no treatment is needed. 2. If there is increased irritation or bleeding, a foam dressing may be used. 3. Consultation with a wound nurse may be indicated. 4. The physician may order silver nitrite to be applied around the site by licensed medical personnel. 5. The tube should be checked daily to ensure the internal and external bolster are holding the tube in the proper position.
Prevention	➢ An anchoring device may be used for a longer tube to avoid excessive movement of the tube.

ASPIRATION	
Possible Causes	➢ Formula or medication has entered the lungs. ➢ Coughing, gagging, runny nose followed by fever in 4 to 6 hours may be observed.
Action to Take	• Stop administering the medication • Seek medical attention immediately
Prevention	1. Ensure proper positioning before administering medication. Head must be elevated according to individual's physician orders. 2. If the individual has nausea or vomiting hold all G-tube infusions including medications and contact the medical personnel for guidance.

REFLUX	
Possible Causes	➢ Delayed stomach emptying. ➢ Improper position.
Action to Take	1. Vent tube and slow down rate of medication 2. Be sure the individual is positioned on their right side if possible, in at least a 30 degree angle. Head must be elevated according to individual's physician orders. 3. Discuss with medical personnel medication to improve stomach emptying and decreased reflux.
Prevention	➢ Vent tube before and after meals. ➢ Ensure correct position for all medication fluid flushes. Head must be elevated according to individual's medical plan of care. ➢ Observe for formula or medication in the mouth or nose and report to medical personnel or further evaluation and follow up as needed.

APPENDICES

APPENDIX A STAFF COMPETENCY EVLAUATIONS

APPENDIX B STUDENT HANDOUT PACKET*

APPENDIX C GUIDELINES FOR TRAINER*

APPENDIX D RESOURCES*

**NOTE: APPENDIX B, C AND D ARE SUGGESTIONS FOR TRAINERS TO DEVELOP THEIR OWN*

APPENDIX A:

STAFF COMPENTENCY EVALUATIONS - WRITTEN TEST

STAFF COMPENTENCY EVALUATION

Staff Name: _____ Job Title: _____

	GASTROSTOMY TUBE – GENERAL KNOWLEDGE	Rating S	Rating U
1.	Verbalizes what gastrostomy tubes are and why a specific individual has a tube.		
2.	States why water flushes are needed.		
3.	Verbalizes the importance of good hand washing and cleanliness of G-tube equipment as essential in safe administration of medication.		
4.	Verbalizes the importance of elevated positions during medication administration and flushes.		
5.	States the importance of preventing the tube from being pulled or pulled out		
6.	States what they would do if the individual vomits while the medication is being administered.		
7.	States what they would do if the individual has difficulty breathing.		
8.	States what they would do if the individual has diarrhea.		
9.	States at least three causes of vomiting.		
10.	States what to do if the stoma site has redness, swelling or purulent drainage.		
11.	States what they would do if the tube becomes blocked.		
12.	States what they would do if the tube became dislodged or appears to have moved out of place.		

☐ Initial ☐ Retest *Key: S – Satisfactory/U – Unsatisfactory*

REGISTERED NURSE OBSERVING PROCEDURE(S):

The staff person named above has successfully completed the skills necessary to:

Date	Task	RN Initial
	Describe purpose of G-tube.	
	Explain use, cleaning and maintenance of equipment.	
	State action plan for problems that may occur during medication administration.	

COMMENTS:

Registered Nurse Signature:		**Initials:**		**Date:**	
Staff Signature:				**Date:**	

STAFF COMPENTENCY EVALUATION

Staff Name: _____ Job Title: _____

GASTROSTOMY TUBE – MEDICATION ADMINISTRATION		Rating S	Rating U
1.	Verbalizes why only licensed personnel and non-licensed certified staff who have successfully completed specialized G-tube medication training may administer medication through a G-tube.		
2.	Verbalizes that a refresher competency evaluation may be needed if there is a lapse between staff training and need to assist with medication administration via G-tube.		
3.	Follows all procedures for preparation of medication/infection control for administration according to Medication Administration Assistance regulations and procedures.		
4.	Demonstrates correct procedures for standard water flushes (unless changed per physician orders): Flush 30 ml water before and after all medications.		
5.	Assembles necessary equipment and amount of water for pre- and post- flushes.		
6.	Prepares medication according to standard procedures. Shakes suspension vigorously before pouring and crushes pills finely before mixing with water or other liquid.		
7.	Informs the individual about the process of medications by the G-tube.		
8.	Checks for proper identification. Of the individual.		
9.	Checks G-tube placement correctly		
10.	Positions individual in correct position		
11.	Clamps/Pinches G-tube before unplugging or disconnecting feeding.		
12.	Places plug or hangs nutritional bag tubing so that they remain free from contamination.		
13.	Inserts tip of syringe barrel (which has been separated from plunger) into the tube while continuing to pinch off the tube.		
14.	Pours 30 ml or other instructed amount of water into syringe and allows it to flow into stomach.		
15.	Pinches off the tube just prior to syringe being completely emptied.		
16.	Pours medication into the barrel of syringe with 5 ml of water between each **type** of medication.		
17.	Ends medication administration with 30 ml (or other instructed amount) water flush.		
18.	Reinserts plug/re-clamps feeding tube.		
19.	Documents administration according to standard procedure for the provider/facility policy.		

☐ Initial ☐ Retest *Key: S – Satisfactory/U – Unsatisfactory*

REGISTERED NURSE OBSERVING PROCEDURE(S):
The staff person named above has successfully completed the skills necessary to:

Date	Task	RN Initial
	Explain requirements for staff to administer medication via G-tube.	
	Demonstrate procedure for medication administration via G-tube.	
	Demonstrates accurate documentation.	

COMMENTS:

Registered Nurse Signature:		**Initials:**		**Date:**	
Staff Signature:				**Date:**	