Development of a Tracheostomy Care Education Program

By

Vanessa Claiborne, RN

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TITLE OF THESIS: Development of a Tracheostomy Care Education Plan

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Dedication

I dedicate this thesis project to my beloved, Camille.

Your smile is a beautiful ray of sunshine….

Acknowledgements

I would like to thank my Almighty God for blessing me with courage, strength and determination to accomplish everything my heart desires. I thank Him for giving me the opportunity to attend graduate school at Point Loma Nazarene University and for providing me with wisdom and knowledge to be a better person. I praise Him for the miracles and blessings that we experience in our lives, and for placing the right people in this wonderful journey that have become my inspiration.

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To God be the Glory!

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CHAPTER ONE

Introduction

Tracheostomies in the adult and pediatric population have dramatically increased from decades ago. During the 1970s, 26% of tracheostomy procedures were performed on adults and 30% were performed on children; by 2010 those numbers were 80% and 86%, respectively (Mathur & Meyers, 2011). The primary purpose of a tracheostomy is to provide a stable airway in patients with congenital or acquired respiratory, cardiovascular, or neuromuscular anomalies (Mathur & Meyers, 2011). When a patient with a tracheostomy is discharged from the hospital, long-term care is generally continued in the home care setting (Zia, Arshad, Nazir & Awam, 2010).

Tracheostomy care involves several challenges and responsibilities for the patient and family members, including sleep deprivation and social isolation and learning how to be competent and confident in stoma care, suctioning, and tracheostomy tube changes (Fiske, 2007). In addition, lack of knowledge about tracheostomy and its risks creates high levels of anxiety for patients and families (Fiske, 2007). According to Mathur and Meyers (2011), tracheostomy patients are prone to complications such as respiratory infection, partial obstruction of the cannula, accidental decannulation, and infection around the stoma. Considering these risks, it has become critical that a systematic education program be provided in the hospital prior to patients being discharged to the home care setting.

Tracheostomy complications can usually be prevented or swiftly mitigated if the patient and the patient's home caregiver have proper knowledge of how to care for the tracheostomy site (Bissell, 2011). To help reduce and prevent tracheostomy-associated complications, it is important to continually emphasize through education the importance of standard precautions

when providing tracheostomy care, identify the signs and symptoms of infection, and demonstrate competence in providing tracheostomy care. This project utilizes education in the form of one-to-one teaching, handouts, visual aids, videos, demonstration, and return demonstration in order to provide the patient and the patient's home caregiver the knowledge and skills to provide tracheostomy care.

Problem Statement

Tracheostomy is a major event for patients and their families and can trigger a mix of physical and emotional responses including high levels of fear and anxiety (Hall, 2010). Studies have shown that patients with tracheostomies reported the experience of having one is very frightening and distressing, especially when the information about tracheostomy was limited (Sherlock, Wilson, & Exley, 2009). In addition, family members or caregivers of individuals with tracheostomies experienced overwhelming burden when little information about tracheostomy care was provided to them (Hall, 2010).

Proper knowledge of tracheostomy care is important for safe and successful self-care management in the home environment once the patient is discharged from the hospital. Without solid tracheostomy care education, the patient with a tracheostomy is at high risk for developing serious complications such as infection around the stoma, respiratory tract infection, accidental decannulation, obstructed tracheostomy tube, and increased stress and anxiety related to his or her inability to verbally communicate (McGoldrick, 2010).

Significance to Nursing

Patient education is one of the most significant nursing interventions, especially for patients who will be discharged home with a tracheostomy (Bowers & Scase, 2007). Studies have shown that patients and families function well when they know what to expect and have

proper knowledge and understanding of the physical changes that will affect the patients' health and lifestyle when transitioning from hospital to the home setting (Lundy & Jones, 2009). Effective patient education promotes trust, encourages patients and families to participate in patient care, increases self-confidence in level of knowledge and understanding about care, and helps create a safe environment when transitioning from hospital to home (American Association for Respiratory Care [AARC], 2010). Nurses can also provide emotional and psychosocial support through patient education that will help reduce stress and anxiety for patients with a tracheostomy (Bastable, 2008).

Purpose Statement

The purpose of this thesis project is to develop a tracheostomy care education program for patients with a tracheostomy prior to being discharged from the hospital to the home environment. The patients' families will also be educated on tracheostomy care so the patients' needs will be addressed. Providing patient education will give patients and families the knowledge and skills needed to enhance their confidence in providing tracheostomy care that will help promote positive adaptation and safe transition from hospital to home.

A tracheostomy care education program is beneficial because it will provide patients and families with important information about tracheostomy, enhance their knowledge and abilities to perform tracheostomy care, and provide resources and support that they need to help decrease their level of stress and anxiety and cope with the challenges of living with a tracheostomy.

CHAPTER TWO

Literature Review

This project will develop a tracheostomy care education program for patients with a tracheostomy and their families to help them acquire knowledge and skills in providing tracheostomy care, reduce anxiety, and increase confidence in self-care. The following related literature was gathered through computerized literature searches on CINAHL and MEDLINE databases, which would help in the further understanding of the study. Keywords and terms searched were *tracheostomy, tracheosotomy care, anxiety, tracheostomy prevalance, adult tracheostomy, pediatric tracheostomy,* and *positive effects of patient education*.

Tracheostomy

For the purpose of this thesis project, the terms *tracheostomy* and *tracheotomy* are used interchangeably. *Tracheostomy* is a surgical procedure used to create an opening in the trachea to provide advanced airway. The stoma or opening that is created is either permanent or temporary and it is referred to as tracheostomy (Marx & Walls, 2009).

Tracheostomy, or tracheotomy, is considered one of the oldest surgical procedures. The first person to perform a tracheotomy (albeit unsuccessfully) was Asclepiades of Persia in 100 BC; later, the first successful procedure was performed by Antonio Brasavola of Italy (Sitiig & Pringnitz, 2001). In the 20th century, Chevalier Jackson's surgical technique's made tracheotomy widely popular; his techniques and principles remain in practice today (St. John & Malen, 2004). The need for tracheostomy has multiplied from previous decades. In the past, its use was limited to emergency intervention of upper airway obstruction and an elective procedure post intubation (Scott, 2005). Today, due to advances in medicine and technology and the broad use of mechanical ventilation, tracheostomy has become one of the most common surgical procedures

that is performed regularly in hospitals (Marx, Hockberger & Walls, 2009). Therefore, it has become imperative for physicians and nursing staff to acquire knowledge of the surgical procedure and post-operative patient care (Cameron, 2008).

Preoperative Education

Patient education is one of the most important nursing responsibilities, playing a significant role in attempts to change patient behavior, knowledge, psychosocial status, or health status (Close, 2006). Walker (2007) postulated that preoperative teaching positively impacts patients' involvement in their care, reduced readmission rates, contributed to an overall increase in patient satisfaction, and significantly decreased anxiety levels. Several research studies have pointed out the positive benefits of preoperative education in improving patient recovery and coping skills and reducing anxiety levels, particularly when thorough information about procedures and expected outcomes was provided (Jones et al., 2011).

In a randomized clinical trial conducted by Yang et al. (2012) to evaluate the effect of preoperative education among patients who underwent carotid endarterectomy (n=120), the patients were divided into two groups. Prior to the day of surgery the study group (n=60) was provided in-depth patient education by the nurse in addition to routine preoperative teaching by the surgeons. On the other hand, the control group (n=60) only received the routine preoperative education. The researchers measured patients' anxiety levels the day before surgery and again at time of discharge using Zung's Self-rating Anxiety Scale (SAS), and concluded that patients in the control group had higher anxiety levels than patients in the study group (58.3% > 33.3%).

In a study by Jones et al. (2011), knee arthroplasty patients (n=472) were educated preoperatively by the health care team to determine whether education reduced hospital length of stay (LOS). The patients were divided into two groups; the conventional group (n=150) received

conventional preoperative treatment and the educational group (n=322) received preoperative treatment and education. LOS was significantly reduced in the educational group (seven days) compared to the conventional group (four days).

Stress and Anxiety

Tracheostomy is stressful for both patients and caregivers, and some patients with tracheostomies experience high level of stress, anxiety, and isolation (Pudner, 2007). A study conducted by Rosenbloom, Wellenius, Mukamal, and Mittleman (2009) postulated that patients with high anxiety were at higher risk for myocardial infarction and sudden death. The term *stress* has been defined as "a subjective response of the body to change" (American Institute of Stress, 2009, p.1). According to the American Psychological Association (APA), *anxiety* is an "emotion that comprises feelings of worry and tension from known or unknown causes that may have a normal effect or an extreme negative effect that impairs the quality of life of an individual" (2012, pp 160-161).

Solid psychological preparation is an important component to help decrease stress and anxiety (Joseph, Mackley, Davis, Spear, & Locke, 2007). Four research studies showed that patient education played an important role in reducing stress and anxiety and enhancing quality of life (Asilioglu & Celik, 2004; Babaee, Keshavarz, Hidarnia, & Shayegan, 2007; Furze, Dumville, Miles, Irvine, Thompson, & Lewin, 2009; Lie, Arnesen, Sandvik, Hamilton, & Bunch, 2007). On the other hand, a research study conducted by Shuldham, Fleming & Goodman (2002) using the Hamilton Anxiety and Depression scale (HAD) showed that patient education had no effect in reducing anxiety levels between the control group and the experimental group (Shuldham, Fleming & Goodman, 2002).

In a research study conducted on patients who underwent coronary artery bypass graft surgery, the intervention group was provided with preoperative teaching, home health visits four weeks after the surgery, and one-on-one patient education was given by a nurse, while the control group only received preoperative teaching. The results using the HAD scale revealed decreased anxiety in both groups; however, the intervention group presented a more significant improvement in both anxiety and depression compared to the control group (Lie et al., 2007).

Caregiver Stress

In a descriptive study, Ferrario, Zotti, Zaccaria, and Donner (2001) conducted a survey of 63 caregivers to evaluate the psychological and psychosocial impact of tracheostomy and the amount of stress caregivers experience when tending to patients who have undergone tracheostomies. Forty of the 63 caregivers reported experiencing stress as a result of caring for patients with tracheostomies. Stress was also greater in female caregivers. Many respondents reported that caring for patients with tracheostomies left them with very restricted personal and social lives, lack of knowledge about the disease process, and the time-consuming activities of tracheostomy care as stressors. Interestingly, the caregivers noted that they felt their patients experienced more psychosocial distress than they did and caring for their patients brought satisfaction and positive meaning to their lives. Evidently, tracheostomy complications significantly increase caregivers' stress and anxiety due to the complicated nature of the disease, feelings of guilt and inadequacy to care for the patient, and the variety of emotions provoked by the patient with tracheostomy complications (Brodsky, 2008). To help relieve caregivers' stress, the authors recommended that when deciding and implementing any treatment plan, the amount of caregiver stress should also be taken into account.

Effect of Tracheostomy on Patient Comfort

There is a perception among caregivers that patients with tracheostomies experience discomfort (Demke, Patel, Dean, Rahbar, Aalst & Drake, 2008). Tracheostomy is one of the most common interventions performed in hospitals, and it provides several advantages such as patient comfort and ability to communicate compared to endotracheal intubation (Durbin, 2005). Bouderka, Fakhir, Bouaggad, Hmamouch & Hamoudi (2004) distributed questionnaires to critical nurses caring for patients with tracheostomy and found that 90% (n=60) preferred tracheostomy over endotracheal intubation. The nurses pointed out several factors that impact patient comfort with tracheostomies: easier mobility, ability to communicate, and ability to eat orally. Nurses also reported that patients who underwent tracheostomy coped better psychologically than patients who were intubated. The researchers concluded that additional studies were required to further assess the effect of tracheostomy on patient comfort.

Tracheostomy Complications

The complications resulting from tracheostomy have been reviewed in several studies. Miura et al., (2005) studied 57 home care tracheostomy patients and several complications were reported: tracheal granulations (n=9), tracheomalacia (n=8), and tracheoinnominate artery fistula (n=5). The reason for these complications could be multi-factorial. One of the main reasons was the size of the tracheostomy tube. Among seven patients with tracheomalacia and tracheal granulations, long, custom-made tracheostomy tubes were needed to successfully manage these complications. In addition, an improved endotracheal tracheostomy tube with sealed tip on the vocal cord side was used in 12 patients to prevent the development of aspiration pneumonia.

In a descriptive study by Bahng, VanHala, Nelson, Hurvitz, Roloff, Grady, and Lewis (1998) surveyed a convenience sample of 52 pediatric tracheostomy patients. Fifty-five percent

of the participants reported that tracheostomy tubes were reused, and 60% of those who reused tracheostomy tubes had developed pneumonia within the previous year. In a retrospective study Kun, Edwards, Ward, and Keens (2012) sought to determine the incidence of hospital readmission in children on home mechanical ventilation with tracheostomy (n=102). Sixty-four percent of hospital readmissions were pulmonary or tracheostomy-related; thus, pneumonia and tracheitis were the most common reasons for hospital readmissions. Overall, the authors concluded that these complications may have been prevented with proper tracheostomy care.

Theoretical Framework

The social learning theory originated by Albert Bandura postulates that each individual learns from other people through direct observation, motivation, role modeling, and from the outcomes of other people's behavior (Bandura, 1986). Two important components of the theory that relate to this project are observing and modeling the behaviors. However, learning does not necessarily mean that people will change their behavior (Sincero, 2011). For a successfully modeled behavior, the learner must incorporate the following steps: attention, retention, reproduction, and motivation (Bandura, 1986). When the learner pays attention and retains the behavior being learned, it is likely that he or she will be successful in reproducing the behavior. Consequently, motivation is the key to repeat the behavior and to keep on performing it (Sincero, 2011).

In tracheostomy care teaching, patients and their caregivers can benefit from watching videos about tracheostomy care, such as trach suctioning, cleaning around the stoma, changing trach tubes, and other techniques. Demonstration and return demonstration will help patients and caregivers learn tracheostomy care techniques through direct observation and hands-on experience. One of the goals of this project was to improve the ability of family or caregivers to

care for the patient in the home setting by decreasing anxiety levels through tracheostomy care education. Tracheostomy care teaching will provide knowledge to both patients and their family or caregivers that will help reduce their stress and anxiety and give them confidence about taking care of their loved ones. Additionally, learning by observing positive behaviors and techniques about tracheostomy care will help create positive adaptation with better outcomes due to increased knowledge about tracheostomy, tracheostomy care, and other community support and resources.

Summary

Patient education is one of nurses' most important responsibilities. This project reviewed the literature on the education of patients with tracheostomy, preoperative education, stress and anxiety for patients and caregivers, the effect of tracheostomy on patient comfort, tracheostomy complications, and caregiver stress. The findings indicated in the literature supported the evidence that patient education improves tracheostomy knowledge and impacts self-care confidence. Hence, patient education plays a vital role in providing tracheostomy care and should be designed based on the assessment of patient and caregiver needs. Appropriate patient education will enhance the skills and confidence of both patients and caregivers; thus, the purpose of this thesis project is to develop a tracheostomy care education program for patients with a tracheostomy prior to being discharged from the hospital to the home environment.

CHAPTER THREE

Methods

Proposed Course Description

Many tracheostomy patients who are discharged to the home setting can maintain tracheostomy without difficulties and function normally (Altman, 2010). Patient and family education will be reinforced and implemented by an experienced Registered Nurse (RN) with extensive tracheostomy knowledge, education, training, and clinical skills prior to hospital discharge in order to provide needed knowledge and skills associated with tracheostomy care. Patients and their primary home caregivers will be educated about the indications for a tracheostomy, the risk factors associated with tracheostomy complications, signs and symptoms of infection, and the procedure for reporting findings to a physician.

The importance of standard precautions, specifically, hand washing when providing tracheostomy care, will also be discussed. Several studies have pointed out the importance of hand hygiene in preventing the spread of infection (CDC, 2007). Education will include an overview of tracheostomy, including airway anatomy, tube location, signs and symptoms of infection and breathing difficulties, demonstration and return demonstration on how to clean the stoma, tracheostomy changes, and proper suctioning. In addition, demonstration on how to respond to an emergency such as performing cardiopulmonary resuscitation (CPR) will also be reiterated. According to the American Heart Association (AHA), 70%-80% of cardiac arrest emergencies happen in the home that it has become imperative for anyone to learn how to perform CPR (AHA, 2010).

Finally, the educator will conduct a brief discussion about resources and support groups with the family. Proper education about tracheostomy care will help not only to reduce the

incidence of tracheostomy-associated infections and complications, but also to decrease the level of stress and anxiety of the patient and the patient's family. The proposed education program will be developed as the potential key resources for nurses in the Telemetry unit as part of discharge teaching, and correct documentation that teaching has occurred will ensure that nurses implement the teaching. In addition, this education program will be included in new hire orientation and in annual competency training for all nurses in the Telemetry unit at a local hospital in Southern, California.

Proposed Course Objectives

The tracheostomy care teaching will take place at a local hospital in Southern, California, using a one-to-one teaching approach by a registered nurse (RN). The participants will include one or more of the patient's primary home caregiver(s). One of the primary goals of tracheostomy care teaching is to promote positive adaptation. Therefore, the proposed course objectives (Appendix A) are as follows:

- Explain the rationale for, risks of, and benefits associated with tracheostomy use;
- Patient and caregiver(s) should demonstrate competence and comfort in providing tracheostomy care, tracheostomy suctioning and tube changes.
- Discuss with the patient and patient's primary caregiver the importance of standard precautions in tracheostomy care; and
- Identify the signs and symptoms of tracheostomy associated complications and infections;

These proposed objectives are aligned with the Centers for Disease Control's (CDC) Standard Precaution Guidelines (2007), and Centers for Disease Control's (CDC) Guidelines for Preventing Health Care-Associated Pneumonia (2003). It is important to adhere to

standard precautions because these are infection prevention practices that apply to patient care (CDC, 2007). In addition, the social learning theory is also aligned with the student learning outcomes of this teaching project (Bandura, 1986).

Proposed Curriculum Content and Teaching Strategies

The course content for this teaching project includes assessment of participants' current knowledge, discussion of the importance of hand washing in tracheostomy care, demonstration of proper hand washing technique, thorough review and discussion of the tracheostomy care packet (Appendix C), demonstration and return demonstration of tracheostomy care, conclusion including a question-and-answer session, and provision of contact information for resources and support groups.

The lesson plan includes teaching strategies that apply to learning styles of the participants. Active learning style involves discussion, demonstration, and getting involved in the subject matter and not only passively listening to the topic being discussed (Franzoni & Assar, 2009). According to Franzoni and Azzar, "Active learning involves students' understanding and retention of information and can be very effective in developing higher order cognitive skills such as problem solving and critical thinking" (p. 12).

Assessment of current knowledge. Assessing learners' current knowledge by asking questions during pre and post teaching (Appendix B) about patient education topics and materials will allow the educator to customize patient education to the learners and give the educator guidance on topics of discussion and other information that may need to be added to the instructional session (Badarudeen & Sabharwad, 2010).

Hand washing. Several studies have pointed out that hand washing is proven to be the most effective method of stopping the spread of illness caused by viruses, bacteria, and other

disease-causing microorganisms. Water, soap, and friction are the three components of proper hand washing techniques in the hospital and in the home care setting (CDC, 2007).

Lack of active hand hygiene promotion and lack of role models for proper hand hygiene are some of the factors for poor adherence to hand hygiene (Hughes, 2006). Therefore, the importance of hand washing, demonstration, and return demonstration of proper hand washing technique will be incorporated in the tracheostomy care patient teaching. Patients and caregivers need to have an understanding of the importance of hand washing and sterile technique before performing any tracheostomy care intervention, and nurses play a vital role in teaching this simple yet very effective method of preventing the transmission of disease.

Tracheostomy care procedure. Three 20-minute instructional sessions on tracheostomy care will be facilitated by the registered nurse (RN) beginning post-op day 2 until the day of discharge. Hospital organizations must require that only experienced nurses with proper knowledge, education, clinical skills and training will participate in facilitating the education program. The vital component of patient education will be the tracheostomy care procedures, and the RN will go over the tracheostomy packet (Appendix C) that will be given to patients and their families or caregivers.

The discussion topics will include proper hand washing, the definition and indications for tracheostomies, cleaning and changing the cannula, cleaning the stoma, changing tracheostomy ties, humidification, suctioning, cleaning the suction catheters, and resuming activities. The goal of this discussion is to prepare the patient and family to handle tracheostomy care at home and to positively adapt and be confident in providing tracheostomy care.

Demonstration and return demonstration. Patient education is an essential part of patient care. It begins at the time of admission and continues until the day of discharge. Actual

demonstration by the nurse and return demonstration by the patient are some of the integral components of patient education (Durham & Alden, 2008). Return Demonstration provides opportunities for the learner to actively engage in simulation that helps enhance their visual, auditory, and tactile senses. Studies have shown that repetition of movement increases confidence, competence and skill retention (Bastable, 2008). According to Bastable (2008), demonstration and return demonstration have major advantages:

> Especially effective for learning in the psychomotor domain; Actively engages the learner through simulation of visual, auditory, and tactile senses; Repetition of movement and constant reinforcement increases confidence, competence, and skill retention; and it provides opportunity for over learning to achieve the goal. (Bastable, 2008, p. 442)

Nurses are educators and they play a vital role in implementing an effective patient education that will enhance patient confidence, promote independence, and eliminate hospital readmissions.

In summary, the proposed three 20-minute of tracheostomy care education will help promote learning opportunities that will enhance patients' knowledge and confidence about tracheostomy care. When patients feel confident about performing a task, they will experience less stress and anxiety that will lead to positive adaptation in regards to tracheostomy care.

CHAPTER FOUR

Evaluation

Evaluation is one of the most important aspects of the nursing process (Tappenden, Campbell, Rawdin, Wong & Kalita, 2012). Nurses constantly evaluate the interventions that have been applied in order to measure how patient outcomes are being met. In patient education, nurses assess and evaluate the efficacy of patient teaching, which plays a vital component in the continuity of quality care from the hospital to the home environment. Evaluation is the final phase of the teaching-learning process that continuously measures the progression of patient learning.

The evaluation of this tracheostomy care education program will include consideration of 1) the effectiveness of the teaching process and strategies, 2) the timing and environment, 3) the knowledge and information imposed, and 4) whether the course objectives have been met. Evaluation will help determine the needs of the learners and provide feedback from participants that will serve as a valuable tool for future patient teaching programs (Oermann & Gaberson, 2006). Methods of evaluation such as direct observation of return demonstration and performance, simple written questionnaires, oral questioning, interviews, and self-reporting will be used to determine the overall effectiveness of the tracheostomy care education program.

Content Evaluation and Return Demonstration

Content evaluation is a tool that should be used immediately after teaching to identify whether learners have achieved the knowledge and skills objectives (Bastable, 2006). Content evaluation of this program through learner's self-report about current knowledge, and asking questions during pre and post teaching (Appendix B) will be conducted during the teaching-learning process to determine what the patients/caregivers have learned.

According to Bastable (2006), "Asking a patient to give a return demonstration or asking a parent to describe the steps in cleaning and changing their child's wound are common examples of content evaluation" (Bastable, 2006, p. 415). Tracheostomy care skills will be evaluated by the nurse through return demonstration and direct observation. This will elicit immediate feedback and allow the nurse to correct and improve clinical skills if needed.

The primary goal of patient teaching is to empower patients and/or caregivers to confidently perform recommendations of care in their homes absent the presence of a health care professional (Falvo, 2011). If the patient/caregiver is unable to perform the required care in the presence of a health care professional and is unable to communicate clear understanding of its importance, it is unlikely the patient/caregiver will confidently demonstrate care skills in the home setting.

Performing tracheostomy care at home requires accurate, confident, and independent care skills. The return demonstration is the best way to evaluate how well information is being taught, how well the patient and caregiver perceive the information, and how well the patient and caregiver can perform the skills confidently and independently (Falvo, 2011). Verification of return demonstration will be conducted by the Registered Nurse (RN) who will be facilitating the education program.

Proposed Pre- and Post-Test

The pre- and post-test are tools used to measure cognitive learning (Dimitrov & Rumrill, 2006). Cognitive learning or knowledge of the information taught will be assessed by a simple and brief questionnaire primarily focused on what patients and caregivers must understand to effectively manage patient care in the home environment (See Appendix B).

Learners will also be asked to complete the Ask Me 3 questionnaire (See Appendix D), developed by the National Patient Safety Foundation (NPSF) and geared towards successful transition from the hospital. According to the NPSF (2013), Ask Me 3 is a patient education program designed to improve communication between patients and health care providers, encourage patients to become members of their health care team, and promote improved health outcomes. Patients and/or caregivers will take the Ask Me 3 questionnaire before and after the teaching session. The questionnaire will allow for immediate feedback and provide an opportunity to identify and correct any misunderstandings about patient care.

CHAPTER FIVE

Discussion

Implications for Nursing Practice

Nurses perform a vital role in the health care field by delivering safe and quality care to any patient population. Part of this quality care is patient education, which can impact patients' quality of life during hospital stay and, most importantly, upon discharge to the home environment. The literature argues the need for a patient education program for tracheostomy care and the role of such a program in helping reduce stress and anxiety in patients and their caregivers when transitioning from the hospital to the home setting.

The purpose of this thesis project is to develop a tracheostomy care education program for patients with a tracheostomy prior to being discharged from the hospital to the home environment. A one-on-one, in-depth education intervention provided prior to patient discharge greatly impacts patients' quality of life in a positive way.

Limitations

Many studies have documented the importance and benefits of patient education interventions, noting that they significantly increase knowledge and understanding of patients' health status, positively impacts patient's involvement in their care, reduces hospital readmission rates, positively impact patient outcomes, and increase patient/caregiver knowledge of available resources and support (Close, 2006; Jones et al., 2011; Walker, 2007; Yang et al., 2012). Hospitals that support and provide quality patient education programs also reap many benefits, including increased patient satisfaction, improved cost-effective care and meeting of regulatory standards, and increased staff satisfaction (Bastable, 2006).

On the other hand, there are several potential limitations that must be pointed out. A possible anticipated limitation to this proposed teaching project is the short duration of the teaching session. Although pre-operative teaching includes discharge instructions, the amount of information given during three twenty-minute tracheostomy education program just before discharge to the home environment may cause patients and caregivers to feel overwhelmed and they may not fully absorb all the knowledge and skills they must learn to manage tracheostomy care.

Another potential limitation to this teaching project is any learning and teaching style conflicts between nurses and patients and/or caregivers. There are many and unique methods of teaching and relaying information and students have many ways of processing and perceiving information. There may be times when nurses have difficulty assessing patients' learning styles, and this can impact the development of effective teaching strategies. Often, nurses use teaching methods they feel comfortable with rather than those that suit the patients' learning styles, which can lead to conflict. Additional factors in learning and teaching style conflicts are patient/caregiver culture; patient health literacy and perceptions of their health status; and physical conditions such as pain, anxiety, fatigue, and fear, and patients' ability to focus while experiencing these conditions.

A final important limitation to this education program could be financial issues. Providing educational services to patients and their families requires the full support of hospitals and their leaders. However, due to budget cuts, funding for the program (e.g., teaching materials, miscellaneous fees, etc.) could be challenging. Proper planning, effective communication, and full support of all staff and administrators are key to a successful patient education program.

Areas for Future Study

The research of patient education programs provides valuable ideas and important information especially when related to increased patient satisfaction. Research on tracheostomy care and management is well represented in the literature; however, research about evaluating a tracheostomy patient education program is absent. A potential future research study could be of a preceptor training program to help train nurses and health care ancillary staff (e.g., speech pathologists and respiratory, physical, and occupational therapists) about tracheostomy care. With this kind of preceptor program, patient teaching is not limited to nurses but extended to other members of the health care team.

Secondly, further research should be conducted on the methods used in this thesis project to evaluate the effectiveness of the teaching (assessment, hand washing, demonstration and return demonstration, etc.). Researchers should also investigate whether three twenty-minute patient education sessions are effective and beneficial to patients and caregivers. In addition, developing a formalized pre and post test tool that will assess learning has occurred for statistical significance could also be beneficial for future studies.

Thirdly, research needs to be conducted on the communication issues of the tracheostomy patient that may interfere with the teaching-learning process. Using different methods of communication during teaching would help the educator and the patient eliminate the communication and learning barrier and establish a successful education program.

Finally, future research could help in developing a tracheostomy care education program provided by home health nurses. Because teaching time is limited in hospitals, nurses could continue patient education at the patients' home environment through home health visits. Additionally, evaluating home health outcomes would be beneficial for future research. With

evidence-based curriculum geared towards home health, nurses will be able to assess, evaluate, and continue patient teaching until desired goals and positive patient outcomes have been met.

Conclusion

Patient education is one of the most important nursing responsibilities, designed to improve patient health and help increase patients' ability to manage their health. A well-designed tracheostomy care education program will be beneficial for patients, caregivers, nursing staff, hospital administrators, and other health care ancillary staff. Patients and their caregivers function well and transition better in the home environment when they are well-informed, have sufficient knowledge, and have proper teaching about tracheostomy care.

Bandura's social learning theory (1986), which affirms that learning occurs through observation, motivation, and role modeling, was applied to this project. Patients and their caregivers could learn tracheostomy care techniques through observation followed by demonstration and return demonstration. Several studies have indicated that patients expect nurses to provide direction and guidance especially in terms of learning new skills (Rankin, Stallings, & London, 2005). In addition, the Joint Commission (TJC) pointed out that patient care and patient education are integrated, making patient education equally important to patient care (TJC, 2006). This proposed tracheostomy care education program may help equip patients and their families with the knowledge and skills needed to effectively manage their health and increase their confidence in providing tracheostomy care in the home setting.

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APPENDIX A

Learning Objectives

Learners will be able to:

- Explain the rationale for, risks of, and benefits associated with tracheostomy use.
- Patient and caregiver(s) should demonstrate competence and comfort in providing tracheostomy care, tracheostomy suctioning and tube changes.
- Discuss with the patient and patient's primary caregiver the importance of standard precautions in tracheostomy care.
- Identify the signs and symptoms of tracheostomy associated complications and infections.

APPENDIX B

PROPOSED PRE AND POST TEACHING QUESTIONNAIRE

Patient's Name:
Date of Admission:
Anticipated Discharge date:

1. What procedure must be performed before suction, and before performing tracheostomy care to reduce the risk of infection?

2. How would you decide when an individual patient requires suction?

3. How will you know when you need to clean the cannula?

4. If the tracheostomy becomes blocked, what will you do?

5. List 2 safety precautions you will take while cleaning the cannula?

6. What will cause you to notify your healthcare provider?

APPENDIX C

Proposed Tracheostomy Care Packet

TRACHEOSTOMY CARE

(St Jude's Research Hospital©, 2008)

Table of Contents

(St Jude's Research Hospital©, 2008)

What is a Tracheostomy?

A tracheostomy is a small opening through the skin into the windpipe (trachea). This opening is called a stoma. A small plastic tube called a tracheostomy (trach) tube is placed through this stoma to help the patient breathe.

What is the purpose of the Tracheostomy?

This operation is performed for a number of reasons. Some persons have tracheostomy to bypass obstructions in their airway from injuries, scarring, or tumors. Some patients have a tracheostomy for the treatment of sleep disorders, such as obstructive sleep apnea. Many patients have a tracheostomy for improvement of breathing and for suctioning secretions from the lungs that are unable to clear with coughing. In most patients the tracheostomy enables a person to function more normally and continue to breathe, despite significant medical problems.

What is happening inside?

Normally we breathe through the nose and mouth so that the air is filtered, warmed, and moistened before it goes down the windpipe to the lungs. With a trach, air goes directly from the windpipe into the lungs. There is no filtering, warming, or moistening. For this reason this artificial airway needs to be maintained in order to prevent serious or life-threatening problems. These problems are frequently related to blockage of the tracheostomy tube. Many patients are discharged to their homes and maintain tracheostomies without difficulties. They are able to resume most normal activities. This booklet is intended as a guideline to reinforce teaching that was given to you in the hospital by our nurses and doctors. It is also for a handy reference while you are home and becoming familiar with

tracheostomy care. Home health services can frequently assist in providing supplies and guidance for patients with recent tracheostomies.

Definitions

• Tracheostomy Tube: A small tube inserted into the windpipe. It maintains the hole in the skin of the neck that connects with the windpipe. A tracheostomy tube can be made of various materials but is most frequently made of plastic or stainless steel. Most trach tubes are made up of both an outer cannula and an inner cannula, but some do not have an inner cannula. All tracheostomy tubes come with an obturator.

• Trachea: Windpipe

• Outer Cannula: The outer part of the tracheostomy tube. Stays in place as long as you have a tracheostomy.

• Inner Cannula:. The inner part of a trach tube. It can be removed for cleaning without removing the entire tracheostomy tube

• Stoma: The connection from the skin to the trachea. It may be used to refer to the neck hole of a tracheostomy.

• Obturator: Enables the tracheostomy tube be precisely guided through the stoma into the windpipe. It is removed after insertion and typically replaced with an inner cannula.

• Mucus: The liquid secretions that are made by your lungs. The color of mucus varies from clear to yellow/green. Initially after a tracheostomy, mucus may dry and plug tracheostomy tubes. This requires special attention to humidification, the cleaning of the tracheostomy tube, and changing the cannulas of the tracheostomy tube. The use of suction and irrigation are very important to keep the tubes clear.

Handwashing

Good handwashing is very important in preventing infection. With a tracheostomy, you are at a higher risk for developing a lung infection since air is bypassing your body's normal defenses. You must wash your hands before and after you do any part of your tracheostomy care.

How to Handwash?

1. Wet hands with water;
2. Apply enough soap to cover all hand surfaces;
3. Rub hands palm to palm;
4. Right palm over left dorsum (back of the hand) with interlaced fingers and vice versa;
5. Palm to palm with fingers interlaced;
6. Back of fingers with opposing palms with fingers interlocked;
7. Rotational rubbing of left thumb clasped in right palm and vice versa;
8. Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;
9. Rinse hands with water;
10. Dry hands thoroughly with clean towel.


START
1.Wet hands
2. Soap
(20 seconds)
3. Scrub backs
of hands, wrists,
between fingers,
under fingernails.
4. Rinse
5. Towel dry
6. Turn off
taps with
towel
HAND
WASHING
STEPS

(WHO, 2009)

HOW TO CLEAN A TRACH SITE

*Clean site at least one (1) time each day and when the site has a lot of wet mucus around it, or dried crusty mucus.

Getting Ready:

- Wash your hands with soap and water. Dry them well.
- Gather your supplies onto a clean work area and open them so they are within easy reach.

These are the supplies you need:

1. Cotton tip swabs
2. Sterile saline or sterile water packets
3. Hydrogen peroxide
4. 2x2 split IV gauze pads
5. 2x2 regular gauze pads
6. Medicine cups or several small, clean containers
7. Gloves
8. Rolled towel or small blanket

- Prepare your supplies as directed below.

*If the patient has crusty mucus around his trach site, make a mixture of 10 ml hydrogen peroxide to 10 ml sterile water or saline in a medicine cup or small, clean container.

*If trach site has drainage only, open a sterile water or sterile saline packet and pour into a medicine cup or a small, clean container.

- Place a rolled towel or small blanket under your child's shoulders to make the stoma area easier to see and clean.

Cleaning

- Suction the trach before cleaning the site. This may help decrease mucus during the cleaning process.
- Put on your gloves
- Check the stoma (skin opening) for signs of infection, such as redness, swelling, bleeding, skin breakdown, discolored drainage (pus). If you see one or more of these symptoms, call the doctor right away.
- If none of the signs listed above are present, continue with the next step.
- If no crusty mucus is present:

- Dip a cotton tipped swab in sterile water or sterile saline.

- Roll the cotton swab between the trach tube and the skin in a circular, outward motion. Use each swab only one (1) time.

- Repeat this process until mucus is removed.

- If crusty mucus is present:

- Dip a cotton tipped swab in the mixture of hydrogen peroxide and sterile water or saline.
- Roll the cotton swab between the trach tube and the skin in a circular, outward motion. Use each swab only one (1) time.
- Repeat this process until mucus is removed.
- Rinse the area using a cotton swab with sterile water or saline only after the crusts are removed.
- Dry area with a regular 2x2 gauze pad.

- If a lot of mucus is present at the stoma even after cleaning, you may place a 2x2 split gauze pad around the trach tube to absorb the mucus.

CHANGING THE TRACH TUBE

*Change the trach tube every two (2) weeks and as needed.

- Wash your hands with soap and water. Dry them well.
- Gather your supplies in a clean work area.

1. Suction machine, set up and ready
2. Resuscitation bag (if needed while suctioning)
3. Suction catheter size _____
4. Trach, size _____
5. Trach, half size smaller _____
6. Scissors
7. Sterile gloves
8. Trach ties
9. Soapy washcloth
10. Clean wet washcloth
11. Clean dry towel
12. Rolled towel or small blanket
13. Extra person to help (if available)

- Wash your hands again with soap and water, and dry well.
- Put on sterile gloves.
- Suction the patient.
- Also if needed, place the rolled towel or small blanket under the patient's neck.

- Prepare the new trach by placing the obturator in the trach and connecting the trach ties. Place the trach on your clean work surface.
- Pull the old trach tube out with a downward motion.
- Quickly insert the new trach tube gently with an inward, downward motion.
- If the trach tube will not insert, attempt to place the trach that is a half size smaller.
- As you hold the trach tube in place, remove the obturator.
- Secure the trach ties. Adjust the neckband so that it is not too tight or too loose. You should be able to get one (1) finger under the neckband.
- Suction the patient again if needed.
- Discard gloves, and wash hands with soap and water.

***Changing a trach tube can often make your child cough and produce extra mucus during the procedure and for several hours following the change. Trach changes also may irritate the airway, causing pink-colored mucus. This should go away within the next several hours. If the mucous is still pink after 2 hours or if you have concerns, call the doctor or care team.

CHANGING TRACH TIES

*** Change trach ties with each trach change and as needed when soiled.

Trach ties should be changed when:

- Wet
- Dirty
- Loose
- Too tight causing too much pressure on the patient's skin

- A trach tube is changed

How to change trach ties

- Wash your hands with soap and water. Dry them well. See "Do you know…Clean hands."
- Gather your supplies in a clean work area.

1. Blunt-tipped scissors
2. Trach ties
3. Rolled towel or small blanket roll if needed.
4. Extra person to help (if available)
5. Non-sterile gloves (not pictured)

- You might place the rolled towel or blanket roll under the patient' shoulders to make it easier to see the trach area and to reach around the neck.
- Measure the length of the ties by holding the ties around the patient's neck.
- Cut away any extra length before putting the trach ties around the patient's neck.
- Put on non-sterile gloves if needed.
- Thread the long, narrow fastener tab through the openings on each side of the trach tube.
- Fasten each of the Velcro® fastener tabs.
- Have your helper hold the trach tube in the stoma while the trach ties are being changed.
- Remove old trach ties.
- Put on new trach ties adjusting the neckband so that it is not too tight or too loose. You should be able to get one (1) finger under the neckband.
- Fasten the wide Velcro® fastener tab to the soft material on the main band. Press firmly to secure.

CLEANING THE TRACH TUBE

*** Bivona trach tubes may be cleaned, sterilized, and reused 5 times for children and neonates. Adults may clean, sterilize, and reuse Bivona trach tubes 10 times before replacing.

For Bivona® trachs

- Gather these supplies:

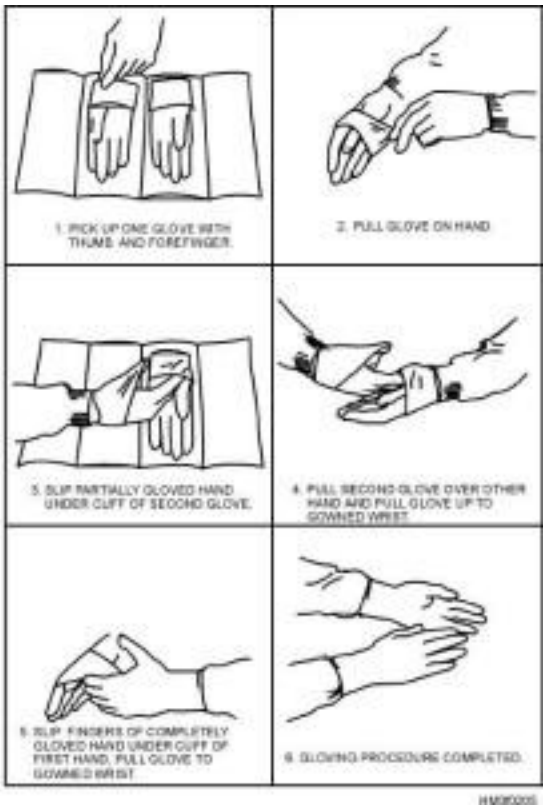
1. Used trach (that was just removed)
2. Obturator
3. Soft brush found in the trach cleaning kit
4. Normal saline
5. Clean plastic bag
6. Gloves

- Wash hands with soap and water and dry them well.
- Put on gloves.
- Inspect the tube. Throw away a trach tube that is cut or damaged. Contact your medical supply company if you throw away a trach so that it can be replaced.
- If the trach is going to be reused, gently wash the inside and outside of the trach tube using normal saline and the soft brush provided in the trach cleaning kit. Be careful. Too much scrubbing or scraping may damage the tube.
- Rinse the tube with water and set aside on clean paper towels to fully air dry.
- Gently wash and rinse the obturator and set aside on clean paper towels to fully air dry.
- Remove gloves, and wash hands with soap and water.

- When the trach tube and obturator are completely dry, store them in a clean plastic bag.

HOW TO PUT ON STERILE GLOVES

- Place package of gloves in a clean work area.
- Remove the outer packaging of the sterile gloves. Open the inner packaging as directed. Do not touch any of the contents inside of the package.
- Wash your hands with soap and water. Dry them well.
- Using your non-dominant hand (the one you do not write with), pick up the dominant hand glove by the cuff. Be careful to only touch the inner portion of the cuff and glove. The inside portion is the part that will touch your skin when the glove is on your hand.
- Slide your hand into the glove with palm facing up and fingers open, pointing downward. Be careful not to touch the package as you put on the gloves. If the glove does not go on straight, wait until after you put on your other glove to adjust it. Keep your hands above waist level to ensure that they remain sterile.
- With your newly gloved, dominant-sterile hand, slide your fingers underneath the cuff of the second glove. Your fingers should only touch the portion of the glove that will not be against your skin once the glove is on your hand.
- Slide your non-dominant hand into the glove with palm up and fingers open, pointing downward. Adjust both gloves until they fit properly. Only touch sterile gloved areas.


1. PICK UP ONE GLOVE WITH THUMB AND FOREFINGER.
2. PULL GLOVE ON HAND.
3. SLIP PARTIALLY GLOVED HAND UNDER CUFF OF SECOND GLOVE.
4. PULL SECOND GLOVE OVER OTHER HAND AND PULL GLOVE UP TO GOWNED WRIST.
5. SLIP FINGERS OF COMPLETELY GLOVED HAND UNDER CUFF OF FIRST HAND. PULL GLOVE TO GOWNED WRIST.
6. GLOVING PROCEDURE COMPLETED.

HOW TO SUCTION A TRACH

*** Mucus is produced by the lungs. Mucus cleans the air we breathe by trapping small particles such as dust and bacteria. Mucus collects in and around the trach tube. Some patients can cough up the mucus, but they often require suctioning to help remove the mucus from the airway. If mucus is not removed from the airway, it can dry and block the trach tube making it hard to breathe. Encourage the patient to cough and breathe deeply.

These exercises can help the patient clear the airway of mucus.

Signs that the patient might need suctioning

- Increased gurgling or coughing
- Mucus bubbling inside the tube
- Anxious
- Flaring nostrils
- Fast breathing
- Whistling noise from trach tube
- Skin pulls in around the ribs or collar bone (called retractions)
- Mouth, lips, and fingernails may be slightly blue or pale
- Appears to be struggling to breathe
- Tells you he needs suctioning

How often should I suction?

- Whenever the patient is having any of the signs in the list above
- When the patient wakes up in the morning

- Before meals
- Before bed at night
- Before changing the trach tube
- As needed, after the tube change

Getting Ready

- Wash your hands with soap and water. Dry them well.
- Gather your supplies onto a clean work area. Open each package ensuring that the contents remain sterile (germ free).
- These are the supplies you need:

  1. Suction machine with suction tubing attached
  2. Collection jar for mucus
  3. Sterile suction catheter size _____
  4. Sterile water packet (4 ounce cup)
  5. Resuscitation bag (optional)
  6. Sterile gloves _____ size

- Turn the suction machine on and set it between 60–80 mm Hg for infants (up to 24 months) and 80–120 mm Hg for children, teens, and adult.
- Position the patient in a way that is comfortable for him but that will not interfere with your suctioning.

Suctioning

Suctioning from start to finish should take no longer than 5–10 seconds. Suctioning longer than 10 seconds can cause oxygen loss and collapse of all or part of the lung. Do not put any fluid down the trach tube during the suction process.

Follow these steps to suction the patient's trach tube:

- Tell the patient that you are ready to suction.
- Put on your gloves.
- Take hold of the suction catheter with the hand you usually write with (dominant hand). Be sure to keep this hand sterile by only touching the catheter.
- With your other hand, attach the tubing from the suction machine to the end of the catheter. Do not touch your sterile hand with anything except the catheter.
- Suction some sterile water into the catheter to make sure it is working and to lubricate the catheter. If a lubricant is used for suctioning, make sure it breaks down in water. Never use petroleum jelly as a lubricant for suctioning.
- *Optional step*: Some patient require extra breaths with suctioning. This can be done using a resuscitation bag. Most patient do not require this extra step, but if the patient appears to have trouble breathing follow these steps:
    - Remove any visible mucus from the tip of the trach tube with the suction catheter.
    - Attach the resuscitation bag, and give the patient a couple of breaths. This will help loosen mucus and help the patient breathe.
    - Then, follow the remaining steps for suctioning.

- Gently insert the catheter into the trach tube until it reaches the end. Then insert it a quarter inch further.
- The patient may begin to cough.
- Do not apply suction while inserting the catheter into the trach tube.
- Apply suction by covering the thumb hole. Slowly remove the catheter from the trach tube using a twisting motion (twirl the catheter between your thumb and index finger). The patient might keep coughing as you do this. Do not suction longer than 10 seconds.
- If the patient is on a ventilator, reattach the ventilator tubing to the trach tube. Allow the patient to have a few breaths and rest for 30 seconds or longer. If more suctioning is needed, follow the steps below:
- Rinse the catheter and suction machine tubing with sterile water by placing the catheter in the sterile water packet (cup). Apply suction, and pull some water into catheter to clear it.
- If the patient needs more suctioning, repeat the steps above. Allow at least 30 seconds in between each suctioning.
- After you finish suctioning the trach tube, you may suction the patient's mouth and nose with the catheter if needed. Do not reinsert the catheter into the trach tube after it has entered the mouth or nose.
- When finished, wash hands with soap and water, and dry well.

When am I finished suctioning?

- When the patient appears comfortable.
- When your child is no longer coughing.
- When his skin color and fingernails are pink.

- When the child is breathing with ease.

What does the mucus look like?

- Normal: Clear to white with no odor.
- Infection: Yellow or green color with strong odor. Call the patient's clinic or doctor right away.
- Blood: Blood may be pink to dark brown. Pink shows that some irritation may be occurring. Dark brown is a sign of old bleeding. Bright red is new blood, which could mean there is a problem. If the patient is having any bleeding, call your clinic or doctor right away.

What do I do if suctioning does not seem to be working?

If the patient keeps coughing after suctioning and the mucus seems stuck, the trach tube might need to be changed.

What do I do with my supplies when I'm done suctioning?

- Turn off the suction machine.
- Throw away your gloves and suction catheter in the regular trash. Pour the remaining sterile water in a sink.
- The suction canister and suction tubing may be cleaned with a vinegar and water mixture. The ratio should be 1 cup white vinegar to 1½ cups warm water. Make as much of this mixture as you need to soak the tubing and canister. Soak these items in the mixture for about 30 minutes.
- Rinse the canister and tubing with warm water after soaking them in the vinegar and water mixture. Place the items out to air dry fully.

- Replace suction machine tubing and suction canister as needed, but at least one (1) time each week.
- Wash hands.

HOW TO USE A TRACH HUMIDITY SYSTEM

Why do we need humidity (moisture) in the air we breathe?

Your nose acts as a humidifier. When you breathe in, your nose moistens, filters, and warms the air before it enters your lungs. When a child has a tracheostomy (trach) tube, the air breathed in does not enter through the nose or mouth, and it is not warmed and humidified. Certain seasons can cause the air we breathe to become dry. This often occurs in the summer months when air conditioners are used and during the winter months when heaters are running. When mucus is not moistened or warmed with humidity, it can become dry, bloody, and thick. This can lead to an airway blockage and could make it hard for the patient to breathe through the trach tube.

To moisten the air the patient breathes, you can provide the patient with one of the following humidity systems:

1. Humidified air through a trach collar or mask
2. A heat moisture exchanger (HME) or a humid-vent (also called an artificial nose)

When should the patient wear his/her trach humidity system?

It is important to use the trach humidity system during naps or at night when the patient is asleep to avoid the chance of drying out mucus and causing a blockage in the tube. During the day, the patient may be able to have periods of time without the humidity system. During this time, be sure to watch for mucus that is dry or blood tinged. If mucus looks dry or blood tinged, the

patient should put on the humidity system. Ask the doctor or nurse how often the humidity system should be worn.

*** For the patient's safety, use only devices that are suggested by the patient's care team.

WHEN TO CALL 911 IF THE PATIENT HAS TRACH PROBLEMS

Call 911 if the patient has one of the following problems, and you cannot relieve it using the steps listed:

If the patient has thick mucus and is having trouble breathing, follow these steps:

1. Have the patient cough with force.
2. If coughing does not clear the mucus, suction to remove it.
3. If the problem remains, change the inner cannula (if there is one) or the entire trach.
4. If the patient is still having trouble breathing, call 911, and use the resuscitation bag to pump air into the patient's lungs until help arrives.

If the patient's trach falls out or becomes dislodged, follow these steps:

1. Replace the trach right away with the spare trach. If the same size trach will not fit into the stoma, use a half size smaller trach.
2. If the smaller trach does not fit, close the patient's mouth and nose and use the resuscitation bag to pump air into the stoma site.
3. Call 911, and keep using the resuscitation bag until help arrives.

When to call the doctor

Be sure to call the patient's doctor right away if one (1) or more of these things occur:

- You are not able to place the same size trach and have to use the half-size smaller trach.
- The patient has any signs of having to work harder to breathe.

- Coughing does not remove the patient's mucus, because the mucus is getting thicker or increasing in volume.
- The mucus starts looking yellow or green or has an odor.
- The patient has a fever (an oral temperature of 100.4 degrees F [38.0 degrees C] or higher or an under the arm temperature of 99.4 degrees F [37.4 degrees C]).

Important telephone numbers:

For all medical emergencies dial 911.

Primary Clinic Number: _____

Home Health:_____

(St Jude's Research Hospital©)

APPENDIX D

Proposed Questionnaire

(Brochures for patient teaching may be purchased from NPSF)

1. **What is my main problem?**

2. **What do I need to do?**

3. **Why is it important for me to do this?**

(National Patient Safety Foundation, 2013)

Good Questions for Your Good Health

Ask Me 3™

Every time you talk with your doctor, nurse, or pharmacist, ask these questions

1. **What is my main problem?**
2. **What do I need to do?**
3. **Why is it important for me to do this?**

The more you know about your health, the better

Ask Me 3™ is an educational program provided by the Partnership for Clear Health Communication at the National Patient Safety Foundation℠

www.npsf.org/askme3

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