



UVM HEALTH NETWORK – CENTRAL VERMONT MEDICAL CENTER

# 2017 Quality Study STD 4.7 PEG (Percutaneous Endoscopic Gastrostomy) Study

*(Attachment to 2017 Cancer Program Public Report)*

## PROJECT AIM:

This study aims to determine whether patients served by the National Life Cancer Center are sufficiently prepared before PEG tube insertion to confidently perform self-care activities independently at home during the oncology treatment course.

## WHY THE PROJECT IS IMPORTANT:

Dysphagia, with associated malnutrition is a common feature in up to 64 % of patients with cancers of the head and neck region, the esophagus and the gastro-esophageal junction (Donaldson and Lenon Cancer 43 (Suppl 5):2036-52, 1979). These patients usually require alternate routes of feeding during treatment. Percutaneous endoscopic gastrostomy tube insertion is a useful means of providing enteral nutrition to patients with swallowing problems when weight maintenance and obtaining proper nutrition is especially difficult. Tube feeding can safely and significantly increase the quality of life, maintaining appropriate weight levels and nutritional requirements.

For those patients who require longer term nutrition, it is customary to place the tube directly into the stomach through the abdominal wall. The PEG tube extends from the interior of the stomach to outside the body through a small incision only slightly larger than the tube itself in the abdominal wall. The tube is prevented from coming out of the stomach by either the “pigtail” or balloon method. About three inches of tubing will protrude from the incision area. Initially, there may be some discomfort while getting used to using the system, from gas or air, or from adjusting to the liquid foods themselves.

Greater care is required during the first week the tube is in place, after the surgery has been performed. The area around the tube insertion must be kept thoroughly clean and covered with clean, gauze. General care includes inspection of the tube and insertion site to determine whether it has pulled away from the abdominal wall, if leakage occurs around the insertion site or if the stoma site becomes enlarged. To maintain patency, the patient should flush the tube with clear water before and after feedings, or after medications have been administered through the tube. Strict handwashing with soap and water before preparing formula or having contact with the PEG system is imperative to prevent infection.

Complications of this therapy have a 1% chance of gastric hemorrhage and peristomal leakage, and an 8% chance of infection, stomal leaks, tube extrusion or migration, aspiration and fistula formation. Aspiration can occur when food is inadvertently inhaled into the lungs. Keeping an upright position during feeding greatly minimizes the risk of aspiration which can potentially lead to pneumonia. (Retrieved from The Oral Cancer Foundation, <http://oralcancerfoundation.org/nutrition/peg-tube-feeding-overview>, July 25, 2017).

In order to determine the patient’s perception of readiness to perform self-care after the insertion of a PEG tube, further study is needed to identify concerns and opportunities for improvement related to patient education and coordination of care across the continuum of services provided.

## STUDY DESIGN:

The study design included detailed assessment of current processes. Discussions were held with:

- GI departments at Central Vermont Medical Center and University of Vermont Medical Center
- Endoscopy services
- Visiting nurse agency
- Radiation and Medical Oncology departments
- Local pharmacies
- Wound Care Clinic

Interviews were conducted with three recent patients who recently underwent this procedure to assess their experience. Although the sample size is small, nurses taking care of these patients felt that optimal quality of life could be improved post PEG insertion.

## FINDINGS AND RESULTS:

While some aspects of the current process are working well, the following were identified as problem areas.

- PEG tube placement is a same-day surgery procedure with sedation and is not conducive to proper teaching of home care and use of the PEG tube. Patient and caregiver receive only short-term care written instructions.  
**Result:** Upon returning home, the patient and family often do not know how to care for the patient or the tube.
- The physician performing the procedure does not order pain medication. Pain medication must be ordered by the patient's treating physician.  
**Result:** Pain medication may be overlooked causing delays in obtaining medication.
- Patients rely on a visit from a home health nurse within 48 hours of the procedure for teaching care and use of the PEG tube. The local home health agency does not have a uniform plan of teaching.  
**Result:** It may be 2-3 or more days before there is a nurse visit, and the information provided at that visit may be incomplete. This referral may be overlooked if the procedure happens at another institution.
- Radiation oncology and medical oncology have limited PEG tube teaching materials.  
**Result:** Patient and family do not have adequate information prior to procedure.
- Lack of standardized PEG tube care and teaching materials.  
**Result:** Patients often get conflicting instructions on use and care.
- There is not a set process for consulting with pharmacy about administering medications via PEG tube.  
**Result:** The patient may administer medications improperly or neglect to take medications.
- There is not a set process for referrals for wound care.  
**Result:** There may be a delay in patient obtaining wound care.

Observations by patients surveyed (3) who had a PEG tube insertion during oncology treatment:

- "It is difficult to get a "face to face" appointment with Burlington GI doctor if problems occur."
- "We needed more information to know how to use the tube and for how to care for it."
- "We need help and a contact if we have a problem with the skin."
- "We need more information on how to clean it."

## LESSONS LEARNED/ANALYSIS

This study validated the suggestion by nursing staff that patients served by the National Life Cancer Center are not provided with consistent education and some have sub-optimal confidence with self-care.

- Patients need necessary information about PEG insertion, care and nutrition prior to insertion procedure.
- Standardized education needs to be provided to patients across the continuum: i.e. Radiation Oncology, Medical Oncology, CVMC Endoscopy, CVHHH, dietician and wound care.

## RECOMMENDATIONS AND NEXT STEPS:

Our next step is to carry out a 4.8 Quality Improvement project to create a revised process that corrects the problems the study identified. The improvement plan will be created to address the following deficiencies:

- PEG flowsheet in ARIA
- Referral for procedure
- Nutrition visit
- Nursing education and demonstration visit
- Provide starter kit and written material
- Consult to pharmacy/wound care as necessary

## STUDY CONDUCTED BY:

Sophie Rossignol, RN Radiation Oncology

## REFERENCES:

Khalil, Lillian, BSN, RN "Care of Gastrostomy Tubes for Adults with IDD in Community Settings: The Nurses' Role" Volunteers of America, Chesapeake

Simons, Shellie and Remington, Ruth "The Percutaneous Endoscopy Gastrostomy Tube: A Nurse's Guide to PEG Tubes" MEDSURG NURSING March-April 2013; Vol. 22/No. 2.

Smith, N. and Mahnke, D. "How to Care for Your PEG Tube" Nov 1, 2015.

