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The Relationship Between the Timing of Self-care Information
and Adjustment to Ostomy Surgery

By

Carol Irene TenEyck

Thesis

Submitted to
Grand Valley State University
in partial fulfillment of the requirements for the
degree of

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1997

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ABSTRACT

THE RELATIONSHIP BETWEEN THE TIMING OF SELF-CARE INFORMATION AND ADJUSTMENT TO OSTOMY SURGERY

By

Carol Irene TenEyck

The purpose of this study was to explore the relationship between the timing of self-care information and a person's adjustment to ostomy surgery. A retrospective, descriptive, correlational approach was used. Information from 57 subjects was obtained by using Quality Assurance Questionnaires from the archived files of an Enterostomal Therapy (ET) Nurse Service in West Michigan. Data from these questionnaires were analyzed using the Statistical Package for Social Sciences (SPSS/PC+) software.

Analysis by linear regression indicated that timing of self-care information is a predictor of adjustment to ostomy surgery. Further analysis of variance after collapsing the groups of respondents indicated a significant difference in adjustment between subjects who received self-care information six or more days before surgery, and those who received this information the day of or after surgery. Analysis of adjustment based on type of ostomy and permanence of ostomy indicated no significant differences.

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CHAPTER 1

INTRODUCTION

An abdominal ostomy is a surgically created diversion of the digestive or urinary tract for the elimination of waste. It is estimated that 100,000 people experience ostomy surgery each year and that there are approximately 2,000,000 people in the United States living with an ostomy (Mihalopoulos, 1994). Ostomy surgery may be required by persons with cancer, inflammatory bowel disease, trauma, or certain congenital or neurologic conditions and results in altering elimination of waste through an abdominal opening, or stoma. While innovations in surgical techniques have resulted in fewer people requiring permanent abdominal ostomies, advances in medical management have improved survival rates for those with permanent bowel or bladder ostomies. Surgery resulting in an abdominal ostomy has a greater impact than just a change in elimination (Hedrick, 1989), it also produces physiological and anatomical changes that affect a person's lifestyle, body image and self-concept (Kluka & Kristjanson, 1996). Psychosocial concerns include quality of life, return to work, altered social life, fear of odor and appliance leakage, sexual attractiveness and hygiene (Pieper, 1996). New physical skills must be mastered to return to productive, healthy living.

Persons faced with this surgery often harbor misconceptions, fear unpleasant sights, sounds and odors, and experience anxiety about acceptance by others. The diagnosis that leads to the need for an ostomy may also precipitate high anxiety levels (Maklebust, 1985). Enterostomal Therapy (ET) Nursing is a specialty nursing practice concerned with the education, rehabilitation, and care of patients with ostomies. These registered nurses receive specialized training at a Wound, Ostomy, and Continence Nurses Society (WOCN) Education Program, and are certified by the WOCN Certification Board. ET Nurses have a pivotal role in teaching these patients self-care skills, providing information for health promotion, and supporting them through the psychosocial sequelae of living with an ostomy (Hedrick, 1987).

Many factors may contribute to learning and adjustment. In her work with the rehabilitation of cancer patients, Dudas (1991) indicated that a good educator, in teaching patients with ostomies, can help improve their quality of life. Studies regarding stress and surgery (Nyamathi & Kashiwabara, 1988; Scott, 1983) have supported Lazarus' theory of anxiety and cognitive abilities in surgical patients; as perioperative anxiety levels increase, critical thinking abilities decrease. Timing may be everything in patient education, since anxiety prior to surgery may be so intense that it blocks learning (Haines & Viellion, 1990). Physicians and nurses now recognize the benefits of

preoperative intervention, often taking place as much as two weeks before the date of surgery (Brown-Etris, 1994).

Other factors also may affect learning in the surgical patient. Hospital stays are becoming increasingly shorter due to cost containment strategies and improved surgical techniques. Gone are the days of admitting surgical patients one or two days preoperatively for testing and bowel preparation. In this researcher's experience, many of these patients are admitted only two hours prior to their surgical procedures with postoperative stays as short as five days. As noted by Hull and Erwin-Toth (1996), these shortened hospitalizations make the concept of patient readiness to learn nearly irrelevant. Patients have less time to absorb the information they need to resume their lives in their home settings (Hanisch, 1993). In addition, the nature of surgery may impede learning and undermine the effectiveness of education in the postoperative period (Cupples, 1991). The hospital environment can be very foreign and distracting, impersonal, and lacking in privacy, therefore diminishing the patient's ability to be attentive to teaching. This is supported by the work of Cimprich (1992) who stated "In the context of illness, directed attention is crucial not only for learning new information but also for carrying out therapeutic self-care and making necessary, but often difficult, adjustments in daily life" (p.43). In a 1992 study of cancer surgery patients, Cimprich suggested that when attentional capacity is

decreased, patient education approaches that are formalized and detailed may be ineffective and even lead to further attention problems. The challenge, then, is for the nurse to determine the most efficient period of time for presenting self-care information to patients in order to facilitate learning and adjustment to ostomy surgery.

Problem Statement

The number of urinary and digestive diseases diagnosed in North America has increased the frequency of ostomy surgeries performed (Rheaume & Gooding, 1991). Improved and varied treatment modalities and earlier diagnosis of these diseases has improved longevity for people with ostomies (Dudas, 1991). Meeting the physical, psychosocial, and cognitive needs of these patients is important to their recovery from ostomy surgery, adjustment to the ostomy, and maintaining their quality of life.

The problem of determining the best timing for providing self-care information is multifaceted. Learning needs must be assessed, goals determined, and teaching initiated to facilitate the patients' knowledge of self-care, adjustment to ostomy surgery, and adaptation to their style of living. Patient anxiety is assumed to be high when faced with the diagnosis of bowel or bladder disease and the prospect of ostomy surgery. Admission to the hospital two hours before surgery limits the nurse's ability to provide self-care information in an environment conducive to learning. Finally, shortened hospital stays

postoperatively compound the issue of adequate opportunity to learn self-care techniques to facilitate adjustment to the ostomy. Thus, it is not clear to the nurse at what period of time the provision of self-care information is most likely to assist the patient with adjusting to ostomy surgery, and facilitate the person's return to healthy, productive living.

Purpose

The purpose of this study was to explore the relationship between the timing of self-care information and a person's adjustment to ostomy surgery.

CHAPTER 2

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Improved surgical techniques, shortened hospital stays, and consumer concerns about quality of life have all increased the need for efficient, concise self-care information for ostomy patients. In this study of the timing of self-care information and adjustment to ostomy surgery, Dorothea Orem's (1985) Self-Care Deficit Theory of Nursing provided a framework for addressing this need.

Orem's Theory

Orem's (1985) general theory is comprised of three interrelated theories: theory of self-care, theory of self-care deficit, and theory of nursing systems. The theories are linked by presuppositions or assumptions.

The theme of the self-care theory is that individuals have the ability to care for themselves and their dependents. Self-care is described as a learned and deliberate action and can vary among different sociocultural groups. Orem (1985) defines self-care as "the production of actions directed to self to regulate one's functioning in the interest of one's life, integrated functioning and well being" (p.31). She describes three types of self-care requisites: (a) universal, (b) developmental, and (c) health deviation. Universal self-care requisites are common to all people throughout the lifespan, and are

important for the maintenance of the integrity of human structure and function. These needs include air, water, food, elimination, activity and rest, solitude and social interaction, prevention of hazards to well being, and normalcy. Care organized around these requisites fosters health and well being. Developmental self-care requisites are important in specific stages of the life cycle to assure proper development. Examples of developmental requisites include pregnancy or situations such as adjusting to the death of a significant other. Health-deviation self-care requisites exist for persons who are ill, have obvious changes in human structure, or are under medical care. These include effectively carrying out therapeutic and rehabilitation measures to compensate for abnormalities, modifying self-concept, and learning to live with the effects of treatment measures in a lifestyle that promotes continued personal development.

In the self-care deficit theory, which Orem (1985) considers the core of her general theory, the central theme is that there are times when limitations occur in an individual's ability for self-care. It is these limitations, or therapeutic self-care demands, that establish the need for nursing.

Nursing systems is Orem's (1985) third theory. It is this theory that defines a person's need for nursing. The nurse determines that a deficit exists between the abilities and demands placed on a patient and together with the

patient develops a plan of care to meet the patient's need. The actions taken by the nurse and the patient to meet the identified demand are called the nursing system. "The goal of the nursing system is to increase the patient's capability to meet a need, or requisite, or to decrease the demand" (Hartweg, p.13). There are three nursing systems based on the amount of assistance needed by the patient, (a) wholly compensatory, (b) partially compensatory, and (c) supportive-educative. In the wholly compensatory system, the nurse performs all self-care actions for the patient. In the partially compensatory system, both the patient and the nurse perform care measures. The supportive-educative system is used by the nurse to teach self-care information to meet the demands and support the patient to become an independent self-care agent.

Many of the universal self-care requisites are affected by ostomy surgery. Basic needs for food and water may be altered based on the person's disease process and ostomy type. New physical skills related to elimination must be mastered in order to prevent complications and gain confidence in social situations. The need for rest and recovery may limit the ability to learn in the postoperative period. Patients often fear return to work, socialization with others and sexual activity (Rheaume & Gooding, 1991). Self-concept and body image changes represent changes in structure, a health-deviation requisite. These must be

addressed in order to adjust to an ostomy and return to a fully functional lifestyle.

Orem (1985) describes nursing as "a complex form of deliberate action performed by nurses over some duration of time for the sake of others" (p.38). It is assumed that patients experiencing ostomy surgery have a knowledge deficit related to ostomy self-care. Therefore, the nurse must construct a nursing system to facilitate learning and support the patient in adjustment to ostomy surgery. The nurse must consider the appropriate timing for providing self-care information in order to assure an effective supportive-educative nursing system (see Appendix A).

Literature Review

Studies examining the relationship between the timing of self-care information and adjustment to ostomy surgery are not found in the literature. Studies addressing the timing of teaching interventions with other patient populations and studies of adjustment to ostomy will be included in this review.

Timing of teaching. Reviewing a study of women with breast cancer and ability to attend to information postoperatively may help to understand the importance of the timing of information and adjustment to surgery. Cimprich (1992), studied attentional fatigue (difficulty doing activities that require directed attention, such as planning, problem solving, purposeful activities, and self-monitoring, p. 202) in women on the day before

discharge following mastectomy or breast conservation surgery. A convenience sample of 32 women, age 29-84, with stage I or II breast cancer was used. Subjects were excluded for preexisting conditions that could affect attentional capacity or performance, use of drugs that may alter attention, hearing or visual disorders, or poor English language skills. Ninety percent of the subjects were white, 50% college graduates, 68% married, and 56% employed.

A battery of seven tests were used by Cimprich (1992) to measure the capacity to direct attention on the day prior to discharge. Meslam's (1985) Digit Span Test has 2 parts. Forward Span (DSF) was used to measure the number of bits of information a person can attend to at one time, and Backward Span (DSB) requires sustained attention. Lezak's (1983) Alphabet Backward (AB) test is a measure of cognitive function requiring sustained ability to direct attention. Smith's (1973) Symbol Digit Modalities Test (SDMT) is a neurocognitive test requiring directed attention while substituting numbers for geometric symbols. The Letter Cancellation (LC) test was adapted from Finding A's test developed by Ekstrom, French, Harman, and Derman (1976). This test requires increased effort to detect individual letters within a word.

Perceived effectiveness in common activities was measured by using a self-rating scale, the Attentional Functioning Index (AFI) developed by Cimprich (1992) for the

study. In addition, a single item Visual Analog Mood Scale (VAMS, Aitker, 1969; Folstein & Luria, 1973) was administered to evaluate possible changes in attention performance from depression.

Cimprich (1992) reported that 56% of scores on DSF and 50% of DSB were at the low end of the range for normal, suggesting severe impairment of directed attention. Thirty-five subjects scored 4 or less on AB. On SDMT, 25% scored below age norm, and one half of these scores were a standard deviation below the norm, suggesting severe dysfunction. On LC, accuracy ratio ranged from .63 to .99, and 50% scored below .93.

For AFI, 78% of scores were at or below the midpoint, indicating lower levels of effectiveness in functioning. There were no significant relationships between the attention tests and the AFI mean score. VAMS scores were not significantly related to attention scores, but there was a significant, ($p < .05$) positive relationship between VAMS and AFI. There was no significant difference between women in the two different surgical groups.

Cimprich (1992) concluded that her study showed evidence of decreased capacity to direct attention and perform simple tasks, as well as a loss of effectiveness in common abilities requiring directed action, after breast surgery. She suggested that patients who are more attentionally fatigued experience more difficulty with everyday self-care demands. Therefore, patients who are

given self-care information and instruction prior to discharge from the hospital may not have the capacity to learn. These results have relevance in the present era of shortened hospital stays when much self-care information is given only in the postoperative period.

Although no studies exploring the best timing of information for the ostomy patient have been found, the subject has been explored in relation to cardiac surgery. Cupples (1991) hypothesized that Coronary Artery Bypass Graft (CABG) patients who received pre and post admission preoperative teaching would have higher preoperative knowledge, lower postoperative anxiety states, more positive postoperative mood states, and more favorable physiologic recovery than those who only received preoperative teaching after admission to the hospital. A randomized, experimental, post-test only design was used. The sample consisted of 40 subjects, 20 male and 20 female, age 30 to 70 with twelfth grade education who were undergoing their first CABG procedure. The experimental group received education 5 to 14 days preoperatively, a preoperative phone call, as well as postoperative teaching. The control group received teaching after admission to the hospital, 1 day preoperatively. Both groups completed the following tests immediately after each teaching session was completed:

- (a) state anxiety scale of the Spielberger (1983) State-Trait Anxiety Inventory (STAI),
- (b) the McNair (1971) Profile of Mood State (POMS),
- (c) the Wolfer-Davis (1970)

Recovery Inventory (RI), and (d) a CABG surgery Knowledge Questionnaire (KQ) developed by the author. STAI and POMS tests were repeated on day 4 postoperatively for both groups. All subjects repeated the RI on postoperative days 4, 5, and 6.

KQ scores for the experimental group were significantly higher ($t = 3.87, p < .001$) than those in the control group. STAI scores did not show a significant difference for anxiety between groups postoperatively ($t = 1.20, p = .24$). The experimental group's scores on POMS were significantly lower (indicating more positive mood states) than the control group ($t = 2.31, p = .03$). RI scores for the experimental group indicated more favorable physiologic recovery ($F = 5.01, p = .03$). The assumption that preoperative state anxiety levels would be lower 5 to 14 days preoperatively than 1 day prior to surgery was supported by the study results ($t = 2.54, p = .02$). Anxiety levels for both groups, however, remained high on the fourth postoperative day.

Cupples (1991) concluded that it was likely the experimental group learned more because the initial education was at a time when they were less anxious. Further, she suggested the control group knowledge scores were lower because the higher anxiety level the day prior to surgery interfered with learning. Finally, she concluded that preadmission preoperative education is an effective strategy for CABG patients.

The major limitation to this study was that while all subjects in the experimental group were taught by the same nurse, those in the control group had a number of different nurses providing preoperative teaching. Different teaching styles and content may have influenced patient learning. In addition, subjects in the experimental group had a greater number of educational exposures, which may have influenced scores.

Lepczyk, Hunt-Raleigh, and Rowley (1990) studied the question of preoperative teaching and recovery from cardiac surgery. Using a pretest-posttest quasi-experimental design, a convenience sample of 74 subjects, age 32-75, from two teaching hospitals were tested for anxiety levels using STAI and a knowledge test developed by the authors. Group I ($n = 32$) received preoperative teaching 2 to 7 days prior to admission to the hospital. Group II ($n = 42$) received the same teaching the evening of admission to the hospital on the day prior to surgery. Both groups were tested the evening of admission and postoperatively.

The two groups had similar preoperative knowledge levels. Preoperative knowledge scores were found to be higher if the subject knew someone who had previously experienced cardiac surgery ($t = 2.34, p = .02$). There was no significant relationship in the anxiety scores. The authors concluded the study did not demonstrate expected results regarding the timing of the preoperative teaching program and recovery from cardiac surgery.

Christopherson and Pfeiffer (1980) conducted a study to examine whether the individual, after reading educational material in the waiting period between learning of the need for surgery and the actual time of operation, would experience decreased anxiety, experience increased recall of information postoperatively, and experience faster recovery. The sample consisted of three groups. Group I ($n = 12$), did not read the booklet. Group II ($n = 11$) read the booklet 1 to 2 days prior to surgery, and Group III ($n = 18$) read the booklet anywhere from 3 to 35 days before surgery. Subjects completed knowledge questionnaires at the time of consent to participate, and STAI tests 1 to 2 days preoperatively. Both tests were repeated 7 to 10 days postoperatively.

Groups II and III significantly increased their learning ($p < .05$). Significant learning did not occur in Group I. STAI anxiety score were significantly decreased only in Group II ($p < .0001$) from the pre to postoperative period. Subjects from Group I experienced statistically significant ($F = 5.0, p < .05$) longer Intensive Care Unit (ICU) stays postoperatively. There was no significant difference in the length of hospital stay ($F = 2.05, p > .05$) between groups. The authors concluded that the question of timing of information remains unclear.

Hanisch (1993) examined the issue of timing of information from the patient's perspective in a descriptive study of cardiac patients. A non-probability sample of 41 Phase II cardiac rehabilitation patients 6 week to 6 months

post Myocardial Infarction (MI) or CABG was studied. A questionnaire including various self-care information items was developed by the author. A 7-point scale was used to measure the patients' information needs. The respondents also were asked to indicate which time interval would be most helpful to them for receiving the information included in the questionnaire. Timing choices for surgical patients included (a) preoperatively, (b) while in the intensive care unit, (c) after the event but before discharge, and (d) post hospitalization. The preferred timing of information identified by 29 of the CABG patients was preoperatively. Statistics to support this conclusion were not reported.

Hanisch (1993) concluded that nurses can meet cardiac patients' informational needs even in the era of shortened hospital stays by identifying what patients need to know and when they want that information provided. The limitations of the study included possible gender and ethnic biases, since the typical subject was described as a 64 year old Caucasian male. The significance of these findings to the current study is that the preferred teaching time of cardiac surgery patients was identified to be during the preoperative period.

Adjustment to Ostomy. Experts in the care and rehabilitation of the ostomy patient have examined adjustment from many different perspectives including (a) hardiness (Krainski, 1994), (b) specialty nursing intervention by Enterostomal Therapy (ET) Nurses (Wade,

1990; Hedrick, 1987), (c) social support and coping strategies (Rheaume & Gooding, 1991), (d) reason for ostomy (Pieper, Mikols & Grant, 1996), and (e) self-help groups (Maklebust, 1985).

Maklebust's (1985) study examining the relationship between visits by members of the United Ostomy Association (UOA) and adjustment to ostomy surgery is important to this study because it provides a framework for describing adjustment to ostomy surgery. During her study she developed the Ostomy Adjustment Scale (OAS), an 18 question tool which reflects the criteria for rehabilitation of the ostomy patient established by the Wound Ostomy and Contenance Nurses Society (WOCN, formerly the International Association for Enterostomal Therapy) and the American Nurses Association (p.85). In this retrospective, descriptive study, people who were visited by a trained UOA member had significantly higher adjustment scores ($n = 118$, $F = 42.68$, $p < .001$) than those who did not. The major limitation of this study, however, was that the subjects were all members of the UOA which may have biased results, because adjustment may have been different among people not involved in a support group.

Maklebust's study also concluded that there was no significant difference in adjustment to ostomy between patients with different ostomy types (ileostomy, colostomy, or urostomy). Later studies by Rheaume and Gooding (1991), and Krainski (1994) produced similar findings. Pieper,

Mikols and Grant (1996), in a study of adjustment among persons with permanent ostomies from disease, temporary ostomies from disease, or temporary ostomies from trauma concluded there was no significant difference in adjustment between these groups as well. These findings are inconsistent with conventional wisdom of ET Nurses and with the experience of this investigator and ET Nurse colleague, who have long considered adjustment to be greater in patients with permanent ostomies, and patients with ileostomies as opposed to those with colostomies or urostomies. Wade's study (1990) suggested that patients with temporary colostomies perceived their return to previous social activities and quality of life as lower than those with permanent colostomies.

Summary and Implications for Study

Although the studies reviewed focus on different patient populations, it could be argued that people experiencing ostomy surgery face similar or greater losses and anxieties as those with breast cancer or cardiac disease. All three groups are faced with a fear-filled diagnosis, the need to change lifestyle patterns, and changes in body image. Ostomy patients must also master physical skills to handle equipment to care for the ostomy. It can be assumed that factors affecting attention and resulting in a decreased capacity for learning will occur in the ostomy patient postoperatively. This decreased ability to focus on activities, problem solve, and self-monitor

negatively affect a patient's ability to meet universal and health-deviation self-care requisites. There may be an optimal window of time preoperatively for preparing patients to meet their self-care demands after surgery. The nurse must understand these factors in order to determine the best timing for self-care information in order to facilitate patient adjustment to ostomy surgery.

Research Question

This study addressed the question: What is the relationship between the timing of ostomy self-care information and the patient's adjustment to ostomy surgery?

Definition of terms

Timing refers to the intervals of time in relation to the surgical procedure during which the ET Nurse first provides ostomy self-care information to the patient undergoing ostomy surgery.

Self-care information is the information the patient needs in order to meet the therapeutic self-care demands and accomplish lifestyle changes as a result of ostomy surgery. This includes anatomical and physiological changes, diet and fluid needs, effect on activities of daily living, psychosocial factors, complication management, and physical skills.

Adjustment to ostomy indicates response/adaptation to an ostomy and is measured by the Ostomy Adjustment Scale.

Ostomy surgery refers to an ileostomy (fecal diversion of small intestine), colostomy (fecal diversion of the large intestine), or urostomy (urinary diversion).

CHAPTER 3

METHODOLOGY

Previous studies have not established the most appropriate time to provide self-care information to patients in order to help them adjust to ostomy surgery and return to healthy, productive lives. The purpose of this study was to explore the relationship between the timing of self-care information and a person's adjustment to ostomy surgery.

Design

This study used a retrospective, descriptive, correlational approach to explore the relationship between the timing of self-care information and the adjustment to ostomy surgery. Descriptive, correlational designs attempt to determine and describe what relationships exist between variables. Wasserbauer and Abraham (1995) explained that this design is relatively straightforward, in which there is no manipulation of the independent variable, since the event has already occurred. When a correlation exists, a change in one variable corresponds to a change in another variable. Therefore, a change in the timing of information should correspond to a change in adjustment to ostomy surgery.

Study Site and Subjects

A convenience sample of archived data collected from 57 subjects was obtained from the case files of an ET Nurse

Service in West Michigan. Selection criteria included patients who: (a) were over 21 years of age, (b) experienced surgery resulting in an ileostomy, colostomy, or urostomy not less than 3 months or more than 6 months prior to the time of data collection, and (c) could read and write English.

Approval was obtained from the Human Subjects Review Committee of Grand Valley State University (see Appendix B) and from the Institutional Review Board of the acute-care institution. (see Appendix C)

Instruments

A Quality Assurance questionnaire (see Appendix D) was the method used by the ET Nurse Service to monitor quality of care. Data obtained from this questionnaire was used in this retrospective study.

The questionnaire consisted of two parts; a 21-item patient profile tool, and Maklebust's (1985) Ostomy Adjustment Scale (OAS). Section I, the patient profile portion of the instrument, included questions designed to describe the subjects, as well as their ostomy type, postoperative history, and interactions with the ET Nurse. Item number 14, Section I, of the instrument, was used to measure the independent variable, or the timing of self-care information. Level of measurement of this variable was ordinal.

Section II, Maklebust's OAS, contained 18 questions designed to measure a person's social adjustment to ostomy

surgery. These 18 items reflected assessment criteria for the rehabilitation of ostomy patients established by the Wound, Ostomy and Continence Nurses Society (WOCN), and the American Nurses Association. To lessen social desirability of responses, half of the items were worded positively, and half were worded negatively (p. 85). A 7-point scale was used. The individual item scores were summed for a possible score of 18-126. The higher the score, the better the adjustment. The total score from this section was used to measure the dependent variable, adjustment to ostomy surgery. The 7-point rating scale items taken individually were considered ordinal, however when item scores were summed, the level of measurement was considered interval (Pierce, 1995).

Five specialists in ET nursing reviewed and analyzed the instrument and agreed it represented adjustment to an ostomy and had content validity. Maklebust (1985) performed a test-retest using 23 ostomy patients and established a Pearson's product moment correlation coefficient of .94. A subsequent alpha reliability was established at .90 (Krainski, 1994). Permission to provide a copy of the instrument was obtained from the author (see Appendix E).

Procedure

A standardized teaching protocol (see Appendix F) developed by the ET Nurse Service, and in use for over 5 years, guided the provision of self-care information to the person undergoing ostomy surgery. This teaching protocol

was developed in accordance with the standards of the WOCN. Anatomical and physiological changes resulting from surgery, psychosocial concerns, and physical skills were all addressed in the teaching protocol.

The ET Nurse Service received patient referrals from the surgeons' offices or the institution's preprocedure planning department. The ET Nurse then contacted the patient to set an appointment to provide the self-care information in an outpatient setting. Because of distance (many of the patients served live outside the greater metropolitan area, limiting their ability to meet with the ET Nurse at a specified time), surgery schedules, seriousness of medical condition, and shortened length of stay, the timing of this information varied. Patients were seen 1 or more weeks preoperatively, the same day of surgery, or postoperatively. Self-care information is provided by one of two certified ET Nurses within the ET Nurse Service. These two ET Nurses had 22 and 12 years experience working with ostomy patients, and 3 years as a team. They reviewed and updated the teaching protocol and teaching tools in order to provide congruent care. Evaluation by students, patients and peers validated similar teaching content and style. Self-care information provided did not differ between temporary and permanent ostomy patients, with the exception of not offering colostomy irrigation instruction to patients with temporary colostomies. Information was reinforced during

postoperative hospitalization, and the patient was given the opportunity to practice new physical skills before discharge.

Quality Assurance Activities of the ET Nurse Service previously focused on the process, or delivery, of care. Recent changes in requirements for accreditation led to the development of outcome based evaluation of care as well. Use of the Quality Assurance Questionnaire was initiated in the Fall of 1995 to measure process and outcomes of the ET Nurse Service interventions with patients undergoing ostomy surgery. The questionnaire was mailed to patient's homes on a quarterly basis. All patients over 21 years of age who were discharged home or to rehabilitation settings receive questionnaires except those who were unable to demonstrate the ability to be independent in self-care due to mental or physical disabilities, or those patients with a prognosis of less than six months survival postoperatively. The results of the questionnaires were compiled by the ET Nurse Service and stored in the archives of the service. Data for this retrospective study of adjustment to ostomy surgery was obtained by the researcher from review of results from the Quality Assurance Questionnaires.

The data collection site required the use of a consent (see Appendix G) for participation in quality assurance activities. This consent was intended to inform participants how the data collected would be used. Two copies of the consent were sent with the questionnaire. The

participants were instructed to sign and return one copy with the questionnaire and keep the other for their records. The copy returned to the ET Nurse Service was stored in a file separate from the returned questionnaire. The Quality Assurance Questionnaires were not coded in any way. The ET Nurse Service provided only archived data to the researcher. This maintained anonymity of the subjects.

CHAPTER 4

DATA ANALYSIS

This chapter will provide the results of the study. A description of the participants will be provided first. This will be followed by analysis of the research question.

Sample

Quality Assurance Questionnaires on file in the ET Nurse Service from patients who had ostomy surgery during the months of October 1995 through October 1996 were used for this study. During this time period, 90 patients of the service met the criteria for receiving the questionnaires. Of the 90 questionnaires, 57 ($N = 57$) patients returned the evaluations, which was a 63% return rate. According to Pierce (1995), an adequate response rate should be 60% or more (p.297). Questionnaires from all 57 patients were included in the data analysis. All data were analyzed using SPSS/PC+ software. The acceptable level of significance for statistical tests was set at $p = .05$.

Patient Profile

Information about the sample was obtained by analysis of items found in the patient profile section of the Quality Assurance Questionnaire. Frequency and percentage was used to describe the items: gender, ethnic group, religion, marital status, employment status, ostomy type, reason for surgery, permanent ostomy, and who was most

helpful in adjusting to surgery (see Table 1). Measures of central tendency were used to describe the items: age, years of education, months since surgery, and length of stay (LOS) after surgery (see Table 2).

The "typical" patient was a 55 year old, married, Protestant Caucasian male who had a permanent colostomy for cancer 4 months prior to completing the questionnaire. He was retired, and a high school graduate. His postoperative hospital stay was 8 days long.

Table 1

Patient Profile I

Variable	Value	n	%
Gender	male	29	50.9
	female	27	47.4
Ethnic group	African American	1	1.8
	Caucasian	53	94.6
	Hispanic	1	1.8
	Other	1	1.8
Religion	Catholic	14	24.6
	Protestant	33	57.9
	None	1	1.8
	Other	9	15.8
Marital Status	divorced	1	1.8
	married	46	80.7
	never married	7	12.3
	widowed	3	5.3

(table continues)

Table 1 continued

Patient Profile I

Variable	Value	n	%
employment status	full time	18	31.6
	part time	4	7.0
	retired	24	42.1
	not employed	9	15.8
	other	2	3.5
Ostomy Type	colostomy	32	57.1
	ileostomy	22	38.6
	urostomy	2	3.6
Reason for surgery	ulcerative colitis	10	17.5
	cancer	27	47.4
	crohn's disease	7	12.3
	diverticulitis	5	8.8
	other	8	14.0
permanent ostomy	yes	35	61.4
	no	18	31.6
	don't know	4	7.0
helped adjust	ET Nurse	21	38.2
	family	11	20.0
	physician	2	3.6
	other	4	7.3
	more than one	17	30.9

Table 2

Patient Profile II

Variable	<i>M</i>	<i>Mdn</i>	mode	<i>SD</i>	<i>n</i>
Age	55.24	59.00	50.00	17.12	55
Education	13.60	13.00	12.00	2.83	57
Months	4.02	4.00	4.00	.94	57
LOS	8.86	7.00	7.00	4.79	56

Research Question

This study addressed the question: What is the relationship between the timing of ostomy self-care information and the patient's adjustment to ostomy surgery? The independent variable was timing of ostomy self-care information. The dependent variable was adjustment to ostomy surgery. In addition, items from the patient profile pertaining to type of ostomy, permanence of ostomy, and reason for ostomy were analyzed to determine if differences in adjustment occurred between these groups.

Timing of Information

The Quality Assurance Questionnaire developed by the ET Nurse Service included seven categories describing the timing of initial self-care information as a means to monitor their activity. Responses to item 14, Section I of

the questionnaire, which measured the timing of self-care information, are illustrated in Table 3.

Table 3

ET Nurse Discussion of Ostomy

	Value	n	%
ET self-care info	9+days preop	10	18.2
	6-8days preop	3	5.3
	3-5days preop	6	10.5
	1-2days preop	8	14.0
	day of surgery	9	15.8
	postop	19	33.3

Adjustment to Ostomy

Adjustment to ostomy surgery was measured using Maklebust's (1985) Ostomy Adjustment Scale (OAS), which was Section II of the questionnaire. The 18 items on the instrument are summed to obtain a total score. Possible scores range from 18 to 126. A higher score indicates better adjustment to an ostomy. To measure internal consistency, Cronbach's alpha was run for this group and was determined to be .91. According to Polit and Hunger (1991), a Cronbach alpha greater than .70 is considered adequate for group comparison (p.373).

The subjects' OAS scores were assessed for missing data. No pattern was found. Missing data appeared randomly in the individual items scored. Polit and Hunger (1991) suggest using the statistical mean as a method to replace missing data (p.558). Subject scores were assessed

individually to assure no more than 3 items were missing from the instrument. The statistical mean was rounded down to the nearest whole number and substituted for the missing data. These scores were then summed for a total adjustment score (see Table 4).

Table 4

Ostomy Adjustment Scale Score

	<i>M</i>	<i>Mdn</i>	<i>mode</i>	<i>SD</i>	<i>N</i>
score	93.58	96.00	120.00	22.27	57

Techniques

Linear regression was used to determine if timing was a predictor of adjustment. This analysis showed that 15% of the variance in adjustment scores can be explained by the timing of ostomy information. The regression indicated that the timing of ostomy self-care information was a predictor of ostomy adjustment ($p = .0032$). However, this regression does not tell us which timing was the most significant predictor of adjustment. Since there were multiple categories of timing, an attempt was made to determine which category was a better predictor of adjustment. Because of the small numbers of subjects in several categories, and for the purpose of this analysis, these categories were collapsed into the following groups: (1) 6 or more days before surgery, (2) 1 to 5 days before surgery, and (3) day of surgery and after surgery. Analysis of Variance (ANOVA) was used to determine the relationship of timing of

information to ostomy adjustment between these groups. This analysis indicated a significant difference ($F = 4.72$, $p = .013$) in adjustment by group (see Table 5).

Table 5

Anaylsis of Variance for Timing of Information and Adjustment to Ostomy Surgery

Group	<i>n</i>	<i>M</i>
6 or more days before surgery	13	106.30
1 to 5 days before surgery	14	99.79
Day of or after surgery	28	86.57

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	3963.22	1981.61	4.72	.0131
Within groups	52	21851.98	420.23		
Total	54	25815.20			

Further analysis using the Scheffe test is illustrated in Table 6. This test showed a significant difference between mean scores of the first group (6 or more days before surgery) and the third group (day of or after surgery) indicating that the provision of self-care information six or more days before surgery led to higher scores for ostomy adjustment.

Table 6

Scheffe Results for Timing of Information and Adjustment to Ostomy Surgery

Comparison	<i>M</i>	<i>significance</i>
6 or more days vs. 1 to 5 days	99.79	ns
6 or more days vs. day of or after	106.31	s
1 to 5 days vs. day of or after	86.57	ns

Note. $s = p < .05$

Other variables which may have explained adjustment to ostomy were further analyzed. Table 7 shows results of *t*-tests for adjustment based on ostomy type and permanence of ostomy. Because only 2 subjects had urostomies, they were not included in the analysis of adjustment by type. Results of the these *t*-tests indicated no difference in adjustment to ostomy based on type or permanence of the ostomy.

Table 7

Adjustment by Type and Permanence of Ostomy

Variable	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
Type					
Colostomy	32	90.09	21.49	-1.31	.196
Ileostomy	22	98.05	22.58		
Permanence					
Permanent	35	97.23	20.23	1.59	.119
Temporary	18	86.89	26.42		

The patient profile listed 5 diseases as reason for ostomy surgery. To analyze adjustment based on reason for surgery, these groups were collapsed into three groups: (1)

inflammatory bowel disease (IBD, or ulcerative colitis and Crohn's disease), (2) cancer, and (3) other (diverticulitis and other). Table 8 illustrates results of ANOVA of adjustment to ostomy based on reason for surgery. These results indicated a significant difference in adjustment by reason for surgery ($p = .0035$).

Table 8

Analysis of Variance for Adjustment by Reason for Surgery

Disease	<i>n</i>	<i>M</i>			
IBD	17	105.71			
Cancer	27	92.93			
Other	13	79.08			
Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	5245.59	2622.79	6.29	.0035
Within groups	54	22516.30	416.97		
Total	56	27761.89			

Further analysis of the data by Scheffe test (see Table 9) indicated a statistically significant difference in adjustment between subjects in the IBD group and the other group, indicating patients with IBD scored higher on ostomy adjustment.

Table 9

Scheffe Results for Adjustment by Reason for Surgery

Comparison	<i>M</i>	<i>significance</i>
IBD vs. cancer	92.93	ns
IBD vs. other	105.71	s
cancer vs. other	79.08	ns

Note. $s = p < .05$

Other Findings of Interest

Demographic items from the patient profile which may have accounted for differences in adjustment included age, years of education, gender, marital status. Length of hospital stay and months since surgery were also considered as possible influential variables in adjustment. Pearson's R tests were used to assess for correlation between length of stay, months since surgery, age, and education and adjustment scores. An eta test was used to analyze adjustment by gender and marital status. No significant differences were noted between any of these variables and the subjects' adjustment to ostomy scores.

CHAPTER 5
DISCUSSION AND IMPLICATIONS

Discussion

The purpose of this study was to determine the relationship between the timing of self-care information and a person's adjustment to ostomy surgery. Data from 57 archived files of an ET Nurse Service in West Michigan were obtained and analyzed in order to address this question.

It was assumed that the earlier patients received ostomy self-care information, the better adjustment would be. This was supported by the linear regression analysis of the data. Further analysis by collapsing the groups into three: (1) 6 or more days preoperatively, (2) 1 to 5 days preoperatively, and (3) day of surgery or postoperatively indicated that there was a statistically significant difference in mean adjustment scores of patients who received initial self-care information approximately one week or more before surgery than those who did not receive this information until the day of or after surgery. Even though there were no statistically significant differences between the one week group and the less than one week group, mean adjustment scores were higher the earlier the initial self-care information was received. Therefore it was concluded that the earlier patients undergoing ostomy

surgery receive self-care information, the better their adjustment to ostomy surgery.

Relationship to Previous Studies

Timing of Teaching

The conclusion that the earlier self-care information is provided, the better people adjust to ostomy surgery, is consistent with previous studies in other patient populations. Cimprich's (1992) studies of women undergoing breast cancer surgery indicated that postoperatively patients experience a decreased ability to direct attention and perform tasks. Increased fatigue after surgery decreases a person's ability to deal with self-care issues and decreases their ability to learn. Since directing attention, performing tasks and learning self-care skills are captured in the OAS score, it can be suggested that postoperative fatigue may play a part in poorer adjustment to ostomy surgery.

The findings of this study are also consistent with Cupples' (1991) study of heart surgery patients, which suggested that patients who received information 5 to 14 days preoperatively learned more because they were less anxious during this time period. Her conclusion that preadmission preoperative teaching was an effective strategy for CABG patients was supported by its applicability to ostomy patients in this study.

Adjustment to Ostomy

The mean adjustment scores which indicated no statistically significant difference in adjustment by type of ostomy are consistent with previous studies (Krainski, 1994; Rheaume & Gooding, 1991; Maklebust, 1985). Interestingly, mean scores for the 2 urostomy patients were higher than either ileostomy or colostomy mean scores. This is surprising based on the experience of the researcher. Urostomy patients tend to have longer recovery times, and more ostomy management difficulties related to frequency of care required and skin complications. This would suggest the possibility of poorer overall adjustment. Because of the small sample, conclusions cannot be drawn from this finding.

Subjects with permanent ostomies had higher mean adjustment scores than those who did not know if their ostomy was permanent. Subjects with temporary ostomies had the lowest mean adjustment scores. While this is consistent with the experience of the researcher, the difference in means was not statistically significant. This result was consistent with the previous studies of Wade (1990) and Pieper, Michols, and Grant (1996).

Mean adjustment scores by reason for surgery indicated a statistically significant difference in adjustment only between those subjects with IBD and those with diverticulitis or other reasons for ostomy surgery. This is not consistent with the findings of Rheaume and

Gooding (1991), which reported no difference in adjustment based on disease. Even though the Scheffe test did not show a statistically significant difference between those with IBD and those with cancer, adjustment scores were higher for the IBD group when compared to the cancer group. This is consistent with the experience of the researcher. IBD subjects typically are aware of a potential for an ostomy further in advance than other patient populations, and may be cured or at minimum symptomatically improved after ostomy surgery. Cancer patients often face postoperative chemotherapy or radiation therapy, continued illness, and fear of future recurrence of disease. Other disease states resulting in need for an ostomy are emergent in nature, leaving the patient with little or no knowledge of the potential for an ostomy before surgery.

Implications

Relationship to Theoretical Framework

Dorothea Orem's (1985) Self-Care Deficit Theory of Nursing was used as a framework for this study. The results of this study should be considered by the nurse in constructing a supportive-educative nursing system which best facilitates a person's adjustment to ostomy surgery.

Application to Nursing

There are several implications from this study that are applicable to nursing practice. A major role for today's nurse is teaching and supporting patients to become independent in self-care. The conclusion that patients who

receive self-care information six or more days preoperatively adjust better to ostomy surgery than those who receive information the day of surgery or postoperatively is important in the managed care environment present in health care today. Emphasis on shorter hospitalizations limit the nurse's interactions with patients at the same time that it has helped the nurse to focus on patient outcomes. Since the timing of initial self-care information was found to be a predictor of adjustment to ostomy surgery, and better adjustment (outcome) was reported by subjects who received self-care information six or more days before surgery, nursing interventions to teach patients should be planned around this time frame in order to best facilitate a person's adjustment to ostomy surgery. ET Nurses who are involved in the care of these patients should design their practice in order to assure preadmission preoperative teaching sessions with as many of these patients as possible. Alliances with Health Maintenance Organizations and surgeons' offices should be pursued in order to be notified as soon as possible for patients being scheduled for ostomy surgery. Preadmission self-care information visits with an ET Nurse should be a critical component of the care map or critical pathway for patients undergoing ostomy surgery. Nursing Administrators should support creative strategies to allow early self-care teaching to occur.

Since no significant differences were found in adjustment based on temporary or permanent ostomy, or type of ostomy, nurses need to focus equally in their interventions for all these groups.

One item of concern identified from the patient profile portion of the Quality Assurance Questionnaire that was intended to measure the process of the ET Nurse role was reviewed. Ten subjects (19%) indicated that the ET Nurse did not address social concerns. Since social concerns are a major hurdle to be overcome in adjusting to ostomy surgery, the OAS scores of these subjects were examined to determine overall adjustment of these patients. Not surprisingly, the mean scores for these 10 subjects ($M = 76.4$, $SD = 23.85$) were less than the mean scores of the sample as a whole ($M = 93.58$, $SD = 22.27$). The ET Nurse must be open to discussion of social concerns, including hygiene, return to work, interactions with others, and sexuality. Patients may need time to focus on new information and skills first, and social concerns may take a back seat to these concerns initially. Ostomy surgery results in many losses for the patient, but it has not received the attention in the media that breast cancer or cardiac surgery have. Therefore these patients may have more difficulty talking about their concerns because they do not know what to ask, or are ashamed. The ET Nurse should emphasize a willingness to discuss any concerns the patient

has about social issues at the preoperative information visit, as well as at postoperative follow-up visits.

Limitations

Sample size may be considered a limitation to the applicability of this study, however the 63% return rate on the Quality Assurance Questionnaires was higher than may have been expected. Pierce (1995), reports that a 30% response rate is not unusual (p.297).

In measuring the variable, timing of self-care information, seven categories of time may have been too many to choose from. Three months after surgery a person may have difficulty remembering when they first met with the ET Nurse. For the purpose of ANOVA, these categories were collapsed into more reasonable periods of time: (1) 6 or more days preoperatively, (2) 1 to 5 days preoperatively, and (3) day of surgery or postoperatively. The wording of this particular question may have been confusing to the subject as well. A more specific question such as "When did you first talk to the ET Nurse about what it means to have an ostomy?" may have been clearer to the subject. It was surprising to the researcher that so many of the subjects indicated "after surgery" as their first informational visit, since the ET Nurse Service strived to provide information as soon as it becomes apparent that someone is scheduled for ostomy surgery. Because anonymity of the subjects was maintained, there was no way to know who

returned the questionnaire. Those patients who were most well adjusted or least well adjusted may not have responded.

The patient profile section of the Quality Assurance Questionnaire does not give the subject an opportunity to identify if their surgery was planned or an emergency. Two subjects indicated "no time" and "it was an emergency", another stated "I was unconscious" when they answered item number 14 on the patient profile. Failure to control for planned or emergent surgery may have accounted for the large number of patients who did not see the ET Nurse preoperatively.

Use of a retrospective research design may have also led to limitations of this study. According to Wasserbauer and Abraham (1995), recall bias, underreporting of socially undesirable outcomes, and overreporting of events may lead to a stronger association than actually exists. In addition, causation cannot be inferred from this design (p. 232).

Suggestions for Further Research/Modifications

The study of the timing of self-care information and adjustment to ostomy surgery provided useful information. By structuring interventions in the optimal time period, the nurse may facilitate the best outcome possible for the patient experiencing ostomy surgery. However, because of the limitations, the following recommendations are made.

Replication of this research over a longer period of time or multiple sites in order to increase the number and

diversity of subjects may help to improve the study's generalizability. A study utilizing videotapes or computer interactive programs to provide patients with self-care information and adjustment to ostomy may be warranted. Although the demographic items from the patient profile did not show significant differences in adjustment, there may be other patient characteristics which affect adjustment. Designing a study to compare adjustment based on social support, self-efficacy, or locus of control might provide additional useful information for the nurse to help guide interventions with these patients.

Modification of the Quality Assurance Questionnaire to separate subjects with planned surgery from those with emergent surgery to determine differences among these groups should be considered. Additional suggestions for modifying the instrument would include regrouping the categories of timing of information and reason for surgery as was done in the statistical analysis. Restating the timing question as a continuous instead of a categorical variable would give more specific information about the most appropriate time to intervene with these patients. Questions could be included asking patients when they would prefer self-care information, and what information they consider most important for them to receive in order to improve their adjustment to ostomy surgery.

Designing a quasi-experimental study to control the extraneous variables of ostomy type, permanence, and reason for surgery would make a stronger study.

APPENDICES



Appendix A

1 CAMPUS DRIVE • ALLENDALE MICHIGAN 49401-9403 • 616/895-6611

October 9, 1996

Carol TenEyck
2732 Albert Dr. SE
E. Grand Rapids, MI 49506

Dear Carol:

Your proposed project entitled "*The Relationship Between Timing of Self-care Information and Adjustment to Ostomy Surgery*" has been reviewed. It has been approved as a study which is exempt from the regulations by section 46.101 of the Federal Register 46(16):8336, January 26, 1981.

Sincerely,

A solid black rectangular box redacting the signature of Howard Stein.

Howard Stein, Acting Chair
Human Research Review Committee

January 16, 1997

Carol TenEyck
2732 Albert Dr., S.E.
E. Grand Rapids, MI 49506

RE: Research project entitled, "The Relationship Between Timing
of Self-Care Information and Adjustment to Ostomy Surgery"

Dear Carol:

I am pleased to inform you that the members of the Institutional
Review Board have reviewed your protocol and approve your
conducting this study at Blodgett Memorial Medical Center.

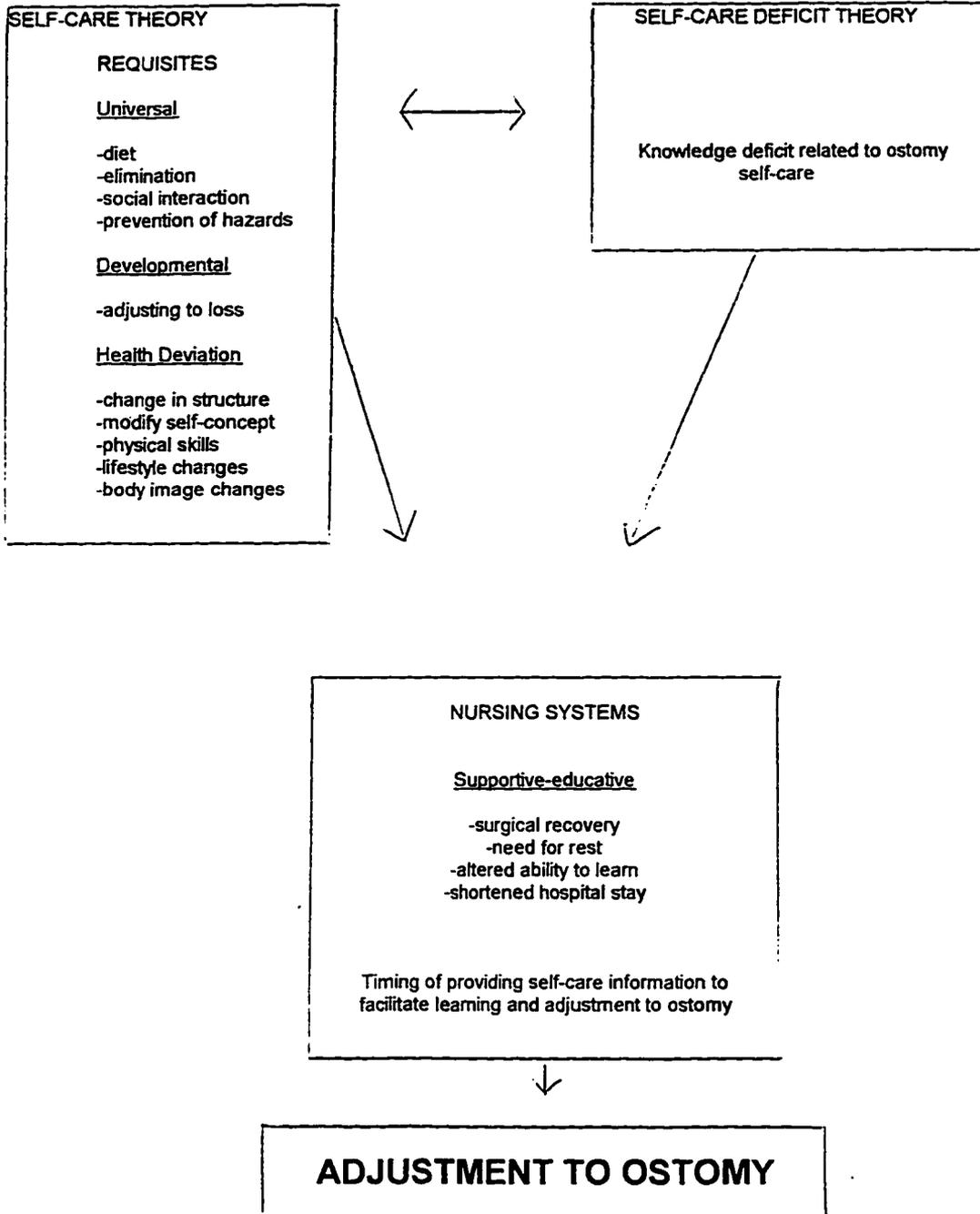
Sincerely,


Stephen D. Cohle, M.D.
Chairman
Institutional Review Board

nmd

Appendix A

OREM SELF-CARE DEFICIT THEORY AND ADJUSTMENT TO OSTOMY



14. When did you first receive information from an Enterostomal Therapist (ET Nurse) about ostomy?
1) 9 or more days before surgery 2) 6-8 days before surgery
3) 3-5 days before surgery 4) 1-2 days before surgery
5) Day of surgery 6) After surgery
7) Other
15. Did you receive instruction from the ET Nurse in care of your ostomy?
1) Yes 2) No
16. Did you have an opportunity to practice your new skills while in the hospital?
1) Yes 2) No
17. Did you receive information from the ET Nurse about social concerns?
1) Yes 2) No
18. Did the Staff Nurses reinforce what you learned from the ET Nurse?
1) Yes 2) No
19. Were your family/friends involved in your teaching?
1) Yes 2) No
20. Who helped you the most in adjusting to your surgery?
1) ET Nurse 2) Family 3) Physician 4) Other ostomate
5) Other
21. What would you like to share about your experience with someone about to have ostomy surgery?

Section 2

Listed below are 18 statements that represent feelings that people with ostomies sometimes have. Based upon the feelings you have, rate how much you agree with each statement. Circle one number on each line to indicate whether you Strongly Agree with the statement, Slightly Agree, are Uncertain, Slightly Disagree, Moderately Disagree, or Strongly Disagree. There are no right or wrong answers. We just want to know how you feel after your ostomy surgery. Your answers may help us to help others experiencing ostomy surgery.

	Strongly Agree	Moderately Agree	Slightly Agree	Uncertain	Slightly Disagree	Moderately Disagree	Strongly Disagree
1. I feel that the future is hopeless because of my ostomy.	1	2	3	4	5	6	7
2. I am able to take care of my ostomy by myself.	1	2	3	4	5	6	7
3. I can easily talk about my ostomy to my family and friends.	1	2	3	4	5	6	7
4. I feel helpless when I look at my stoma.	1	2	3	4	5	6	7
5. My ostomy takes so much time that it limits my normal everyday activity.	1	2	3	4	5	6	7
6. I feel very angry that this ostomy happened to me.	1	2	3	4	5	6	7
7. My ostomy prevents me from having relationships with others.	1	2	3	4	5	6	7
8. I fear that my ostomy has an odor that would offend people.	1	2	3	4	5	6	7
9. I can look at my stoma without feeling depressed.	1	2	3	4	5	6	7
10. I can dress in the same kind of clothes that I wore before my ostomy surgery.	1	2	3	4	5	6	7
11. I avoid situations where I will be out in public more than I did before I had my ostomy surgery.	1	2	3	4	5	6	7

		Strongly Agree	Moderately	Slightly Agree	Uncertain	Slightly Disagree	Moderately Disagree	Strongly Disagree
12.	I feel that my ostomy is a physical disability.	1	2	3	4	5	6	7
13	Traveling away from home is not a big problem for me.	1	2	3	4	5	6	7
14.	I am at least as physically active now as I was before I had my ostomy surgery.	1	2	3	4	5	6	7
15.	I am at least as socially active now as I was before I had my ostomy surgery.	1	2	3	4	5	6	7
16.	I am at least as sexually active now as I was before my ostomy surgery.	1	2	3	4	5	6	7
17.	My sexual relationship has worsened as a result of my ostomy.	1	2	3	4	5	6	7
18.	It would give me pleasure to help a new ostomate by visiting him or her in the hospital to offer encouragement.	1	2	3	4	5	6	7

Comments:

Appendix E

Carol I. TenEyck, B.S.N., R.N., C.E.T.N.
2732 Albert Dr., S.E.
East Grand Rapids, MI. 49506

JoAnn Maklebust, M.S.N., R.N., C.S.
Harper Hospital/Detroit Medical Center
3990 John R
Detroit, MI. 48201

Dear Ms. Maklebust,

This is a letter of request for permission to use your Ostomy Adjustment Scale (OAS), published in Journal of Enterostomal Therapy, 12(3), May/June 1985, p.89-92. The tool will be used for: (a) quality assurance activities for the Enterostomal Therapy (ET) Nurse Services at Blodgett Memorial Medical Center in Grand Rapids, MI., and (b) to collect data for my Master's thesis entitled "The Relationship Between the Timing of Self-Care Information and Adjustment to Ostomy Surgery."

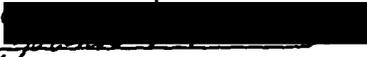
I am also requesting permission to reproduce, in the final copy of my thesis, your OAS. Full credit will be given. Please advise me as to what I need to do to use the tool and if there will be any cost to do so.

Thank you for your assistance.

Sincerely,


Carol I. TenEyck

Permission Granted:

By 

Date 1-29-96

Appendix F

BLODGETT MEMORIAL MEDICAL CENTER
DEPARTMENT OF NURSING

Initiated _____ Discontinued _____
Date _____ Date _____
Time _____ Time _____
RN _____ RN _____

OSTOMY TEACHING PROTOCOL

PURPOSE: To outline nursing responsibility in patient education of a patient/S.O. with an ostomy.

LEVEL: Independent

CONTENT:

OUTCOME STANDARDS:

Physiologic: The ostomy patient will maintain optimal ostomy function through effective self care.

Psychologic: The ostomy patient will demonstrate a beginning attitude of acceptance of modified life style (altered bowel/bladder elimination) and body image.

Cognitive: The patient will demonstrate the ability to manage his ostomy independently (or with SO assistance).

INFORMATION TO BE OBTAINED/DELIVERED	METHODOLOGY	TAUGHT BY/DATE	PATIENT/S.O. RESPONSE ADDITIONAL LEARNING NEEDS
1. Determine preferred learning style and/or any learning difficulties.	Ask patient how he learns best: i.e. reading, listening, observing, hands on.		
2. Asses prior knowledge of subject to be taught.	Inquire of patient his previous experience related to subject.		
<u>DISEASE PROCESS</u>			
3. Obtain appropriate teaching literature (ostomy specific, food list, hints, pharmacy list, anatomy diagram) from Enterostomal Therapy Nurse.			
4. Teach patient about disease process and why ostomy necessary.	Demonstrate on diagram Use pamphlets as indicated.		

INFORMATION TO BE OBTAINED/DELIVERED	METHODOLOGY	TAUGHT BY/DATE	PATIENT/S.O. RESPONSE ADDITIONAL LEARNING NEEDS
<u>ANATOMY AND PHYSIOLOGY</u>	Demonstrate site of		
5. Review basic anatomy and physiology related to affected gastrointestinal or genitourinary tract.	ostomy on diagram Patient to identify location of ostomy in relation to other GI/GU structures prior to discharge.		
<u>DIET AND FLUIDS</u>			
For Fecal Diversions.			
6. List foods that may cause increase in diarrhea, flatulence, and constipation, or assist in odor control.	Review "Food list". Patient to verbalize foods that alter bowel function.		
7. Stress importance of maintaining hydration balance.			
For Urinary Diversions			
8. Review foods that may increase urinary odor.	Explain rationale for fluid intake of 2 quarts per day of non-caffeinated beverages.		
9. Teach methods and rationale of acidification of urine.	Patient to verbalize optimal fluid intake.		
• need for at least 2 quarts per day of fluid.	Review urostomy literature with patient.		
• acid urine decreases risk of urinary tract infection.	Patient to verbalize optimal fluid intake.		
• signs of alkaline urine.			
<u>MEDICATIONS</u>	Review ostomy literature with patient.		
For ileostomies only; there are no medication restrictions for colostomies and urostomies).			
10. Avoid enteric coated or timed release medications.			
11. Do not use cathartics or enemas.			

INFORMATION TO BE OBTAINED/DELIVERED	METHODOLOGY	TAUGHT BY/DATE	PATIENT/S.O. RESPONSE ADDITIONAL LEARNING NEEDS
<p><u>ACTIVITY</u></p> <p>12. Teach patient importance of daily walking program and possible activity restrictions.</p> <ul style="list-style-type: none"> • Discuss with physician other possible restriction i.e. driving, work, weight lifting restriction. 	<p>Review ostomy literature.</p> <ul style="list-style-type: none"> • Patient to verbalize any restrictions in ADL's. 		
<p><u>POUCH</u></p> <p>13. Teach patient proper application of pouch using home equipment.</p>	<p>Implement Universal Precautions as needed for nurse and significant other.</p> <p>Follow procedure for changing pouch and instructions from ET Nurse.</p> <p>Demonstrate on patient/model.</p> <p>Return demo by patient with assistance.</p> <p>Return demo by patient independently.</p>		
<p>14. Review pouch emptying technique(s).</p> <p>Fecal Diversions</p> <ul style="list-style-type: none"> • Empty when 1/2 full of flatus or stool. 	<p>Demonstrate "burping".</p> <p>Demonstrate folding tail back, emptying flushing with cool water, drying and reclamping.</p> <p>Return demo by patient with assistance.</p>		

INFORMATION TO BE OBTAINED/DELIVERED	METHODOLOGY	TAUGHT BY/DATE	PATIENT/S.O. RESPONSE ADDITIONAL LEARNING NEEDS
<p>Urinary Diversions</p> <ul style="list-style-type: none"> • Review emptying via spout. • Review attachment to night drainage bag or legbag. <p>15. Teach proper cleansing and storage of ostomy supplies.</p> <ul style="list-style-type: none"> • Explain negative effects of storage in hot/cold place and need for cleansing with cool water and dishwashing liquid. 	<p>Return demo by patient independently.</p> <p>Demonstrate emptying.</p> <p>Demonstrate attaching connector and hooking up to collection device.</p> <p>Explain cleansing routine with 1/4 strength vinegar solution.</p> <p>Demonstrate cleansing collection device.</p> <p>Return demo by patient with assistance.</p> <p>Return demo by patient independently.</p> <p>Review literature</p> <p>Patient to verbalize/demonstrate.</p>		
<p><u>SKIN</u></p> <p>16. Teach proper skin and stoma care.</p> <ul style="list-style-type: none"> • Stress importance of cleansing gently with non-oil based soap (i.e. Dial, Ivory, Zest). 	<p>Review ostomy literature.</p> <p>Patient to demonstrate.</p>		

INFORMATION TO BE OBTAINED/DELIVERED	METHODOLOGY	TAUGHT BY/DATE	PATIENT/S.O. RESPONSE ADDITIONAL LEARNING NEEDS
<ul style="list-style-type: none"> • Discuss previous bowel habits to determine best time schedule for procedure based on patient's needs. 	<p>Return demo by patient with assistance.</p> <p>Return demo by patient independently.</p>		
<u>ODOR CONTROL</u>			
18. Teach dietary methods for decreasing odor.	Review food list with patient.		
19. Teach other methods of odor control.	Review literature.		
<ul style="list-style-type: none"> • Review use of mouthwash (fecal diversion) or vinegar solution (urinary diversion) to decrease odor pouch hygiene. 	Patient to verbalize/demonstrate.		
<u>HOME MANAGEMENT</u>			
20. Review supplier list; patient to verbalize where to buy supplies and indicate understanding of possible insurance coverage.	Review with patient local ostomy suppliers.		
21. Review community agencies available to patient if further questions. eg. Ostomy Association, NFIC, Cancer Society.	Review ostomy literature.		
22. Review possible wardrobe alterations.			
<ul style="list-style-type: none"> • Discuss beltline, clothing colors, pouch covers, bathing suits, suspenders, snap crotch suits for infants. 			
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INFORMATION TO BE OBTAINED/DELIVERED	METHODOLOGY	TAUGHT BY/DATE	PATIENT/S.O. RESPONSE ADDITIONAL LEARNING NEEDS
23. Discuss problem solving for possible situations that may occur while traveling, at work, events outside the home.	<p>Review ostomy literature provided by ET Nurse.</p> <p>Patient to verbalize contents of emergency kit, management in public restrooms, how to find help while traveling, what supplies to take while traveling.</p>		
<p>24. Teach danger signals to report to MD/ET Nurse.</p> <p>Colostomy</p> <ul style="list-style-type: none"> • No BM x 3 days, emesis, abdominal pain. <p>Ileostomy</p> <ul style="list-style-type: none"> • No output for 12 hours. • Diarrhea for 24 hours. • Diarrhea and vomiting for 12 hours. <p>Urostomy</p> <ul style="list-style-type: none"> • No urine output for 2 hours. • Bloody urine, flank pain, fever. 	<p>Review danger signals.</p> <p>Patient to verbalize when to call MD/ET Nurse.</p>		
25. Reinforce information in ostomy literature related to ADL, sexuality, hobbies and importance of resocializing and that prehospital lifestyle can continue.	<p>Ask patient how he feels his ostomy will affect his life.</p> <p>Obtain ostomy visitor if patient desires.</p>		

INFORMATION TO BE OBTAINED/DELIVERED	METHODOLOGY	TAUGHT BY/DATE	PATIENT/S.O. RESPONSE ADDITIONAL LEARNING NEEDS
<p><u>DOCUMENTATION</u></p> <p>26. Document the implementation of the protocol on the Protocol Flowsheet.</p> <p>27. Record all teaching done on this teaching protocol.</p> <ul style="list-style-type: none"> • Involve S.O. when possible. • Note whether outcome standards have been met. • Indicate referral plan if outcome standards <u>not met</u> using comments section. • Complete dates/signature where indicated. 	<p>Patient to verbalize beginning acceptance of change in body image.</p> <p>Refer to Social Work/Continuing Care if needed.</p>		

Appendix G

Cover Letter

INFORMATION/CONSENT FOR PARTICIPATION IN OSTOMY QUALITY ASSESSMENT STUDY

INTRODUCTION

During your recent hospitalization, you received information about your ostomy. People experiencing ostomy surgery differ in their acceptance of and adaptation to their ostomy. As part of our quality assurance program, we ask that you take about ten minutes to complete the enclosed questionnaire. In addition to quality assurance, a research study will be done using the data collected to discover how well people have adjusted to their ostomy after surgery.

PROCEDURE

You can help us by completing the enclosed questionnaire. Please do not write your name on the form. Once completed, please return the questionnaire in the enclosed, self-addressed, stamped envelope. Sign the consent, and keep one copy for your records. Return the other copy with the questionnaire.

BENEFIT

The information we receive from former patients about their experiences helps nurses and physicians to best prepare others for the changes they will experience after surgery, and facilitate their return to normal living.

RISK

There are no risks to participating in this study. It should only take about ten minutes to complete the questionnaire. All information is confidential, and will in no way affect the current or future care you receive from your surgeon or ET Nurse.

VOLUNTARY PARTICIPATION

Your participation in this project is entirely voluntary. If you choose not to participate, your care will not be affected in any way by your decision.

COMPENSATION

You will receive no financial compensation of any kind for participation .

CONFIDENTIALITY

You have the right to privacy. All data collected will be processed and reported in a group basis. No individual data will be released. Your records, (if requested) may be provided to the hospital's Institutional Review Board and /or a governmental agency assigned the function to review research of this kind. The collection of information from this study will be accomplished with strict adherence to professional standards of confidentiality.

If you have any questions about the quality assurance project or the study, please contact Carol TenEyck, RN, CETN, at (616) 774-7448. Thank You.

Please sign below. Keep one copy for yourself, and return one with the questionnaire . Thank you.

I have read and understand the information set forth above and have voluntarily entered into this agreement.

Name _____

Date _____

Signature _____

Witness _____

LIST OF REFERENCES

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