AN INVESTIGATION OF THE IMPACT OF AN INDIVIDUAL TEACHING
GUIDE ON THE INPATIENT EDUCATION OF MYOCARDIAL INFARCTION
PATIENTS

By

JENNIFER ANN MOHaupt

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Abstract

Myocardial Infarction patients (MI, or heart attack) are vulnerable patients that require specialized care. The purpose of this study was to develop a teaching guide to be used by nursing staff with myocardial infarction patients in the hospital setting, and to investigate the impact of this individualized patient teaching guide (IPTG). This research met its specific purposes through a three-phase structure: development of the teaching guide, implementation, and assessment of participant impact. In phase one, development of the teaching guide, two focus groups were conducted: one with previous MI patients and the other with nursing staff. The IPTG was developed using the topics identified as important by these two focus groups.

Twenty patients participated in the implementation phase. The intention was for these patients to have patient teaching guided by the options they chose on their IPTGs. Seventy percent of the patients provided feedback concerning the impact of the guide. All of these patients (n=14) indicated that Risk Factors was very important or important for them to learn about in the hospital, and 13 received instruction on Risk Factors from health care practitioners. Psychological Concerns was the category most neglected: only 1 of patients that had identified this as important received instruction on this topic. While the majority of patients (n=10) indicated that the IPTG provided them with an opportunity to identify their learning needs, only four of the patients surveyed felt that their learning needs were completely met in the hospital setting. The other six patients indicated that the information provided to them was insufficient.

It seems that some of the topics identified as important were addressed in the clinical setting. Furthermore, the tool did allow patients an opportunity to identify learning needs. However, given that the majority of patients indicated dissatisfaction with the amount of education they received in the hospital setting, it may be concluded that the IPTG did not accomplish the goal of
improving the in-patient learning experience. Reasons for this are discussed.
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CHAPTER ONE: THE PROBLEM

Introduction

Myocardial Infarction patients (MI, or heart attack) are vulnerable and require specialized care, attention and health education. Numerous studies have identified the failures of health care professionals in meeting the information needs of this special patient population (Redman, 1997; Tierney, Worth & Watson, 2000; Turton, 1998). As a Registered Nurse I have spent the majority of my career caring for cardiac patients. My clinical experience spans ten years in the intensive care environment where I have been charged with the responsibility of caring for many newly diagnosed MI patients. I have often wondered how health care providers might better help cardiac patients through the recovery process. Through my varied experiences I have learned that the education afforded to recovering cardiac patients is inconsistent. Some patients may receive booklets to take home; others may view videotapes chosen by staff; and others may have their learning needs ignored completely. Based on my experiences, it appears that the constant thread in patient teaching is that nurses direct how, what and when patients learn post-MI; patients are merely the recipients of what we choose to teach them (Bastable, 2003). Patients want and need to have some control over these patient teaching sessions (England & Evans, 1992; Garvin, Moser, Riegel, MiKinley, Doering & An, 2003; Moser & Dracup, 1995; Stewart, Abbey, Shnek, Irvine & Grace, 2004). Recognizing this, it follows that they need an individualized approach to education that incorporates principles of adult learning.

Background of the Problem

In 1999, cardiovascular disease accounted for the deaths of nearly twenty-one thousand Canadians; in fact, heart disease is the underlying cause of death for one in three Canadians, a number that is expected to rise as our population ages (Heart and Stroke, 2003). If it is true that
cardiac disease is linked to a number of modifiable lifestyle choices including smoking, physical inactivity, and obesity, it is reasonable to assume that effective patient education could certainly have a positive outcome for millions (Heart and Stroke, 2003). If nurses can use patient teaching as a tool to help patients avoid these risk factors, the number of deaths associated with heart disease does have the potential to diminish.

The average length of stay for MI patients is between five and ten days (barring any complications). This affords little time for education about lifestyle modification that has the potential to save lives. Cardiac rehabilitation programs outside of the hospital appear at first glance to be the best way to solve this dilemma; however, few patients are referred, and for various reasons, those who are referred often do not attend most of the meetings (Daly, Sindone, Thompson & Hancock, 2002).

While patients are in the hospital, they interact with many health care professionals and have opportunities to have their most critical questions answered. Ideally, health care providers should be dedicated to patient teaching and sharing their knowledge with the cardiac population. Even a short hospital stay should provide an opportunity for nurses to initiate education for patients and their relatives about recovery from an MI and correct misconceptions they may have that could lead to deleterious health behaviors (Newens, Bond & McColl, 1995). Registered Nurses have long held the esteemed role of educator and through their clinical experiences are assumed to be knowledgeable about the content areas necessary for patients to learn. Or are they? “Studies of myocardial infarction patients and their spouses have revealed that both partners frequently report dissatisfaction with the quality and quantity of information and support they have received from health professionals” (Thomson, Webster & Meddis, 1990, p. 1064). Either patients are not receiving the information they require or nurses are dispensing education
in a manner that does not make an impact on patient knowledge (Scholte op Reimer, Jansen, de Swart, Boersma, Simmons & Deckers, 2002). Clearly change should be considered. In order to reduce the probability that heart attack survivors suffer repeated attacks, congestive heart failure or other complications, this population must leave the hospital with an arsenal of information. Without a solid knowledge base, MI patients run the risk of becoming cardiac invalids.

If health professionals are failing this population despite good intentions, perhaps it results from ineffective teaching strategies employed by nurses in the hospital environment. The benefits of patient education are widespread, and have been cited to increase consumer satisfaction, improve quality of life, decrease patient anxiety, reduce incidence of complications, promote adherence to treatment plans, maximize independence, and empower patients to become more involved in the planning of their own care (Bastable, 2003). In order to provide adequate and useful information to cardiac patients, perhaps a partial solution would be for nurses to learn more about their target audience: who they are, what motivates them to learn, and what their self-perceived learning needs are.

Meeting the educational needs of cardiac patients is widely discussed in the literature, and much research surrounding the impact of in-hospital education of the MI patient has been done (Fletcher, 1987; Mirka, 1994; Murray, 1989; Newens, Bond, Raleigh & Odtohan, 1987; Pierce & Hicks, 2001; Thompson, Webster & Meddis, 1990). It seems reasonable that nurses should consider throwing away their cookie-cutter approach to patient teaching and revisit the principles of adult learning theory to teach patients how to live with the consequences of a heart attack.

**Self-Perceived Learning Needs**

A very real possibility is that patients are dissatisfied with the information they obtain in hospital because of the discrepancy between what patients feel they need to learn and what
nurses decide to teach them. A number of studies have examined the self-perceived information needs of patients and their families compared to the perceptions of nursing staff (Chan, 1990; Czar & Engler, 1997; Gerard & Peterson, 1984; Karlik & Yarcheski, 1987; Mildred & Engler, 1997; Moynihan, 1984; Turton, 1998).

Gerard and Peterson (1984) developed the Cardiac Patient Learning Needs Inventory (CPLNI) in order to determine what items MI patients perceive as important to learn. The CPLNI contains 43 items that are rated on a scale from one (‘not important’) to five (‘very important’). The information is grouped into eight categories: Introduction to the CCU (Cardiac Care Unit), Cardiovascular Anatomy and Physiology, Psychological Concerns, Risk Factors, Information about Medications, Dietary Information, Physical Activity Information, and Miscellaneous Information (Gerard & Peterson, 1984). Included in the final category were items such as: when to call a doctor, how to take one’s pulse, signs and symptoms of angina and congestive heart failure, post-discharge tests, and where family can learn CPR. Gerard and Peterson (1984) tested their tool in a study examining the perceived learning needs of patients compared with the nurses’ perceptions of the needs of these patients. All participants (including 16 in-hospital patients in the CCU, 15 post-discharge patients, 20 CCU nurses and 16 post-CCU nurses) were asked to complete the CPLNI questionnaire. The results clearly indicate that nurses and patients view learning needs very differently. Patients in both the CCU and post-discharge group considered risk factors as most important to learn. In contrast, nurses put risk factors near the bottom of the list. This is clearly a problem if one considers that patients will likely not retain information that they do not believe is personally relevant or important (Knowles, 1989).

Gerard and Peterson’s (1984) work is cited in numerous documents interested in the perceived learning needs of cardiac patients (Ashton, 1997; Chan, 1990; Czar & Engler, 1997;
Karlik & Yarcheski, 1987; Turton, 1998; Wingate, 1990). Of all of the studies examined, the literature indicates that patients and nurses do not rank categories related to cardiac disease in the same order. This means that nurses and patients do not agree about what is important to learn. Neglecting the priorities of patients’ perceived learning needs means that principles of adult learning theory are not being used. “Adult learners have a concept of being responsible for their own decisions and resent when others force their will upon them” (Mirka, 1994, p.451). In order to be effective educators, health care professionals may consider stepping back and allowing patients to direct their own learning. Negotiating with patients on topics of consideration while in hospital may, in turn, motivate patients to focus on those issues that they feel are most important to learn.

Perhaps the most important contributions made by the CPLNI are the concepts that can be extracted from the various studies using the tool. First, patients’ perceptions of their educational needs differ from the perceptions of cardiac nurses; second, patients often perceive different educational needs in each phase of their recovery; and third, patients perceive information as more or less realistic to learn depending on where they are in their recovery process (Wang, 1994).

The literature indicates that patients themselves do not always agree on what is most important to learn. Rather than illustrating a flaw in research design, this point may further indicate the necessity of individualizing in-patient education for each and every patient. Not only do needs among patients differ, needs change for individual patients as they travel down the road to recovery.

In order to integrate information, patients must utilize their coping resources: health/energy/morale, problem-solving skills, social networks, utilitarian resources, and general
and specific beliefs (Chan, 1990). After suffering a heart attack, these resources are likely reduced; thus patients will tackle only those topics that they feel are realistic to learn (Chan, 1990). Patients are much more likely to view items as realistic to learn if they feel those items have relevance to their situation and their individual learning needs.

*Readiness to Learn*

A patient’s current situation will affect whether they consider topics related to heart disease to be realistic for them to learn. The coronary care and intensive care units (CCU and ICU) are often the first stop for MI patients. While staff are unfazed by the various bells and alarms emitting from extensive technological equipment, patients and their families are not. This area is home to various machines including cardiac monitors, ventilators and other strange and often frightening pieces of equipment. If one combines the facts that these patients are in this unfamiliar environment, have just been told that they have had a heart attack, and are often drowsy with drugs prescribed to combat chest pain, it is not surprising that this population is often not terribly receptive to health teaching (Wiggins, 1989). It is well documented that patients do not retain information while under extreme stress. “All agree that high levels of stress and anxiety are inversely related to learning. Simply, patients do not retain the information that they are taught if they are highly anxious” (Mirka, 1994, p. 449).

*Perceptions of Control*

A patient’s health locus of control is the extent to which that patient believes that he or she has control over health situations rather than that these situations happen by chance (Murray, 1989). Patients in the CCU with fresh myocardial infarctions very often feel at the mercy of fate
or “God,” and rarely feel that they have any control over their immediate destiny. If this is the case, the likelihood of patients seeking and gaining knowledge at this point of recovery is low.

When patients are admitted to the hospital they lose control over many aspects of their life including when to eat, shower, dress, take their medications, and, in many instances, when they may use the toilet. Obviously this is distressing to adults who are accustomed to making their own decisions and directing the activities of their day. Allowing patients at least the perception of control contributes to positive outcomes including decreased levels of anxiety, depression, and hostility (Moser & Dracup, 1995).

The Purpose

The purpose of this descriptive study was to develop and implement a teaching guide to be used by nursing staff in the hospital setting and to describe the impact of this guide on the in-patient education of MI patients. Three primary questions defined the scope of this research study:

1. What topics do MI patients perceive to be important to include in an individualized in-patient teaching guide?

2. What content is important to nurses to include in an individualized in-patient teaching guide?

3. How does teaching content using an individualized patient teaching guide affect the quality of in-patient education according to MI patients and nurses caring for them?

The research, grounded in adult learning theory, was intended to improve the education of these patients within the hospital setting. The Individualized Patient Teaching Guide (IPTG) was constructed from the results of focus groups aimed at gaining insight into the self-perceived learning needs identified by patients themselves and the suggestions of nursing staff charged with the responsibility of caring for this unique population. This teaching tool was applied to
post-MI patient education in an effort to promote individualized learning contracts based on the perceived learning needs of patients, including learning topics and preferred learning styles. To promote readiness to learn, I chose to apply the IPTG to patients on the medical floor of a hospital located in southwestern Ontario rather than approaching patients immediately following admission to the hospital. This study concluded with an examination of the impact of the IPTG on the satisfaction of patients’ learning experiences while hospitalized, and an assessment of how user-friendly the staff perceived the tool to be.

The Approach

It is unlikely that all MI patients will identify identical learning needs that they feel are realistic and important to learn in the hospital environment. Consequently, the IPTG developed in and for this study was intended to illuminate different learning priorities for each patient and required negotiation between nurse and patient to set objectives that were appropriate and effective. Susan Bastable (2003) defines the education process as “a systematic, sequential, planned course of action consisting of two major interdependent operations, teaching and learning…which leads to mutually desired behavior changes”(p. 10). This definition is especially fitting for the education of cardiac patients where the ultimate goal is the abandonment of behaviors such as smoking, over-eating, inactivity and so on that will ultimately decrease mortality.

Bastable (2003) relates the education process to the nursing process in a manner that was quite helpful for the conceptualization of this study. First, the nurse and patient must work together to identify the patient’s perceived learning needs, as well as determine readiness to learn. While patients should be given the opportunity to direct their own learning, nursing input is essential because it is unrealistic to assume that patients will be able to independently identify
their learning gaps after suffering their first MI. They will likely not know enough about the
issues to ascertain what it is they need or want to learn. I developed the IPTG to address this
problem. By providing patients with a list of items that pertain to cardiac disease and allowing
them to choose among these, I expected patients would be better able to make informed
decisions about the items they wished to learn while in the hospital.

These categories were developed using the results of two separate focus groups. The first
focus group was made up of nurses responsible for the patient care of cardiac patients. Post-MI
patients were given the opportunity to identify important topics to include in the guide in the
second focus group. The categories identified as important to include in the Individualized
Patient Teaching Guide (IPTG), were very similar to the topics outlined in the CPLNI developed
by Gerard (1984). The focus groups were the first step of my thesis work to ensure that I heard
from the population I was trying to reach.

I then invited patients and nurses to use the guide I had developed using the input from the
focus groups. The plan was that with this guide, once a patient had chosen the items to learn
while hospitalized, the nurse would negotiate with the patient to arrive at a plan that was
appropriate and based on effective adult teaching principles with the goal of raising the
probability of enhanced learning. The hospital environment has a number of different teaching
tools and resources available for use including literature, videos, three-dimensional models and,
of course, dialogue with health professionals. Recent literature on learning styles and multiple
intelligences suggests that the approach to teaching should be shaped by the individual
preference of the patient who is learning (Bastable, 2003).

It is important to keep an open dialogue with patients because their needs often change as
they move down the road to recovery (Czar & Engler, 1997; Moynihan, 1984). Patients should
be given the opportunity to ask questions and change the course of the teaching plan to meet their own needs. While nurses and other health care professionals can certainly suggest topics to address, I contend that they should avoid imposing their biases or preferred topics on patients. Incorporating adult learning theory ensures that the teacher’s own biases and agendas be shelved in favor of the patient’s identified learning desires.

The end of the educational process involves looking at a patient’s behaviour changes in knowledge, attitudes and skills (Bastable, 2003). In the final phase of my research, I was interested in the feedback from patients involved in this study: how they felt their educational needs were met, how prepared they felt to go home, and the gaps they perceived in their own in-hospital learning experiences.

Chapter Two is a review of relevant published literature. In Chapter Three the methodology for data collection and analysis utilized in this study is presented. Chapter Four summarizes the results obtained. Finally, in Chapter Five, a discussion of this research will conclude this thesis work.
CHAPTER TWO: LITERATURE REVIEW

If one of the professional responsibilities of nurses is to deliver information that will enable MI patients to leave the hospital equipped with accurate and actionable knowledge, I believe it is vital that the health-related learning needs of these patients are identified. This literature review will include studies that have examined the perceived educational learning needs of patients from three perspectives: the patients themselves, their family members and the nurses caring for them. Research has demonstrated that adults will not retain any information that they do not view as important or relevant to them (Benn, 2000); therefore, teaching effectively at the bedside will necessitate using tools and approaches that incorporate principles derived from adult learning theory, an area of the literature that will be reviewed in this chapter. By teaching patients according to the principles of adult learning theory, nurses should be able to enhance patients’ feelings of control in the unfamiliar and often frightening environment of the hospital. The perception that one is in a position of control over events in the hospital favorably affects one’s health (England & Evans, 1992). A discussion of the literature examining issues of preference for information and perceived control concludes this review.

Cardiac Patients’ Perceived Learning Needs

In order for the educational needs of cardiac patients and their families to be met, nurses should be made aware of the immediate content needs and learning priorities of these important stakeholders from first-hand sources instead of basing the information presented using their own ideas and biases about what MI patients need to learn during rehabilitation. The literature shows that the perceptions of patients and nurses are incongruent. Studies also show that patients’ spouses have special information needs of their own and that those patients’ educational needs change as they recover.
Gerard and Peterson’s (1984) seminal work is cited in many published papers about the perceived learning needs of cardiac patients. Gerard (1984) developed the Cardiac Patient Learning Needs Inventory (CPLNI) in order to determine what topics MI patients perceive as important to learn. The CPLNI contains 43 items that are rated on a likert scale from one (not important) to five (very important). The information is organized into eight categories: Introduction to the Coronary Care Unit (CCU), Cardiovascular Anatomy and Physiology, Psychological Concerns, Risk Factors, Information about Medications, Dietary Information, Physical Activity Information and Miscellaneous Information (Gerard & Peterson, 1984). The final category included items such as when to call a doctor, how to take one’s pulse, signs and symptoms of angina and congestive heart failure, post-discharge tests and where family members can learn CPR. The items assembled from the literature to be included in the inventory were reviewed independently for content by four doctorally prepared nurses adept at teaching nursing content at the graduate level, and by two master’s level cardiovascular nursing clinical specialists (Gerard & Peterson, 1984). Instructions and items contained in the questionnaire were reviewed by experts whose advice led to some revisions to improve wording.

Gerard and Peterson’s study (1984) examined the perceived learning needs of patients compared with the nurses’ perceptions of the needs of these patients. The patient sample size was 31: 16 CCU patients, and 15 post-discharge patients. The nurse sample included 20 CCU nurses and 16 post-CCU nurses. All participants were given both the CPLNI questionnaire as well as the Educator Preference Tool, an instrument developed to illuminate patients’ preference of nurse or physician educator.
The results of this study showed that nurses and patients viewed learning needs very differently (see Figure 1). Patients in both the CCU and post-discharge group felt that risk factors were the most important item to learn. In contrast, nurses put risk factors near the bottom of the list. This is important because given shorter hospital stays, nurses may be forced to prioritize patient teaching and may not be able to spend adequate time on items the nurses perceive as less important. It may be necessary to identify the most significant learning needs of the patient and focus on those topics.

Patients in the CCU and those post-discharge also rated items very differently. This is not surprising, as one would expect a patient’s learning needs to change as the recovery process takes place. In fact, there was greater variance among patient populations than among nursing groups for the same set of items. One surprising result was that the post-discharge patient group indicated that the category “Introduction to CCU” was very important (second only to risk factors), and patients that were actually in the CCU ranked this category much lower. Given this, it seems that nurses may need to adjust their teaching strategies for different periods of cardiac rehabilitation.

Perhaps the most disappointing finding to read as an RN is the fact that the patients in this study clearly preferred physicians as health teachers, rather than other health care professionals including nurses. Because nurses are typically at the bedside consistently and physicians are only available to answer questions and educate sporadically, the image of the nurse as educator needs to improve.
Figure 1. Priority Ranking of CPLNI Categories Identified by Patients and Nurses in Gerard & Peterson’s (1984) Study.
One suggestion may be that an inconsistent knowledge level among nursing staff affects patients’ perceptions of the abilities of nursing staff to impart relevant information. Nurses should be provided with sound knowledge on issues surrounding the care of cardiac patients so that they will be equipped to teach them accordingly (Newens, McColl, Bond & Priest, 1995).

Karlik and Yarcheski (1987) replicated Gerard and Peterson’s (1984) study to determine if their results were replicable and generalizable to all members of this population. The patient sample taken was similar, i.e., 15 CCU patients and 15 post-discharge patients for an \( n \) of 30. The nursing sample was slightly different as it included 15 nurse educators as well as the 15 CCU nurses. This is relevant because nurse educators tend to have a higher level of education, in that most have completed a Master’s degree. Karlik’s and Yarcheski’s results agreed with the findings of the original study, during which it was determined that the patients’ highest priority was in learning about risk facts. Patients in this study also stated that medications were important items about which to learn. In both the CCU setting and post-discharge, patients felt that it was less important to address and learn about psychological factors. As in the original study, nurses in the replication study did not rank risk factors as most important for patients to learn. Both nursing groups felt that medication information was a top priority for teaching. “A comparison of the ranks obtained in both studies indicated that there was more agreement between nurses than between patients in ranking the relative importance of individual items” (Karlik & Yarcheski, p.548). As in the previous study, patients in this group also preferred to receive instruction from physicians rather than nursing staff. Clearly, there are implications that may affect patient teaching, suggesting that nurses may need to work hard to change the public perceptions of the role of nurses in the hospital setting.
Perception of Nurse Compared to Patient and Family

In a descriptive non-experimental design study, a third party, i.e., the spouse, was introduced. Turton (1998) used a modified version of the CPLNI to determine the self-perceived information needs of patients and their spouses/partners compared with the perceptions of nursing staff. In this study the category “risk factors” was changed to “life-style factors” and “introduction to CCU” was omitted and a new category “symptom management” was included. Subjects included 18 patients and their spouses, and 18 nurses. Findings illustrated congruency among all groups when looking at the two spectrums most important and least important to learn. The total scores for some of the other categories were significantly different between the nursing and patients and spouse groups (p<0.0001). Conversely, with the exception of dietary information, perceptions of importance of categories of information remained consistent among patients and their spouses (Turton, 1998). It would appear that since cardiac patients and their spouses share similar information needs, this is a good argument to support the inclusion of family members in patient teaching sessions (Wiggins, 1989). Family members are important contributors to health. Often spouses prepare meals, encourage physical activity and act in a supportive capacity. It is important for nursing staff to remember the contributions that family can make to the rehabilitation of MI patients. Literature shows that spouses are often neglected when it comes to patient teaching. In one study it was found that only one 25% of the women were spoken to by nurses about possible dietary change for their partners, 24% were educated about exercise and 31% were advised about general lifestyle of their partners (Newens, Bond & McColl, 1995).

Patients Perceived Needs and Their Environment

Chan (1990) modified Gerard and Peterson’s CPLNI by adding a new dimension entitled “realistic to learn.” This Canadian longitudinal study followed 30 patients over a three month
period, eliciting data from patients both during hospitalization and after discharge. Patients in this study felt that risk factors were the most realistic to learn. This is important given the high ranking attributed to this category by nearly all patient populations. The group of patients in hospital and the post-discharge group differed in their belief in how realistic items were to learn. In-hospital patients seemed to perceive things like anatomy and physiology and pulse taking realistic items for education, and dietary information least realistic to learn in the hospital setting. Out-patients felt that medication information and dietary information were realistic goals for teaching and miscellaneous information less realistic. Interestingly, they may have felt that miscellaneous information such as sexuality was less realistic to learn because of the relative lack of importance they afforded this topic (Knowles, 1984).

Wingate (1990) further examined the role of setting and rehabilitation status on the perception of learning needs of cardiac patients. The investigator indicated that this project was developed based on Knowles’ theory of andragogy (Wingate, 1990). This descriptive study took a convenience sample of 32 patients and followed them through their recovery process. The CPLNI was used as a method for obtaining the data. The researcher hypothesized that patients would have different perceptions of learning needs in the CCU, PCCU (Post Cardiac Care Unit) and at home. The results were consistent with other studies in that patients perceived risk factors and anatomy and physiology as most important to learn. The investigator noted that patients ranked all the categories higher in hospital than at home.

Czar and Engler’s (1997) longitudinal exploratory study looked at 28 patients and compared their perceived learning needs while in-hospital and again at home. The investigators modified Gerard and Peterson’s (1984) tool and entitled their instrument “Everything You Ever Wanted to Know About Heart Disease.” This updated instrument included categories such as cardiac
IPTG- 18

anatomy and physiology, food restrictions, exercise, recognizing symptoms, sex, medications, smoking, work, stress and general concerns. Matched $t$-tests and Pearson’s correlation were used for analysis and indicated that there were no statistical differences between learning needs at home as opposed to in-hospital. The top ranked items were again directly related to the survival of cardiac patients. The items seen as less important were things like smoking, work and sex. Perhaps these topics can be viewed as more intimate or difficult to discuss and could account for why they were ranked lower.

Moynihan (1984) also studied the relationship of environment and perceived learning needs. This study did not utilize the CPLNI, instead a “questionnaire designed to describe the current recommended educational components of an established organized program in cardiac rehabilitation” was sent to 17 respondents (Moynihan, 1984, p. 444). Patients were asked to identify whether topics were important and when instruction on given topics would be most appropriate. The content validity and internal consistency of the tool was not discussed in the literature. The author did not provide the reader with rationale for topics included or state the credentials of the individuals involved in the creation of this questionnaire. The results indicated that patients admitted in CCU desired very limited information. In contrast to other research, Moynihan found that this population felt introduction to the CCU was most important and other topics may have been too overwhelming at that stressful time. Interestingly, CCU patients in other studies did not seem to view the introduction to the unit and the policies and procedures as very important to learn. Patients on the medical floor felt that the most relevant category was dietary information. This is inconsistent with all other findings. Post-discharge, patients felt that information about hobbies, sexual activity and activity restrictions were most important to learn. This, again, is inconsistent with other literature on the subject. One of the difficulties with the
Moynihan study is the lack of information regarding the psychometric qualities of the questionnaire. Without being able to make an informed decision about the reliability and validity of the instrument that formed the basis of this study, it is impossible to determine whether the highly inconsistent findings are attributable to the population or the methodology employed.

**Perceptions of Men versus Women**

Ashton’s (1997) descriptive study was comparative in its design, and sought to illuminate the different learning needs of cardiac patients along gender lines. The author claimed that the current literature concerning the educational needs of cardiac patients often neglects the needs of female patients. It is true that when women cardiac patients are included in this research, they are invariably the minority (Chan, 1990; Czar & Engler, 1997; Gerard & Peterson, 1984; Karlik & Yarcheski, 1987; Turton, 1998). The study was based on the hypothesis that the perceived learning needs of women are different from those of men. Again, the CPLNI was used to gather data. The results indicated that men felt that information about medications was most important to learn while women considered risk factors the top priority. Unfortunately, a further breakdown of the CPLNI was not provided and cannot be analyzed. The perceived needs of women were reported as being ranked higher in all categories than those prioritized for men (Ashton, 1997). Also important to note was the fact that the men and women preferred different disciplines as educators. Women (61.7%) preferred physicians to teach them the categories included in the inventory, whereas men (43.7%) were just as satisfied to have the nurse do the teaching. Physician-led instruction was still preferred by a large portion of the male cardiac population (40.9%). These findings favoring the nurse by some patients are inconsistent with
past results. It may be that the image of nursing had improved by 1997, or perhaps the nurses in this setting were viewed as particularly knowledgeable.

*Strengths and Limitations of the CPLNI*

As previously stated, the CPLNI has been used numerous times by independent researchers to identify the perceived learning needs of the cardiac patient. Each time a survey is utilized, it gains acceptance and credibility. Each author indicates that the content validity and coefficient α reliability are strong. The tool is often chosen due to its ease of use by both patients and nurses. It is quickly and easily administered and lends itself both to oral administration as well as written data collection. Providing MI patients with the CPLNI may open the door to dialogue and prompt patients to ask questions that they may not have considered. When patients are provided with a written list of important topics pertaining to heart disease, they have the opportunity to become more aware of the issues surrounding myocardial infarction.

While the CPLNI has been effective in identifying the different perceptions of patients, spouses and nurses, there are a few problems with the tool. The first issue with the tool begins at its design and development. The instrument was developed to investigate the perceived needs of cardiac patients; however, the researchers excluded this population from the panel designing the tool. Consequently, the patients can choose only among the topics determined to be important to learn by the nurses. I hoped to avoid this bias by using two sets of focus groups with participants who have a vested interest in the issue to identify the topics that should be included in my teaching tool: one comprised of nurses and the second, patients.

Furthermore, the results obtained by studies utilizing the CPLNI may be obscured by the categories included in the index. The questionnaire may have prompted patients to recognize the importance of categories that they would not have considered without the tool. “What was
formless becomes informed, categorized and itemized by the questionnaire. This priming effect casts a shadow of doubt over their responses as the authentic expression of their own concerns and needs” (Scott & Thompson, 2003, p.9). This will be difficult to avoid in a clinical situation. Perhaps nurse educators can begin with dialogue to ascertain the perceived learning needs of patients prior to administering the teaching tool. The teaching tool in my thesis included topics outlined by previous patients and nursing staff, allowing patients to choose areas for teaching according to individual needs. In a positive vein, the tool may have acted as a catalyst for conversation between nurse and patient.

Information Needs

Meeting patients’ information needs and respecting their decisional preferences are shown to be linked to better self-efficacy, satisfaction, and behaviours that promote healthy lifestyles (Stewart, Abbey, Shnek, Irvine, & Grace, 2004). An examination of studies that have utilized the CPLNI have shown that patients consider practical information pertinent to their survival most important to learn post-MI (Ashton, 1997; Chan, 1990; Czar & Engler, 1997, Gerard & Peterson, 1984; Moynihan, 1984; Wingate, 1990). It is also important to recognize how much information patients desire, how that affects their ability to participate in medical decision making and the effects of information preferences on well-being.

Information Needs and Decisional Preferences of Men versus Women

Stewart et al (2004) endeavoured to examine the gender differences in health information needs and decisional preferences of patients admitted with cardiac disease. They examined how information needs, the amount of education perceived to be received, and participation in medical decision-making affected satisfaction, self-efficacy, and health behaviors. This prospective longitudinal study gathered participants from 12 hospitals across Ontario, Canada to
participate. Consenting participants were given questionnaires to complete while in hospital and were mailed questionnaires six months post-admission and again 12 months after discharge. Nine hundred and six patients completed the first questionnaire, 541 (69%) returned the six month questionnaire, and 522 (64%) completed the final questionnaire (Stewart et al, 2004). The questionnaire given in the hospital gathered demographic data, disease-related information, and psychosocial variables using the Beck Depression Inventory. Of note is the fact that the mean age for men was 59.97 years and the mean age for women was 65.83 years. This is in keeping with current statistics about cardiac disease which indicates that men have their first cardiac event at a younger age than women do (Heart & Stroke, 2003). The findings indicated that both men and women want a great deal of information about the management of their disease. Men are more interested in learning about how their illness will affect their sexual function, whereas women are more interested in specific topics such as high blood pressure and angina. While both groups have strong informational needs, women reported feeling much less satisfied with the amount of information they did receive. With respect to family doctors, men were 1.30 times more likely than women to report they received helpful information about test results and 1.23 times more likely than women to report that they received information about cardiac rehabilitation. In terms of decision making, both men and women preferred a shared role. A shared role was defined as equal sharing of decision making by patient and doctor. Despite the fact that 181 patients reported their preference for a shared role, only 117 reported that they had experienced this. The authors found that after controlling for extraneous factors, those who were more satisfied with the amount of health information they had received had greater self-efficacy, engaged in more preventive health behaviors, and were more satisfied with their health care.
This key finding strongly supports the purpose of this study, i.e., to develop an instrument that allows patients to learn the content they personally perceive to be most immediate and important.

Perceived Control and Recovery

Individualizing patient teaching requires an assessment of each individual: what they need to learn, how much they want to learn, and in what way they would best learn the material. One study in particular has demonstrated that personalized assessment is a key finding. Individuals with a high preference for information who receive information interventions have been shown to experience a decreased state of anxiety, but persons with a low preference for information receiving too much education have experienced an increase in anxiety (Garvin, Moser, Riegel, McKinley, Doering & An, 2003). It would be possible for nurses to allow patients more control by encouraging them to direct their own learning. “The perception of control has been associated with positive outcomes; control need not be exercised nor real to be effective” (Moser, & Dracup, 1995).

One study considered the influence of perceived control on the psychosocial recovery following a cardiac event (Moser & Dracup, 1995). Within two weeks of recruitment from six large metropolitan hospitals on the West coast, 228 patients were mailed baseline questionnaires. Of these patients 176 patients remained in the study. The participants completed a second questionnaire six months post-MI. The questionnaires included the Control Attitudes Scale, the Psychosocial Adjustment to Illness Scale and the Multiple Affect Adjective Checklist. Patients with perceptions of high control at baseline had significantly lower anxiety scores six months later than patients who reported feelings of low control ($p=0.002$). This relationship was also true for depression ($p=0.001$) and hostility ($p=0.009$). Also noteworthy was the fact that the psychosocial adjustment to illness score was much higher in patients with perceptions of high
control. Health care professionals can enhance patients’ perceptions of control by allowing them input into their teaching sessions and discussing treatment options openly with them. Ultimately, adhering to principles of adult learning theory could serve to enhance control in the MI patient population.

Adult Learning Theory

In the context of adult learning theory, “MI patients can be viewed as responsible adult learners who are motivated and interested in learning information related to their health condition especially when they believe that such information will help improve health status” (Wang, 1994, p. 34). Nurses may wish to abandon older methods of education that centered on the teacher teaching since the new educational paradigm dictates attention on the learner learning (Bastable, 2003). There are at least five characteristics that are unique to adult learners. (1) Adults are self-directed. Adults need to direct their own learning in order to reach their goals. Nurses should be prepared to elicit involvement from patients in the development of teaching sessions within the hospital setting. This feedback may force the nurse to redesign and develop new learning activities (Thoms, 2002). (2) Adults are goal-oriented. Before accepting participation in a learning environment adults generally know what they hope to achieve (Knowles, 1989). Nurses can help patients identify healthy goals to be achieved during cardiac rehabilitation. (3) Adults are relevancy-oriented. These learners must see a purpose for the learning. They tend to be problem-centered rather than content-centered and, as a result, objectives should be negotiated at the beginning of any learning situation (Thoms, 2002). (4) Adults come with a variety of life experiences and previously attained knowledge (Knowles, 1989). Often it is because of life experiences that an adult seeks out a learning experience. This is definitely true for the post-MI patient that is in a position where learning may be necessary for
survival. (5) Adults are practical and focus on lessons that will be most useful to them. Thus, I feel, it is imperative that nurses educating this group focus on issues that these patients consider important to learn.

I contend that most MI patients would be quite motivated and eager to learn because they have an imminent need for this information, and the knowledge they hope to gain pertains to a real-life situation, specifically dealing with life after a heart attack. Incorporating the theoretic principles of adult learning into the teaching strategies that nurses use every day should enhance the educational process for patients and family members (Palazzo, 2001).

Patricia Cross (1981) developed the chain-of-response (COR) model to articulate why adults participate in learning activities. The COR model stipulates that learning is not a single act but the result of a chain of responses. Nursing staff can be more effective in their patient teaching if they are aware of the relevant variables included in this model. The variables include:

a) Self evaluation. Certain personality characteristics play a role in the motivation for achievement (Cross, 1981). Individuals who lack self-esteem or confidence may hesitate to engage in learning activities for fear that they may not be successful. Nurses will need to foster an environment where patients will feel confident in their ability to learn information they consider important after suffering an MI.

b) Attitudes about education. “Attitudes toward education arise directly from the learner’s own past experience and indirectly from the attitudes and experiences of friends and significant others.” (Cross, 1981, p.125) It is imperative that nurses acknowledge patients’ attitudes about learning in the hospital environment and try to facilitate open dialogue. Patients may feel overwhelmed with their learning needs
after a cardiac event and these feelings may affect their attitudes regarding patient teaching.

c) Importance of goals and expectation that participation will meet goals. This level has two components. ‘Valence’ refers to the importance of the learning topic to the individual. ‘Expectancy’ is the individual’s subjective judgment that the pursuit of the learning topic will be successful and meet their individual needs (Cross, 1981). If the topic is considered by the patient to be important and likely to be successfully learned through patient education, then motivation at this level (level c) would be strong.

d) Life transitions. This level refers to periods of change that call for adjustment to new phases of the life cycle (Cross, 1981). Identifying the “teachable moment” will depend on developmental tasks that are predictably associated with each phase of human development (Cross, 1981). The “right” time to teach adults about cardiovascular health may be prior to their reaching middle age, when their risk factors increase and the relevancy to their foreseeable future health status is clear.

e) Opportunities and barriers. If adults are able to reach this point in the Chain of Response model with a strong desire to participate in educational endeavors, it is likely that their motivation will encourage them to seek out opportunities and overcome most barriers. Nurses will be responsible to help patients identify and overcome barriers, and to help patients seek out learning opportunities that are in keeping with their individual learning needs.

f) Information. The role of information in the COR model is critical and links motivated learners to appropriate opportunities (Cross, 1981). Nurses must give
patients accurate information to ensure their learning needs are met. It is important that nurses have patients verbalize their understanding of the items taught to ensure they have integrated the information accurately.

g) Participation. The last level of the model is participation (Cross, 1981). If levels a-f are met, patients should successfully engage in participating in the teaching/learning process.

Applying these principles, nurses may wish to consider abandoning the practice of spoon-feeding their patients information that they, themselves, value and prioritize. Instead, nurses might negotiate with patients to determine those topics that the patients perceive both as being important and realistic to learn in the hospital.

Wlodkowski (1999) states that if the learner is to have a chance of initiating the learning experience, the instructor and learner should consider a number of criteria. (1) A discussion is important to determine if the goal is achievable (Wlodkowski, 1999). Through negotiation, nurses and patients could assess if the topic(s) can be learned in the time MI patients will spend in the hospital setting. The IPTG includes topics patients identified as important for their individual learning, based on how realistic they felt those topics were for them to learn in the hospital environment. Nursing staff should be very helpful in identifying topics that are realistic to learn over several days in the hospital. An assessment of the materials available on the medical ward was also important to determine if these resources were sufficient to accommodate learning. (2) Both learner and instructor need to negotiate how progress will be measured (Wlodkowski, 1999). In what way was the patient able to gauge their progress toward learning identified topics? The IPTG includes an area where patients or staff were able to write notes; here they could indicate where reinforcement of topics is necessary. (3) Instructors must
determine how much the learner desires the goal (Wlodkowski, 1999). Nurses were required to ascertain the priority the patient attached to each category. If patients considered one category to be especially important for them to learn and another relatively unimportant, nurses were asked to respect these preferences and allocate their teaching time accordingly. (4) It is important to create a consistent way to focus on the goal (attainment of knowledge of individually selected topics) (Wlodkowski, 1999). Some learners feel the need for a daily plan. The IPTG could act as a way to keep the learning goals of the patient in both the patient’s and nurse’s awareness. (5) The instructor should preplan to consider and remove possible obstacles (Wlodkowski, 1999). Nurses should ensure that they have the time to dedicate to patient teaching. One strategy is to recruit colleagues to “cover” a nurse’s other patients and answer call bells. It is also important to ensure that patients are comfortable (free from chest pain), clinically stable and alert. (6) One must identify resources and learning processes with the learner (Wlodkowski, 1999). Nurses could consider ascertaining how patients would like to learn the information. The IPTG has a section on the top of the tool where patients were given the opportunity to identify their specific learning style preferences. (7) The learner must make a commitment (Wlodkowski, 1999). When patients choose priorities, they make an informal commitment to become the recipients of information on those topics they identified as important. (8) Consider a goal review schedule. Nursing staff should ensure that they interact with the patients at regular intervals. By checking in with patients regularly they will demonstrate their own commitment to patient teaching.

Not every patient perceives a need for education. As a result, assessments should be used to prioritize the needs and interests of the learner to set objectives for an appropriate learning plan (Bastable, 2003). The development of an individualized patient teaching guide (IPTG) would meet the information needs of each patient while incorporating adult learning theory. Not only
could patients have the perception of control; they would, in fact, control the content, and
delivery of information available to them in the hospital setting.

Chapter Three discusses the methodology I used to guide my thesis study.
CHAPTER THREE: METHOD FOR DATA COLLECTION AND ANALYSIS

If one accepts that adult learners have a concept of being responsible for their own decisions and resent when others force their will upon them it follows that nurses should be aware of patients’ perceived learning needs when delivering information. The purpose of this study was to develop a teaching guide to be used by nursing staff with myocardial infarction patients in the hospital setting and to investigate the impact of this individualized patient teaching guide (IPTG) on in-patient education for post-MI patients. This research met its specific purposes through a three-phase structure: development of the teaching guide, implementation, and assessment of participant impact. In this chapter, the research methodology and procedures that were utilized for the study are outlined. The research design, methods of recruitment of participants and a description of the instrumentation that was used throughout the study are described. An explication of the data collection techniques is provided. Next, there is a description of the methods that were used for the analysis of data in this research inquiry. Finally, ethical considerations of the study are considered.

Description of the Research Design

A qualitative approach was used to obtain the breadth and depth of appropriate data sources required to answer the three primary questions that define the scope of this research:

1. What topics do MI patients want to have included in an in-patient teaching guide?
2. What content do nurses believe should be included in an in-patient teaching guide?
3. How does teaching content using an individualized patient teaching guide affect the quality of in-patient education according to MI patients and the nurses caring for them?
The research addressed these questions through a three-phase structure: development of the teaching guide, implementation of the guide, and assessment of impact on patients and nurses (see Figure 2).

*Development of the IPTG*

The first phase of the research, development of the teaching guide, sought to answer the first two questions regarding the topics MI patients and nurses perceive to be important to include in an in-patient teaching guide. Qualitative research methodology, specifically phenomenology, was utilized to explore the meaning of in-patient education for both groups of participants (Patton, 2002). Two focus groups were used to capture how MI patients and nurses see the in-patient learning experience: “how they perceive it, describe it, feel about it, judge it, remember it, make sense of it, and talk about it with others” (Patton, 2002, pg. 104). Choosing subjects to participate could not be a random act, since only those who have directly experienced the phenomenon of interest, namely having suffered an MI or cared for this population, could be included in this research study (Patton, 2002).
**Figure 2.** A Schematic Diagram of the Three Phase Plan to Gather Data in this Research Study.
Prior to the initiation of this research it was my intention to visit one of the classes conducted at the out-patient program in order to provide an introduction and briefly describe the research purpose to the participants enrolled. At that time, all post-MI patients would have been provided with a letter of information further describing the purpose of the research (Appendix A). Interested participants would then have returned the attached consent form (Appendix B) and accept an invitation to be a member of a focus group with four to six other cardiac patients. The staff at the out-patient clinic preferred to approach patients themselves who they felt would be appropriate for this study. They then asked these adults for their permission for me to contact them and inform them about the research study. I was given the names and telephone numbers of six post-MI clients whom I contacted by telephone. These participants were given the aforementioned letters of information and consent forms (Appendix A and Appendix B).

The second group of participants to be interviewed in a focus group setting were health care professionals working in the hospital setting, specifically those nurses caring for post-MI patients in one hospital location. They also received an information letter and consent form (Appendix C and Appendix B). It can be argued that given their experience and education with heart disease, these professionals are experts in determining topics that could be included on a patient teaching guide (Scott & Thompson, 2003). The responses obtained from these separate focus groups were used to shape the instrument, the IPTG which was field-tested in this research study.

Implementation

In the implementation phase, the draft IPTG was used in a clinical setting, specifically the cardiac step-down floor and medical ward. Thirty-seven nurses were recruited from the medical and cardiac step-down floor to utilize the IPTG in their health teaching of MI patients under their care. All of the nurses working in the Cardiac Inpatient Unit and the Medical Floor were given a
letter of information describing the purpose of the study (Appendix D). Interested participants filled out a consent form (Appendix E) and attended an orientation to the IPTG. Twelve twenty-minute orientation sessions were conducted in the nursing station on six different dates. Because nurses work twelve hour shifts on an alternating schedule, I varied the times that I offered these information sessions. At the orientation meetings I introduced the Individualized Patient Teaching Guide, outlined how the tool could be used in patient teaching and defined the role of the nurses in this study. At that time, staff were given the opportunity to ask questions about the content and use of the tool before using it in their patient education.

Potential study participants from the patient population were provided with a letter of information (Appendix F) and consent form (Appendix E) to fill out prior to inclusion in this thesis work. Twenty in-patient participants agreed to participate in this study. The intent was for these patients to negotiate with the bedside nurse on topics they felt were important to learn, the timing of teaching sessions, and the delivery methods most suited to their learning style (videotapes, group sessions, written material, informal conversation with nurses, or concrete tools such as heart models). The IPTG provided space for nurses and patients to make notes regarding patient teaching accomplished and continued learning needs of the individual patient.

The changing perceptions of patients as they recover have been examined by a number of researchers (Czar & Engler, 1997; Moynihan, 1994; Wingate, 1990). These studies have concluded that patients’ perceived needs and their perception of realistically learning information change depending on where they are on the recovery continuum. Nurses and patients were encouraged to renegotiate the learning plan contained in the IPTG as needed.

*Participant Impact*
In the final phase of my research, I surveyed the MI patients and nurses who had participated in the implementation phase. An evaluation survey can be a very useful tool to learn about the impact that programs have on recipients (Salant & Dillman, 1994). Evaluation of the impact of the tool on participants could act to either justify the existence of using the IPTG or to point out flaws in the design to be amended or discarded altogether.

First, surveys (Appendix G) were distributed to nurses in order to assess the draft teaching guide. In this case I used the “drop-off survey.” Here, surveyors combine features of face-to-face interviews with mail surveys by personally delivering questionnaires. Personal contact enables the researcher to encourage respondents to complete the questionnaire and it gives the survey a human face (Salant & Dillman, 1994).

Second, I provided surveys to the MI patients (Appendix H) who participated in the individualized in-patient education program. The use of carefully constructed questionnaires was used to illuminate perceptions of nurses and MI patients. Questionnaires included both single response and Likert scale items as well as open-ended response items. Descriptive statistics were used to analyze the single response answers, whereas the extended response data was categorized through qualitative analysis.

Selection of Participants

This proposed study was performed at one mid-sized medical facility in southwestern Ontario. This facility is a teaching hospital that houses a cardiac catheterization lab, thus drawing a large number of cardiac patients from the surrounding area. Recruiting subjects from one institution ensures that all patients and nurses share the same frame of reference because all hospital environments are unique in their culture and practices. The participants that were
recruited for inclusion in this study included: recovering MI patients discharged from hospital, nurses employed in the hospital and MI inpatients hospitalized within the facility.

*Phase One Participants*

In phase one of this study I examined the perceived information needs of MI patients according to post-MI patients and nurses. Participants in each of two focus groups served as “experts” who guided me inside the phenomenon of interest, namely perceived information needs of MI patients (Patton, 2002). Their input directly steered the development of the IPTG. For the first focus group, a convenience sample of four male recovering MI patients were recruited from an out-patient cardiac program currently offered at the hospital. Some theorists recommend homogeneity concerning age, gender and social economic factors when selecting participants to facilitate discussions (Greenbaum, 1998). “Some authors also point out that sharing a health problem or having something in common is sufficient to stimulate discussion” (Ivanoff, 2002, p. 6). Inclusion criteria necessitated recent hospitalization with a diagnosis of uncomplicated myocardial infarction, stable clinical condition, ability to communicate in English, and that participants must be adults between the ages of 19 and 79 years of age. MI patients under the age of 19 are rare, and their specific needs are not typical of most cardiac patients. Teaching the very elderly (gerogogy) is different from teaching adults (andragogy) (Weinrich, & Boyd, 1992). In order to facilitate learning of the elderly patient one must consider normal aging changes such as: increased time needed to learn, decrease in short-term memory and attention span, decreased ability to think abstractly, and decreased ability to concentrate (Pearson & Wessman 1996). While the elderly patient deserves special attention in patient teaching sessions, the needs of this group are beyond the scope of this thesis work.
The second focus group consisted of five nurses employed in the institution whose regular duties included nursing care for MI patients.

Phase Two and Three Participants

A larger group of thirty-seven nurses with direct patient care responsibilities for MI patients was recruited to implement the use of the IPTG in phase two and investigate the impact of the developed IPTG in phase three. Because nurses were the individuals directly using the guide to direct patient teaching sessions and documenting learning objectives and needs, their feedback was essential.

The final group of subjects to be included in this research study were the in-patients that received instruction according to the IPTG. Over a two-month period, 20 subjects were selected from the cardiac step-down floor and the medical ward and thus would be considered a convenience sample (Creswell, 2002). In order to participate, the subjects were required to fulfill certain inclusion criteria. Participants had to be patients who had a confirmed diagnosis of uncomplicated myocardial infarction by exhibiting two or more of the following characteristics: prolonged and severe chest pain, 12-lead EKG changes, and/or positive Troponin 1 blood levels (personal communication, Dr. Alessandrin, November 18, 2002). Participants were adults between the ages of 19 and 79 (for the reasons cited above), and were either male or female. It was the goal of this researcher to recruit a number of women participants because there is a notable absence of female cardiac patients identified in relevant research literature. While 35% of male deaths in 1999 were attributed to heart disease, the number was even higher, 37% for female deaths (Heart and Stroke, 2002). Exclusion criteria included complicated myocardial infarctions, non-English speaking patients and patients with limited cognitive abilities. Patients suffering from complications associated with heart attacks are too incapacitated to engage in the
adult learning process (Palazzo, 2001). Often the priorities of the medical staff trained to care for this special patient population concentrate on life support/sustaining efforts and education is not an immediate priority. Non-English speaking patients and those with limited cognitive abilities were excluded from this study because of the special education needs that this population requires. This exclusion in no way indicates that these patients should not be provided with in-patient education and information related to cardiac disease, only that they were not included in this study.

Instrumentation

One of the main purposes of this study was to design the instrument that was used to direct patient teaching activities. The individualized patient teaching guide (IPTG) was developed with a core set of topics identified from the literature and with input from both MI patients and nurses caring for this population. The categories included in the Cardiac Patient Learning Needs Inventory (CPLNI) (Gerard & Peterson, 1984) were considered for use in the IPTG. The items assembled from the literature to be included in the CPLNI were reviewed independently for content by four doctorally prepared nurses adept at teaching nursing content at the graduate level, and by two Master’s prepared cardiovascular nursing clinical specialists (Gerard and Peterson, 1984). The CPLNI has been used or modified for use in a number of studies to investigate the perceived learning needs of patients according to the patients themselves, their spouses and nursing staff (Ashton, 1997; Chan, 1990; Czar & Engler, 1997; Karlik & Yarcheski, 1987; Moynihan, 1984; Timmons & Kaliszer, 2003; Turton, 1998). The literature clearly illustrates a discrepancy between what patients perceive as important to learn compared with the topics nurses feel are most important to teach. These findings indicate that patients appear to favor practical information pertinent to their survival such as risk factors, whereas nurses are
more interested in medical aspects of care like anatomy and physiology (Turton, 1998). One major criticism of the CPLNI comes from its development, in that although the researchers were investigating the perceived needs of cardiac patients, they chose to exclude this population from the panel designing the tool. The patients could only choose among topics determined by the nurses. While one category was set aside for miscellaneous concerns, none of the studies acknowledged the response to this section by patients, spouses or nurses. The results obtained may be obscured by the categories included in the index. The questionnaire may have prompted patients to recognize the importance of categories that they would not have considered without the tool. “What was formless becomes informed, categorized and itemized by the questionnaire. This priming effect casts a shadow of doubt over their responses as the authentic expression of their own concerns and needs” (Scott & Thompson, 2003, p. 9). This problem was avoided in my thesis work through the use of focus groups that allowed patients themselves an opportunity to identify topics they felt were pertinent to cardiac in-patients’ learning needs. Only after the focus group participants had an opportunity to discuss their perceptions of the information needs of in-patients, were they provided with a copy of the eight categories and asked to express their opinions on the value of these topics. Allowing patients’ input to the tool is congruent with the principles of adult learning theory and should promote increased learning in the hospital environment. “MI patients can be viewed as responsible adult learners who are motivated and interested in learning information related to their health condition especially when they believe that such information will help improve health status” (Wang, 1994, p. 34).

Data Collection

Selection of the data collection instruments for this study was based on the specific objectives and questions the research attempted to answer. In the first phase of this thesis work, focus
groups were used to gain input from both patients and nurses on topics considered to be important to include in the IPTG. Traditionally, nurses provide information to patients according to their professional opinion on what is important to learn. “Focus group methodology can be defined as group discussions in which persons representing the target group discuss different aspects of a topic” (Ivanoff, 2002). Focus groups act to enhance adult learning by allowing patients to have input into educational efforts put forth on their behalf. The use of focus groups gives voice to the concerns and information needs of the patients themselves (Sullivan, & Foltz, 2000). The focus groups I directed consisted of two separate participant types. The first group consisted of recovering MI patients recruited from an out-patient cardiac program. This group was comprised of four formerly hospitalized male cardiac patients. I had hoped to include at least one female participant in this group, but unfortunately that was not possible. The intent of this focus group was to allow patients to reflect on their individual hospital experiences and how they perceived the in-patient education they received. Through reflection, patients were able to illuminate the aspects of health teaching they found helpful and those they found irrelevant or deleterious. The focus group was conducted at a conference room at the hospital the participants attend for their cardiac rehabilitation. The session ran for 75 minutes. I acted as the moderator of this group. As an experienced cardiac nurse, I have knowledge of cardiac disease, patient care and cardiac rehabilitation. These participants were asked to specifically outline topics they perceived to be important to include in an IPTG. The second focus group included nurses working with cardiac patients in the hospital setting. This group included a discussion of approximately 50 minutes, led by the researcher and involving five nurse participants (Greenbaum, 1998). The discussions in each of the focus groups were stimulated by focus group draft questionnaires (Appendix I and Appendix J) that had been prepared in advance. The drafts
were made up of semi-structured interview questions; however when interesting and pertinent conversation lead the group in different directions, I allowed for including this additional rich data. Each of the focus group sessions was audio taped for data analysis purposes.

Based on the input from the focus groups, the IPTG was developed. Following its inception, the IPTG was then implemented and the impact of the tool on participants involved was examined.

Fink and Kosecoff (1985) cite three good reasons for survey use: a policy needs to be set or a program must be planned, you are a researcher and a survey is used to assist you, and you want to evaluate the effectiveness of programs to change people’s knowledge, attitudes, health or welfare. The final phase of this research incorporated the third reason for survey use. Surveys were handed out to two different groups of participants to evaluate the impact the IPTG had on each of these sets of participants. First, questionnaires were handed out among nurses who had agreed to participate in the study to assess the usefulness of the IPTG from their perspective. It stands to reason that if the nurses did not feel that the guide was a useful tool to promote patient teaching, they would not consider using it in the future.

It was the intention of the author to assess the effectiveness of a program that acted to increase patients’ knowledge, health and welfare post-MI. Surveys were therefore distributed to patients who received instruction using the IPTG. Patients were asked to fill out their questionnaires at their leisure, seal them in an envelope and give them to the nurse looking after them to be collected later by myself. “Self-administered questionnaires are appropriate for populations such as patients in the health-care system” (Gray, & Guppy, 1999). A cross-sectional survey including both forced choice and open-ended questions, provided me with the most amount of information to be analyzed according to descriptive statistics. Multiple-choice
or closed-ended questions have proven themselves to be the more efficient and ultimately more reliable. Their efficiency comes from being easy to use, score, and code (Fink & Kosecoff, 1985). Their reliability is enhanced because of the uniform data everyone provides. They do lack insight into the thoughts and opinions of each individual respondent. By providing some open-ended questions the researcher was able to delve into questions that offered insight into why patients felt they way they did (Fink & Kosecoff, 1985).

Data Analysis

To learn as much as possible about the issues involved in teaching patients according to their own perceived learning needs the author gathered information from a variety of sources using a variety of different methods. Triangulation is the process of corroborating evidence from different individuals, types of data and methods of data collection (Creswell, 2002). By utilizing this approach multiple referents were used to draw conclusions about what constitutes accurate data. Each information source was examined in an effort to find evidence to support the study’s findings.

Analysis of the open-ended data obtained from the focus groups followed conventional approaches used in performing content analysis in qualitative research, namely, establishment of patterns, themes and categories through inductive analysis (Patton, 2002). I began with verbatim transcription of the audiotapes recorded at the sessions. The qualitative data from the focus groups was categorized and summarized manually using thematic codes and categories. I became familiar with the content found on the transcription by reading the data several times. The use of highlighting emerging themes and placing theses themes in piles assisted in identifying shared opinions of the two sets of participants. The resultant emerging themes shaped the ITPG implemented in phases two and three.
Descriptive statistics were used to analyze two separate issues. First, the opinions of the nurses highlighted how useful the IPTG may be if used as it was intended as an information delivery tool. Ease of use, readability, practicality and promotion of collaboration between nurse and patient were some of the topics nurses evaluated. Secondly, the responses provided by the patients were analyzed to determine how effective the IPTG was according to patients’ perceptions of their learning experiences.

Ethical Considerations

This thesis study complied with the ethical guidelines for research with human participants as outlined by the Queen’s University Ethics Board as well as by the Ethics board located at the hospital under investigation. Approval to proceed with this research thesis was contingent on permission granted by both research boards.

Researcher bias was prevented by choosing a hospital environment that I had never practiced as a Registered Nurse. The nurse and patient participants had never met the researcher prior to the beginning of the study.

All participants were assured that their inclusion was entirely voluntary and their actions or inactions were to remain completely confidential. A third party moderator was not used in this study because the questions asked did not reflect judgment or evaluation of current individual practices. Nurses were not asked to answer questions that were politically labile, personally evaluative, or contrary to current practices within their hospital culture. Nursing managers were not invited to participate in the focus group to protect the confidentiality and comfort levels of the other nursing staff. The manager was not provided with the names or any other identifying characteristics of professional participants.
There were no foreseeable risks in participation in this research. The author explained the purpose of the research study and obtained informed consent prior to collecting any data. Confidentiality of participants was guaranteed throughout the research process by providing pseudonyms to patients and nurses alike. At no time was anyone, including hospital management, provided with the names of participants involved in the study. All transcripts and questionnaires were held at the home of the researcher in a locked cabinet, and will be destroyed five years following the completion of this research endeavour.

In the next chapter I will present the results of the study.
CHAPTER FOUR: RESULTS/FINDINGS

The purpose of this study was to develop and implement an Individualized Patient Teaching Guide (IPTG) and investigate the impact this tool had on in-patient education. The study was conducted on two floors that house cardiac patients: the Cardiac Inpatient Unit (CIU) and the medical floor in a mid-sized teaching hospital in South-Western Ontario. The research followed a three-phase structure: development of the teaching guide, implementation, and assessment of participant impact (see Figure 3). In this chapter, I will present the data under those three sections.

Phase One: Development of the Teaching Guide

Focus Group With Post-MI Patients

The first of the primary questions that fell within the scope of this research was as follows: what topics do MI patients perceive to be important to include in an in-patient teaching guide? In order to answer this question a focus group comprised of four patients previously admitted in the hospital with a diagnosis of Myocardial Infarction (MI) was conducted. All of the participants were recruited from a post-MI clinic where they received on-going exercise and health teaching on a variety of topics relevant to cardiac disease. Originally, five post-MI patients agreed to participate in the focus group. One of the patients was unable to attend the session due to inclement driving conditions. The remaining four post-MI patients met me at the clinic in a small classroom. All of the participants were men who had been discharged from the hospital in the last six months following a diagnosis of Myocardial Infarction. Decaffeinated coffee, fruit, muffins, juice and water were provided. The participants did not receive remuneration for their attendance with the exception of parking costs.
Figure 3. A Schematic Diagram of the Three Phase Structure Used to Gather Data in this Research Study.
The main intent of this discussion was to elicit their opinions on important topics to include in a patient teaching guide to be used in the hospital setting. The discussion was led by myself, the primary investigator, using a focus draft questionnaire (Appendix J) to help guide the discussion.

I was most interested in learning about what topics post-MI patients considered important after reflecting on their own individual experiences. To begin, I enquired how these participants received information while they were patients in the hospital. They identified the use of a number of teaching tools in the hospital setting including: videos, written material, models, and discussion with various health care providers. One very popular teaching tool identified by the focus group participants was a manual that was given to each of these patients on the cardiac floor. “The cardio-department gave me an amazing book. It is pretty much like a step-by-step instruction book on what to do after you have a heart attack” (P1). The expertise of nursing staff delivered through informal teaching sessions was also valued by the group. “The male nurse I had in the ICU he was excellent…. When I was in the intensive care unit there was a male nurse. He provided me with…almost everything I should do, what I should expect. He actually told me where I had a problem with my artery and how clogged it was. He provided me with everything. He was excellent. I couldn’t have added anything to it. I think he was teaching the other nurses” (P2). A third participant discussed the use of audio-visual teaching aids used to prepare his family for his by-pass surgery. “Now my wife she saw all the videos and so she knew what to expect” (P3). The discussion that evolved from the focus group supported the premise that patients learn in a variety of ways and it would be important for the IPTG to have a section that allowed patients to identify how they best learn so that nurses could choose teaching tools that would accommodate different learning styles.
One topic to be considered as a priority for teaching that was volunteered early in the discussion group was that of tests and procedures that might take place while a cardiac patient is hospitalized. One of the patients said, “As for me, I don’t have high blood pressure or high cholesterol but I got in the emergency room and they [told] me I have [had] a heart attack! I [went] upstairs and to the room and had a stent. Before this I didn’t even know what that was” (P4).

While all of the participants agreed that anatomy and physiology were not priorities for health teaching, some did learn a bit about this during their hospital stay. “As far as the education goes, I didn’t know everything that was going to happen but the doctor, he was good. He basically showed me before the operation where the blockages were and that was pretty much it. I didn’t need any more than that, just as long as I get through it! [Laugh]” (P4).

Regarding risk factors, one of the participants acknowledged:

You know, I’m not sure it really matters what happened…I think the thing I wish I had known was more the why I was the one that had a heart attack. They use that term ‘risk factors’ in the hospital. Everyone should know about what they are doing that might hurt themselves (P1).

This last statement had all of the members of the focus group avidly nodding their heads in agreement.

The conversation evolved into comparing prescription medications around the table. “One thing people really need to know about is their medications, for example you have to be careful taking Lipitor because it can cause kidney problems” (P1). Another participant was eager to share: “I am now taking one, two, three, four medications where I took none before” (P4). The
other three men were quick to agree: “It’s amazing, sometimes I think I need one of those ‘pill organizers’ just to keep them all straight” (P3).

To get to the heart of what patients perceived to be important to learn, I asked the group to share the most important thing they learned while in the hospital. After some reflection one group member began to speak. “I think I was taught about an awareness of what I should be eating…and exercise” (P1). Another group member agreed. “Yes that is very important …watching your diet” (P3). The answers did vary however. One gentleman stated, “One of the things that I found to be most surprising was the six weeks no driving thing. I was shocked and upset by that” (P2). The six week restriction was not reserved for operating vehicles. One of the participants was surprised to hear that he would be unable to return to work for several weeks. “You know I went home feeling pretty good, and still they said I couldn’t work for at least six weeks. Not so great when you run your own company” (P1). Another gentleman turned to the last speaker and muttered, “Hah! And they are telling us we should avoid stress. Maybe they should be handing out a book about that” (P3).

I was very interested in ascertaining which health care professional post-MI patients felt should be doing health teaching in the hospital setting. When I asked the group who they thought should be responsible for teaching patients in the hospital the group seemed unsure. “Well I don’t know who should be doing this kind of thing…it seems like too big a job for the nurses. Maybe it is the doctor’s job to tell the patients what they need to do and the nurses and other staff should know enough to answer questions. Is that right?” (P2).

The focus group was a useful tool that provided me with a great deal of information that would later be important to include in the IPTG. The tool would require a section that allowed patients to identify their learning style and preferred teaching tools to be used by staff in the
hospital. The topics that this group identified as important to learn while in the hospital were: risk factors, medication information, tests/procedures that will take place in the hospital, dietary information, exercise, driving and work restrictions, and stress reduction.

Focus Group With Nursing Staff

Before the IPTG was developed it was important to seek answers to the second question that defined the scope of this research, namely: what content is important to nursing staff to include in an in-patient teaching guide? Five nurses agreed to participate in the focus group that I led. As in the previous focus group, I tried to follow a focus group questionnaire to guide the session (Appendix I). While all of the nurses in attendance had more than 10 years of clinical experience, this is certainly not representative of the staff that would work on the floor in any given shift. All of the nurses that participated in the focus group worked regularly with cardiac patients in the institution where the pilot study took place.

I found that the nurses initially were not receptive to discussing topics that should be included in the teaching guide because they were very concerned that the IPTG would add to their workload. “You say that this is going to be [the patient’s] piece of paper. But just you wait, it will become our piece of paper, just another thing for me to do; and it’s not gonna get done…no time left” (N1).

The nurses seemed much more comfortable discussing the teaching tools they had in place and were already using. “We have a book on all of that here though and it is a patient book and it goes through everything that they need to know. We give it to our patients and they just read it” (N2). The nurse to her right agreed. “All of the important topics are right in there. You know, like smoking, anatomy of the heart, and even the stuff that patients won’t talk about like sex!” (N5). Written material in the form of a book that could be taken home was highly valued
by the nursing staff. This hospital also made use of education boards displayed in the corridors. “We have an education wall on this floor that has all of that stuff. If [the patients] wanted to they could just get up and walk over and look at it” (N3). The nurses indicated that there is also audio-visual equipment that is used for patient teaching purposes. “Well, we do have a video about angiograms but even that isn’t enough. It shows you right up to the catheter part but not really what they are going to do in the cath lab”(N4). Given this description it may be that the video would be a good introduction to the topic of cardiac catheterization, but the nurse would need to add insight to give the patient a clear idea about the procedure.

Before the nurses were ready to discuss important topics that patients should learn about, the group seemed intent on discussing obstacles to patient teaching. It was clear to me that this was very important to the group and as a result, this issue was explored next. One of the first things that was discussed was the short lengths of stay of some of the cardiac patients. One nurse stated, “Usually they aren’t here long enough for us to do a lot of health teaching. They could come here at 0200 in the morning and then go to the cath lab and they may then go to another floor and not back here” (N2). In instances like this health teaching was not likely to be performed at all.

The issue of workload and time constraints in a shift was echoed by all of the nurses in attendance. “We could never put the time aside for patient teaching. We can barely get done what we have to get done in the shift. Just forget about sitting around teaching the things they can read about on the board or in the book” (N5). Another nurse talked about her strategies given the lack of time available for teaching sessions. “A lot of our teaching is done informally in little chunks because it is a big joke to think that we have half an hour to sit around and talk with a patient. It just ain’t gonna happen” (N1). An impromptu discussion on strategies to help
with time constraints evolved and included utilizing other members of the health care team in the health teaching of post-MI patients in the hospital. “So, if [the patient] identifies that diet is important or cholesterol then I’m just gonna call in the dietician and she can deal with those questions” (N1). Another nurse suggested, “And the resident too, he can answer questions too” (N3).

Another barrier to patient teaching identified in the nursing focus group was the knowledge of the nurse responsible for a patient’s care on any given shift. “We have a lot of junior [nurses] here, and I know that a lot of patients aren’t told because the nurse just doesn’t know herself” (N4).

Once the topic of barriers to patient teaching was exhausted, I asked the nurses to identify specific topics that they felt were vital to MI patient knowledge. After several moments of silence the nurses began to consider some of the topics that they thought would be important for patients to know. The nurses were in agreement with the patient group when it came to the topic of medication administration. “They may have gotten nitro for the first time in the doctor’s office and they think they should take four or five squirts instead of one because they just don’t understand. And then they bottom out their blood pressure and end up on the floor. Yup. They need to understand their meds” (N1). This prompted a discussion about how patients often do not cope at home. “I guess along with the meds the patients need to get how to take them properly, like with the beta blockers, so many of them don’t even know how to take their own pulse or who to talk to when they are at home if they’re having trouble” (N3). One of the other nurses responded, “Well yeah, and then they just end up back in here and we put a band-aid on the problem. Fix ‘em up and send them back out the revolving door” (N5).
The focus group concluded with the question: Do you see any value in having a patient choose the topics they would like to learn about while in the hospital? The nurses were not quick to answer this question and seemed to think about it seriously before answering. One nurse stated, “Hmmm…well I guess if they choose and they are taught they can never say that they don’t know” (N3). Another agreed. “That’s true. Or you didn’t tell me…or you didn’t teach me” (N5). At the end of the session not all of the participants were convinced of the value of a teaching tool that would be directed by patient’s perceived information needs. One nurse said quietly, “They can choose topics all they want. It’s not gonna make [health teaching] happen” (N1).

This focus group identified several issues that would be important to consider when developing the IPTG. First, in order for the nurses to accept the tool at all, it was very important that the tool be filled out by the patient independently and be used as a guide that would allow them to provide small pieces of information informally when they were in the patient’s room providing other care. The nurses were very clear that they were not interested in filling out more paper work than their regular charting required. Topics that they considered important were: smoking cessation, anatomy of the heart, sexuality, medication administration, knowledge on how to take one’s own pulse, and community resources.

*Development of the IPTG.*

The IPTG was developed incorporating the topics identified by the two focus groups (Appendix K). The tool resembles the Cardiac Patient Learning Needs Inventory (CPLNI) developed by Gerard and Peterson (1984) in many of its categories. There are some categories that the IPTG has included that were absent in the CPLNI including community resources, stress reduction, smoking cessation, tests or procedures to expect in the hospital, driving/work
restrictions, and how/when to take a pulse. These categories were included because the participants of the focus group felt that they were important.

Prior to implementing the tool on the two nursing units the IPTG was given to the nurses on the Medicine Floor and Cardiac In-patient Unit, the managers of these wards, and a nurse educator for approval. A few syntax revisions were made following the advice of the educator and the tool was then prepared for distribution.

Phase Two: Implementation

Thirty-seven nurses agreed to participate in the study, 20 on the medical floor, 17 on the cardiac in-patient ward (CIU). The amount of clinical experience varied widely: 19 of these nurses had been practicing for over 10 years, 11 had been working for one to five years and the remaining seven had been employed as a nurse for less than one year. Interestingly, not one nurse identified that he/she had worked for between six and ten years (see Figure 4). Nursing is a female dominated profession. Not surprisingly, of the 37 participants, 33 were female and four were male.
Figure 4. Clinical years of Experience of Nurses Working in Medicine and the Cardiac Inpatient Unit.
Before nurses were expected to use the tool to guide their patient teaching, informal information sessions were held to familiarize staff with the IPTG. Staff requested that these sessions be conducted in the nursing station and that I limit the time to fifteen-minute intervals. Twelve of these sessions were conducted at various times so that I would have the best chance of connecting with all of the staff working various twelve and eight hour shifts. Groups consisted of three to nine nurses. In these discussions I introduced the IPTG by providing each nurse with a blank copy, and a letter of information (Appendix D). A neon poster was constructed with this same information (as well as a blank manila envelope so that nurses could insert completed IPTGs and patient questionnaires) and posted in the medication room in plain sight. Nurses were invited to ask questions and comment on the IPTG. Some resistance was met. “So, am I expected to sit down with the patient and help them fill this form out? You need to know that this floor is very busy…not a lot of time left for this” (N1). I discussed alternatives with the nurses in attendance, such as having the patient fill out the form independently, or the possibility that I could help them when the patient enrolled in the study. One possible problem with these strategies could have been the fact that negotiation between nurse and patient, a central goal of this study, would be compromised. Nurses felt that they would still be able to negotiate with patients if they did not participate in choosing topics and they decided that either the patient would fill out the form independently or I would assist them. The nurses gave their assurance that once the form was completed they would discuss the topics and negotiate with the patients under their care.

The nurses were very interested in what their role would be in this study. “So, how much do you want me to do? Is this going to eat-up a lot of time?” It was clear that the nurses were very concerned about the time commitment this study would require. I assured the nurses that my
goal was not to add new nursing responsibilities. Patient education is an existing professional responsibility mandated by the College of Nurses of Ontario. I was hopeful that participation in this study would afford the nurses more time because their teaching would be targeted to the identified needs of individual patients. Once the nurses understood that they were not expected to hold time-consuming formalized teaching classes for their patients they were much more receptive. It is important to note that health teaching by the nurse in the hospital is typically performed in small chunks, often when the nurse is in the patient’s room for other patient care purposes. The nurses were assured that this common practice was both expected and appropriate for this research study. When the nurses were told that their current teaching practices were valued they were much more interested in discussing patient teaching. “Okay. So if I see that the patient wants to learn about meds than I can talk to that when I hand out my eight o’clock’s? Oh, I already do that” (N2). Nurses were told that their expected roles were to negotiate teaching according to the IPTG, teach according to patients’ identified learning needs and to collect completed IPTGs and patient questionnaires when patients were discharged.

Staff were very helpful in suggesting ways that would flag those patients that were enrolled in the study. “You’ll have to put something in the Kardex. We refer to them every shift. Maybe think about a highlighter or something really bright” (N3). This advice was followed: every patient that agreed to participate in the study had a notation in the Kardex under Patient Teaching indicating that they were enrolled in the IPTG study (highlighted in bright green). A reminder to collect patient questionnaires and completed IPTGs on discharge was also noted in this section.

Once the tool was developed, patients were recruited to participate in the study. Twenty patients agreed to enroll in the study. Patients ranged in age from 46-79 years of age and
included six female patients and eight male patients. Patients were provided with their own copy of the IPTG which they filled out according to their individual learning needs. Patients were instructed to leave this teaching tool in full view at all times to give the nursing staff the opportunity to refer to it when providing health teaching. Prior to discharge patients were given a brief questionnaire to be filled out: the completed IPTG and questionnaire were returned to the investigator of this study (Appendix H and Appendix K). Of these twenty patients, fourteen returned their questionnaires accounting for a 70% response rate. Ten patients returned their questionnaire to the nurse on the day of discharge as directed, four more mailed their questionnaires back to the hospital post-discharge. The first four patients did not return their questionnaires at all, possibly because the staff at the beginning of the study were unfamiliar with the process and were unaware that they were expected to collect them. One patient was discharged home from the hospital and did not return his questionnaire to the nurse or mail it to the hospital. The last participant developed further medical complications and was not discharged from the hospital at the conclusion of the pilot study.

Phase Three: Participant Response

Patient Survey Results

When identifying their learning needs on the IPTG, the majority of patient respondents ($n=13$, or 93%) indicated that the topic Risk Factors was very important for them to learn about in the hospital. Information about Medications (71%, or $n=10$), Dietary Information ($n=10$), and Stress Reduction ($n=10$) were also considered very important to learn by many of the patients. Interestingly, the topics considered to be most important were all topics that had been identified as important by the Post-MI patients in the first focus group. The topics that were considered by most to be not important included: Community Resources ($n=13$, or 93%), How and When to
Take a Pulse (n=12), and Driving/Work Restrictions (n=11, or 79%). Conversely, the topics of Community Resources and How and When to Take a Pulse were ones that the nurses in the second focus group identified as important for learning. Tests or Procedures, and Anatomy and Physiology were considered important by half of the patients that participated in this study. Emotional concerns were considered not important by a slim majority (n=8) (see Figure 5).

In the survey provided to the patients prior to discharge they were asked which topics they were actually taught about while they were in the hospital setting (see Figure 6). The majority of patients indicated that the topic of Risk Factors was addressed during their hospital stay (93%, or n=13). Health care providers also discussed Medications (71%, or n=10), Activity Restrictions (64%, n=9), Anatomy and Physiology (n=9), and Diet Considerations (n=8, or 57%) with a majority of the patients surveyed. Other topics that were addressed to some of the patients included Introduction to the CCU (n=4, or 29%), Psychological Factors (n=2, 14%) and Miscellaneous Topics (n=3, 21%). Interestingly, none of the nurses in the focus group spoke to the need to teach patients about risk factors and yet this topic seemed to have received the most amount of attention. Perhaps the patients surveyed asked questions about this topic, or the nurses in these cases felt that this topic was particularly relevant to the patients in question. Anatomy and Physiology, and Medications were topics that were discussed in the focus group by nurses: these were topics that many patients identified as teaching topics.
Figure 5. Topics Identified by In-patients as Very Important or Important to Learn.
Figure 6. Topics Addressed by Nursing Staff in the Hospital Setting With Patients Surveyed.
A comparison of the perceived learning needs of patients and topics nurses include in health teaching was essential for me to determine if the tool was used as it was intended. In this research study, many of the patients did receive instruction on topics that they had identified as important or very important for them to learn (see Figure 7). Of the fourteen patients that identified Risk Factors as a priority for learning, 13 (or 93%) of these patients indicated that they did receive patient teaching on this subject. Nurses also addressed the topic of Medications with 91% (n=10) of the patients that had identified this subject as an important one for them to learn. Activity Restrictions (or Exercise) was discussed with seven of the eight patients that had chosen this topic as a priority. While nurses seemed diligent in meeting the educational needs of patients in the preceding subjects, it seems that negotiation between patient and nurse was absent for many other topics. Many of the patients identified Diet as an important topic to learn about while hospitalized (n= 12). This topic was discussed with fifty-seven per cent (n=7) of these participants. Despite the fact that one patient had indicated that Diet was not important, this patient stated that this was one of the topics covered. Seven patients identified Anatomy and Physiology as a learning need. Four of them (or 57%) received instruction on this topic. The topic that received the least amount of attention by nursing staff was that of Psychologic Concerns. A mere two patients of six (33%) requesting information received health teaching on this topic. The fact that this can be a difficult topic to address may have contributed to these results.
Figure 7. A Comparison of the Topics Identified by Patients as *Important* or *Very Important* to Learn and the Topics Addressed by Nursing Staff.
The IPTG was developed with the intention of assisting nurses and patients to collaborate on the health teaching that would be provided in the hospital setting. In order to ascertain whether or not the tool was used as it was intended, patients were asked if they felt that they had been given an opportunity to identify their individual learning needs to staff and whether they felt that these needs guided the patient education they received in the hospital setting. In both cases 72% ($n=10$) of the participants answered in the affirmative, indicating that, at least on some level, the tool was used to promote in-patient education of post-MI patients (see Figure 8 and Figure 9).

Despite the fact that the majority of patients felt that the tool allowed them to identify their learning needs, the survey indicated that identified learning needs were still not met to the satisfaction of the patients surveyed. When asked to rate the information received during hospitalization, 50% ($n=7$) indicated that overall their needs were “not met,” 29% ($n=4$) felt that information provided “somewhat met” their needs and three people (or 21%) considered the information provided to them “completely met” their needs.
Figure 8. In-patients’ Perceptions About Opportunity Provided to Express Their Individual Learning Needs.
Figure 9. Patient’s Perceptions Regarding Whether or Not Their Identified Learning Needs Guided the Education They Received in Hospital.
The primary goal of this research study was to improve the in-patient education of post-MI patients through the use of the IPTG. Despite the fact that the majority of patients identified that the tool was used to guide the teaching that they did receive, patients continued to express dissatisfaction with their overall educational experience. One of the problems cited as affecting the in-patient learning experience was the fact that nurses did not always address *all* of the topics patients had identified as important to learn. It may be that nurses in this study continued to teach patients those topics that the nurses considered to be important to learn. Seventy-two per cent (*n*=10) of participants indicated that there were topics that they had identified as important that were not taught to them while they were admitted in the hospital. Thirty-six per cent of patients (*n*=5) felt that the topic of medications was neglected, 14% (*n*=2) indicated that psychological topics were not discussed and one participant indicated that “None of my important topics were discussed.” The remaining six patients did not indicate which topics were ignored.

Patients were also dissatisfied with the amount of education they received as in-patients. The majority of patients (*n*=10, or 72%) felt that the amount of information received in the hospital was insufficient. Four patients indicated that the amount of information they received was adequate, and no one felt that they had been provided with too much information (see Figure 10).

Research indicates that a patient’s learning needs are never static and change over time (Czar, & Engler, 1997; Moynihan, 1984). The vast majority of patients surveyed in this study (*n*=13, or 93%) agreed with this assessment. Only one patient stated that his/her information needs did not change throughout the recovery period.
Figure 10. Perception of the Amount of Education Hospitalized Post-MI Patients Received Prior to Discharge.
In order to best deliver information, it is important to be aware of a patient’s readiness to learn. The results were variable with this group. Six patients (43%) felt that they were ready for health teaching to begin on day two in the CCU, fifty per cent (n=7) felt that they were ready to learn on the day they were transferred to the step-down floor, and one patient felt he wasn’t ready until he went home and had access to his computer (see Figure 11).

The questionnaire asked the patients from whom they received their health teaching while they were hospitalized. Nurses were seen by all patients to be one of the healthcare professionals that were credited for delivering patient education. Five patients (36%) indicated that physicians also provided some health teaching. The physiotherapist (n=1) and diabetic educator (n=1) were also named as key educators.

The final question on the survey asked patients if they felt confident that they would be able to look after themselves after they were discharged from the hospital. Every patient (100%) indicated that they were, in fact, confident that they would be able to care for themselves at home.

Nurse Questionnaire Results

In order to ascertain the usefulness of the IPTG it was necessary to investigate the opinions of the nurses caring for this patient population. Thirty-seven nurses were surveyed at the conclusion of this study (see Appendix C). Clinical experience varied from less than five years (n=6) to greater than 10 years (n=21). The nurses were given a survey with the IPTG attached to ensure that they were able to answer the questions even if they had not cared for a patient in the pilot study.
Figure 11. Patients Identified Readiness to Learn During the Recovery Process Post-MI.
Given the fact that only a select few nurses were given an opportunity to shape the tool through the use of a focus group, nurses were asked whether they were satisfied that all topics that should be covered in an in-patient education program were included in the guide. Ninety-five per cent (n=35) of the nurses surveyed answered that they were satisfied that all relevant topics were represented. The remaining five percent were comprised of one nurse indicating that the topic of diabetes should have been included and the last nurse was undecided at the time of the survey.

In order for any tool to be used in a clinical setting, one of the factors that must be considered is ease of use. All of the nurses surveyed (n=37) indicated that the tool was “easy to use.” When asked in a separate question if they considered the tool to be “user-friendly” 33 nurses (or 89%) answered in the affirmative, and the remaining 11% (n=4) were undecided (see Figure 12). One hypothesis may be that these nurses did not have the opportunity to use the tool during the pilot study and were not prepared to commit until they had actually used the tool in patient care.

As previously discussed, one of the goals of the IPTG was to foster negotiation of a teaching plan between a patient and nursing staff. When surveyed, the nurses were unsure about whether or not this could be accomplished using the tool. Fifty-one per cent (n=22) felt the tool would foster negotiation, and the remaining forty-one per cent (n=15) indicated that they were unsure at the time of the survey. One possible explanation for the uncertainty of the nurses could be that they had not actually used the tool and thus this question would be difficult to answer one way or the other.
Figure 12. Nurses’ Responses to Survey Question Asking if IPTG is User-Friendly
The survey allowed space for the nurses to add any comments they wished. One nurse wrote, “I am concerned that this could be very time consuming although it does appear to be a good tool for developing a teaching plan.” Another novice nurse (with less than one year of clinical experience) said, “This tool might foster negotiation of a teaching plan if pt’s responses are true; it may also depend on the nurse-client relationship (i.e., discussing sexual concerns). Overall, a comprehensive guide.” The last comment discussed learning styles: “some people learn through combined learning styles and assume patients can check off more than one style? Suggest have comment box for learning styles in case pt doesn’t fit into specified four categories.”

Summary

This study followed a three-phase structure: development of the teaching guide, implementation and investigation of participant impact. Two focus groups were conducted to ascertain what topics patients and nurses considered important to include in an Individualized Patient Teaching Guide (IPTG). Patients identified topics including tests and procedures, medications, risk factors, diet, exercise, stress and driving and work limitations. Nurses agreed that new medications and diet were very important to include in an in-patient teaching tool, but also considered smoking cessation, anatomy and physiology of the heart, learning to take one’s own pulse, community resources and issues relating to resuming sexual relationships as necessary topics to include in the tool. Nurses also spent a great deal of time discussing some of the existing barriers to adequate health teaching including time constraints, work-overload, and inexperience of nursing staff.

A pilot study was conducted with 20 patient participants. The intention was for these patients to have patient teaching guided by the responses they chose on their IPTGs. Seventy per cent of these patients returned their evaluative questionnaires. All of the patient respondents (n=14)
indicated that the topic Risk Factors was *very important* or *important* for them to learn about in the hospital. Of these patients, 13 (or 93%) received instruction on Risk Factors by health care providers. Information about Medications was another topic that was discussed by nursing staff for the vast majority (91%) of patients that had identified this category as a priority. Only half of the patients received information about Diet despite identifying it as *Important/Very Important*. Psychological Concerns was the category most neglected. Only 33% of patients that had identified this as important received instruction on this topic. While the majority of patients (72%) indicated that the IPTG provided them an opportunity to identify their learning needs, a mere 21% of the patients surveyed felt that their learning needs were completely met in the hospital setting. Seventy-two per cent of these patients indicated that the information provided to them was insufficient.

It seems that some of the topics identified as important were addressed in the clinical setting. Furthermore, the tool did allow patients an opportunity to identify learning needs. Given the fact that the majority of patients indicated dissatisfaction with the amount of education they received in the hospital setting, it may be concluded that the IPTG did not accomplish the goal of improving the in-patient learning experience. It is important to ascertain whether the tool itself is flawed or if it was used as it was intended. When the nurses were surveyed at the conclusion of the pilot study to ascertain how they felt about the IPTG, their responses indicated that they felt that the guide was thorough in its choice of topics (95%), and easy to use (100%). Chapter Five illustrates the conclusions, implications, and recommendations for this thesis work.
CHAPTER FIVE: DISCUSSION

The purpose of this study was to develop and implement an Individualized Patient Teaching Guide (IPTG) and investigate the impact this tool had on in-patient education. Gerard and Peterson (1984) developed the Cardiac Patient Learning Needs Inventory (CPLNI) and used it to highlight the inconsistencies of perceptions of learning needs of patients compared to nursing staff. While the CPLNI has been shown to be an effective tool to discuss topics relevant to cardiac patients, an examination of the impact of targeting patient teaching according to those topics identified as high priorities by patients has never been done. Furthermore, the CPLNI is an older tool, it is not context specific, and patients were not invited to participate in the inception of the CPLNI. This thesis attempted to address all of these issues. This study was conducted in a mid-sized teaching hospital in South-Western Ontario. The research followed a three-phase structure: development of the teaching guide, implementation and a review of participant impact. In this final chapter, I summarize the information presented in the preceding chapters, present the conclusions that may be drawn from the data with support from previous literature, consider the implications of the study for practice, discuss the limitations, and finally, suggest future research considerations.

Summary

Nurses contribute to patient outcomes in a number of areas including cardiac rehabilitation, health promotion and patient education (Spilsbury & Meyer, 2001). If patients are dissatisfied with the quality or quantity of information that they are receiving from nurses perhaps a change in practice should be considered. One approach may be to direct our patient teaching towards those topics patients themselves identify as important. “It is timely to re-consider patients’ information needs…isolating priority information needs of this group as identified by patients
may be useful to nurses who are providing information to patients during short hospital stays” (Timmons 2005, p.175). One goal of this study was to develop an Individualized Patient Teaching Guide (IPTG) that would embrace the ideals of patient-directed care. A mixed-methods approach was used to facilitate answers to three primary questions that defined the scope of this research:

1. **What topics do MI patients perceive to be important to include in an individualized in-patient teaching guide?**

2. **What content is important to nurses to include in an individualized in-patient teaching guide?**

3. **How does teaching content using an individualized patient teaching guide affect the quality of in-patient education according to MI patients and nurses caring for them?**

The literature review included information related to Gerard’s (1984) Cardiac Patient Learning Needs Inventory (CPLNI), readiness to learn, and adult learning theory. These topics were considered as central to the concept of patient education.

In phase one of the research study, *Development of the IPTG*, focus groups were conducted to ascertain the opinions of post-MI patients and nurses regarding topics they felt were important to include in the guide. Post-MI participants enthusiastically identified a number of important topics including: tests and procedures to expect in the hospital, medications, risk factors, diet, exercise, stress and driving and work limitations. Resistance of the nursing staff was evident early in this study. When attempting to facilitate a discussion about the learning needs of cardiac patients, nurses made it very clear that they had teaching tools such as education boards and booklets that patients could use if they were interested. The nurses articulated reluctance in participating in this research study, citing time limitations as their primary concern. Once nurses
had an opportunity to discuss the barriers to patient education, they did identify the following priorities for teaching: smoking cessation, anatomy and physiology of the heart, learning to take one’s own pulse, community resources, and issues relating to sexuality. The IPTG was developed using all of the topics articulated by the two groups.

Phase Two, *Implementation*, involved using the IPTG on the medical ward and the Cardiac Inpatient Unit (CIU). Twelve information sessions were held for staff to educate them on the use of the tool. Twenty patients participated. These patients filled out their IPTG according to their perceived learning needs, had the guide visible on their night-stand and were to receive instruction according to the topics they had indicated as *very important* or *important*.

The efficacy of the IPTG was tested in Phase Three, *Participant Impact*. The results of the surveys indicated limited success of the IPTG. The nurses surveyed at the conclusion of the pilot study indicated that they felt that the guide was thorough in its choice of topics (95%) and easy to use (100%). Some of the topics that patients had identified as *very important* or *important* to learn were addressed by nursing staff including: Risk Factors, Medications, and Activity Restrictions. Negotiation between patient and nurse seems to have been neglected in topics such as Diet, Psychological Concerns and Anatomy and Physiology. While the majority of the patients indicated that the IPTG provided them an opportunity to identify their learning needs, only four out of the ten participants felt that their learning needs were completely met in the hospital setting. Ten patients identified that there were identified topics on the IPTG that were not discussed and these participants considered the health teaching they received insufficient to meet their learning needs.

**Conclusions**

*Patient Information Needs*
The first of the primary questions of this research study read as follows: What topics do MI patients perceive to be important to include in an inpatient teaching guide? In order to ascertain what it is that patients want to know following acute cardiac events, a number of survey-based research studies have been conducted (Casey et al., 1984; Gerard & Peterson, 1984; Moynihan, 1984; Karlik & Yarcheski, 1987; Chan, 1990; Wingate, 1990; Ashton, 1997; Turton, 1998; Timmins & Kalisze, 2003). Gerard and Peterson (1984) devised the cardiac patient learning needs inventory (CPLNI) to ascertain the individual learning needs of cardiac patients. This tool has been used and validated in several subsequent studies (Timmins, 2005). The categories included were Introduction to the Coronary Care Unit, Anatomy and Physiology, Psychological Concerns, Risk Factors, Information about Medications, Dietary Information, Physical Activity and Miscellaneous Information. The Individualized Patient Teaching Guide (IPTG) developed in this thesis work mimicked many of the categories of the CPLNI and contained a few new categories as well. Participants in the patient focus group felt that topics such as Tests and Procedures, Stress, and Driving and Work Limitations were also important for teaching consideration. While many of the previous research studies endeavored to examine the differences between perceived information needs of patients compared to nursing staff, it is important to note that the variations between nurse and patient views were often spurious (Timmins, 2005). The differences were derived from rank orders, but each of the categories in all cases was considered important to learn by both patients and nurses. Perhaps it is more important to consider how individual patients prioritized categories rather than to dissect differences between the two groups. “The notion of developing a tool to assess patient information needs clearly emerges from the literature; however, there are little existent practical guidelines… in this area” (Timmins, 2005, p. 179). This study endeavored to do just that. This
study was successful in developing a teaching guide that allowed patients to identify their individual learning styles and learning needs. Scott and Thompson (2003), in their extensive review of the CPLNI, noted an absence of patient involvement in the tool’s inception. Given this lack of patient involvement, it has been suggested that, “A new measurement tool should be devised based on systematic review, qualitative research and involvement of patients and experts in the area” (Timmons, 2005, p.180). This is, in essence, what I was trying to do through the use of focus groups comprised of recovering post-MI patients and nurses responsible for their care. It was the topics identified by both the nurses and the patients that were used to develop the IPTG.

Adult Learning Theory

Adhering to the principles of adult learning theory was central to the focus of this research study. Patient-focused care is an initiative that many hospitals have embraced in the last decade (Saltmarche, Kolodny, & Mitchell, 1998). Nurses are in a unique position to build relationships with their patients that would enable the collaboration and negotiation necessary for patient education by virtue of the amount of patient contact their job entails (Kendall, Deacon-Crouch, & Raymond, 2007). The IPTG could be an effective tool to enable the nurse and patient an opportunity to participate in an exchange of ideas about important topics that should be considered prior to discharge. The majority of nurses surveyed in this study agreed that this tool might be helpful in fostering communication between nurses and patients in this clinical area. This negotiation and communication is central to adult learning theory (Cross, 1981; Knowles, 1984; Wlodkowski, 1999). Health care providers can maximize their teaching moments by adhering to the principles of adult learning theory (Russell, 2006). According to adult learning theory, the patients in this study should have been motivated to learn if nurses taught the topics
that they identified in the IPTG as very important to them. “Adults learn best when convinced of the need for knowing the information” (Russell, 2006, p.350). The IPTG could facilitate the process of topic negotiation (of patient’s perceived learning needs), development of a learning plan, and evaluation of the behavior in knowledge, attitudes and skills: necessary requirements for the education process (Bastable, 2003). In this study the majority of patients surveyed indicated that the use of the IPTG allowed them to identify their learning needs and that the nurses (at least to some extent) used the tool to guide some of their patient teaching. While this success may indicate that the nurses in this hospital were embracing the concepts of adult learning and focusing on the perceived learning needs of the patients under their care, the survey responses to follow cast doubt on the amount of negotiation that truly occurred. The vast majority of patients in this study indicated that the nurses ignored some of the topics that they had identified as important. They also identified that they had been provided with insufficient education as a whole. Given that the primary focus of this thesis work was to investigate the impact of an Individualized Patient Teaching Guide in the in-patient education of post-MI patients, can we then assume that the tool was a failure? Certainly that is one possible answer.

I would like to offer a few alternative explanations. One alternative is that it is irrelevant how well-developed a patient teaching tool is if the staff do not use it.

Limitations of this Study

Four potential limitations of this study are immediately apparent: the fact that the study was conducted at one institution, lack of a female patient perspective within the focus group, exclusion of patients based on age, and exclusion of patients based on language. Including only one hospital in this study limits the usefulness of the results. The possibility of a larger replication study exists for future consideration. While several female in-patients participated in
the intervention phase of the study, the focus group in the first phase consisted entirely of men. I had hoped to have female post-MI patients agree to participate in the focus group. Given that all of the cardiac patients were male, it is conceivable that topics may be missing that would be pertinent to female patients. A future study could investigate the perceived learning needs of female patients by including them in focus groups. By excluding the very elderly, a significant portion of MI patients were omitted from this study. There is a current gap in teaching tools to educate our non-English speaking patients. While the needs of this population are beyond the scope of this thesis work, they must not go by unnoticed. Patient literature should be available in a variety of languages to promote patient education, and there should be improved access to translators in the near future. Tailoring the IPTG to non-English speaking patients could be a consideration in the future.

The feedback questionnaire provided to the patients had a question that asked them which of the following topics they had been taught while in the hospital. The topics they could choose from came from the CPLNI rather than the IPTG. While this was an oversight, I don’t think it really impacted the results of the study. It didn’t really matter which topics were covered, only that the topics considered as important by the patient were addressed. If I were to give advice to a researcher evaluating the in-patient experiences of cardiac patients, I would suggest that interviews might provide more meaningful data than the questionnaires I collected.

While this study was successful in developing a teaching tool that incorporated those topics that both nurses and post-MI patients identified as most important for cardiac patients to learn while in the hospital, the implementation phase of the study enjoyed limited success. Despite the fact that nurses identified that the IPTG was potentially easy to use and inclusive in its range of topics, the tool was not used by staff as it was intended. During my many visits to the hospital, I
would engage in conversations with staff to determine how they felt the tool was impacting their patient teaching. In every situation I was met with blank stares and the comment, “I didn’t realize my patient was on the study,” or “I haven’t had time to even think about patient teaching today.” The fact that the nurses were unaware that the patient was on the study was a source of great frustration for me. At the beginning of the study I ran six different information sessions on each of the floors to ensure that as many different nurses were aware of the IPTG and understood the role I was asking them to play as possible. A green neon poster was clearly displayed in the medication rooms with information about the study and the implications on nursing. I also flagged the patients’ charts and highlighted the study in the care plans for each patient. The IPTG was always left in view at the patient’s bedside. Despite these efforts, very few (if any) nurses referred to the IPTG to direct their patient teaching. This made the nursing evaluation form difficult for them to fill out. The questionnaire read more like a pre-test questionnaire eliciting opinions from the staff on how they thought the tool might work if they were to use it to guide their health teaching. The questionnaire should have included a box that would indicate if the nurse had used the tool in the two-month implementation phase. An examination of barriers that prevented the nurses from utilizing the IPTG as intended is in order.

Barriers to Patient Education

According to the nursing staff in this study, the IPTG appeared to be easy to use and could promote negotiation between the nurse and patient if used as intended. Why then do the results of the survey indicate that learning needs of the patient participants were not met? I would argue that although most of the nurses stated that the tool was easy to use, many did not actually use it in the clinical setting. Before the tool was even implemented on the floor, nurses communicated resistance by discussing teaching barriers in the focus group session. The barriers
to patient teaching that were identified were time, knowledge of the nurse, readiness to learn and available resources. Perhaps these obstacles may all have contributed to the difficulty the nurses had in meeting the educational needs of the patients in this study.

These barriers to patient teaching are not unique to this group of nurses. Despite the fact that better patient outcomes have been attributed to nurses’ focus on patient education, this area of nursing care is chronically neglected (Alm-Roijer, Fridlund, Stagmo, & Erhardt, 2006; Kendall, Deacon-Crouch, & Raymond, 2007; Marcum, et al. 2002). Perhaps the most frequently cited reason for neglecting patient teaching is the nurses’ lack of time during a shift (Burkhead, Jones, & VonCannon, 2003; Conway, McMillan, & Solman, 2006; Kendall, Deacon-Crouch, & Raymond, 2007; Trocino, Byers, & Peach, 1997). Marcum et al (2002) studied professional nurses’ perception of the role of patient educator and the inhibiting and enhancing factors of patient teaching. In this case seventy-nine percent (n=124) of nursing respondents indicated that they did not have sufficient time to perform patient education (Marcum et al, 2002). Even those nurses that value patient teaching indicated that it was done infrequently because it did not rank as high a priority as other nursing duties. With decreasing lengths of stays, increasing patient acuity and chronic nursing shortage, the issue of time available in a shift is not likely to improve in the near future.

The physical environment of the hospital is another factor that is not conducive to teaching/learning. In-patient education in this thesis work was always done informally, at the patient’s bedside. By virtue of the fact that health teaching was done informally patients may not have recognized those moments when they were receiving patient education. Lack of privacy, noise, and distractions may also have contributed to the fact that the patients were dissatisfied with the education they received in this study.
Another barrier cited in the research literature as a contributing factor for the neglect of patient education is the knowledge of the nurses responsible for this health teaching (Burkhead, Jones & VanCannon, 2003; Kendall, Deacon-Crouch & Raymond, 2007; O’Shea, 2001). The nurses that I met with indicated that the number of new staff members working on the floors impacted how much patient education would be performed in a shift: “The nurses don’t know themselves”. The literature supports the notion that many nurses feel ill-equipped to meet the educational needs of their patients (Caress, 2003). The basic education provided in nursing school may be insufficient when one considers the complex needs of cardiac patients (Burke & Fair, 2003). In this study, sessions were organized to introduce nursing staff to the IPTG. A needs assessment of the nurses working on the floor was not performed to determine if the nurses were knowledgeable about all of the topics contained within the IPTG as this was beyond the scope of this thesis work. The literature supports the notion that it is not just the new staff that are inadequately prepared to meet the educational needs of patients in the hospital. “Nursing schools as well as continuing education classes spend little time preparing nurses to teach patients” (Burkhead, Jones, Von Cannon & Hu, 2003, p. 144). Even if a nurse is knowledgeable about the various topics that patients have identified as important for them to learn, knowledge transfer could be compromised. “A thorough knowledge base does not ensure that the nurse will be able to convey the message to the patient in a meaningful way” (Kendall, Deacon-Crouch & Raymond, 2007, p.174). Many nurses do not know how to evaluate whether or not their patients have understood the information they have relayed (Burkhead, Jones & VanCannon, 2003). Other nurses may not have the ability to assess a patient’s readiness to learn when planning optimal teaching strategies (O’Shea, 2001).
While most nurses would agree that patient education is an important aspect of health care, the literature reports some disagreement among nurses about who should be responsible for this patient teaching (Conway, McMillan & Solman, 2006; Trocino, Byers & Peach 1997). In the evaluation survey completed by patients in this thesis work, all of the patients indicated that they had received some instruction by nurses caring for them. However, if nurses do not value health teaching as an integral part of their professional role, I would assert that they would be less likely to be effective in their patient teaching.

Motivation is another factor that must be considered. It was clear to me early in this study that the nurses I encountered lacked motivation to participate in patient teaching activities. This attitude was articulated in the focus group, information sessions and daily interactions. Often I approached nurses that were caring for patients enrolled in the study and asked them how helpful the tool was in guiding their patient teaching. Comments such as, “This patient has the book, he’ll ask me questions if he has any” or “I might get to it later” were not uncommon. If nurses were not motivated to take part in this research study or if their participation was not mandated or encouraged by their nursing managers, perhaps these factors can account for the lack of participation. Trends in today’s acute care hospital settings such as low morale, staff shortages, heavier workloads, higher patient acuity and reduced resources all contribute to job dissatisfaction and poor motivation to engage in what is viewed as “extra” activities (Bally, 2007).

The attitudes of nursing staff surrounding research in general may have had a deleterious impact on the results of this thesis work. As a Registered Nurse myself, I have seen first-hand the sheer volume of research studies that can take place in a clinical setting. Understandably,
nurses can become fatigued by participating in numerous research activities and resentful about the amount of time they perceive their participation requires (Roxburgh, 2005).

Implications for Practice

Congruent to existing literature, in-patient participants in this study considered topics relevant to survival as most important to learn about while in the hospital setting (Ashton, 1997; Chan, 1990; Czar & Engler, 1997; Gerard & Peterson, 1984; Moynihan, 1984; Wingate, 1990). When identifying their learning needs on the IPTG, the majority of patients (n=13, or 93%) indicated that the topic Risk Factors was very important for them to learn about in the hospital. Research indicates that when patients gain specific knowledge about risk factors and other cardiac topics, there is a specific correlation between this knowledge acquisition and lifestyle changes (Alm-Roijer, Fridlund, Stagmo & Erhardt, 2006). Given that nurses spend the most amount of time of all health professionals with these patients, it is reasonable that patient teaching must be an integral part of their professional role. Given the lack of consistency of nursing when it comes to patient education, it seems that a change in expectations is warranted. I contend that managers and institutions must mandate health teaching and inform nurses that this is an expected professional responsibility. In order to support nurses in their patient teaching endeavors, change would be required at various points within the hospital, including the individual, unit, and institutional levels. Simply mandating nurses to focus on patient education does nothing to eliminate the teaching barriers that have been previously discussed. In order for the shift to a patient-focused approach to be successful, management will need to provide nurses with the tools they require to deliver this care.

A Focus on the Patient
It seems that negotiation between nurses and their patients was inconsistent in the implementation phase of this study. While some topics that were considered important such as Risk Factors and Medications were addressed by nursing staff, many topics were not. It is unknown whether nurses discussed these topics as a result of negotiation with patients, by chance, or as a result of questions posed by the patients. The literature is clearly in support of teaching patients according to adult learning principles. Addressing those topics that are valued by the learner is one necessary step paramount to ensuring retention. The IPTG used in this study would be one tool that could be used by cardiac nurses to identify and negotiate the topics that are valued by patients. Once nurses have elicited from patients those topics that they see are most relevant to their own care, communication strategies become important. Barrere (2007) supports the contention that symmetrical communication is the most effective communication strategy for health teaching. Symmetrical communication is patient focused and abandons the traditional nurse-patient hierarchy (Barrere, 2007). By focusing on the needs of the patient, as that patient perceives those needs, nurses can communicate with their patients as equal partners. Nurses communicate their knowledge in a way that maximizes the needs and “voice” of the patient (Barrere, 2007). Clearly it is not simply what the message is that nurses must consider, but also how that message is delivered.

A Needs Assessment

I think it is fair to say that all nurses want the very best for the patients under their care. I think it is also fair to say that most nurses appreciate the fact that patients require a great deal of education following a diagnosis of Acute Myocardial Infarction. The problem lies in how patients are to receive that education. Perhaps in the case of patient education it might be more important to assess the needs of the nurses before considering the educational needs of the
patients. “By conducting a needs assessment, one can better understand how and why improvement should be addressed” (Palmer, 2006). By conducting a needs assessment for nurses caring for cardiac patients, management could gain a more focused understanding about what these nurses need to better educate their patients. If nurses are responsible for educating their patients on a host of cardiac topics, it seems reasonable to ensure that they have the requisite knowledge to do so. A needs assessment could incorporate a survey that would act to test this knowledge base and illuminate those areas that may require professional development.

A needs assessment could also delve into teaching strategies and available resources on the floor that could be used to enhance patient education. Teaching tools such as teaching guides (such as the IPTG), models and physical resources (quiet rooms equipped with educational supplies to be used for teaching) should be assessed according to the needs of the floor. Once the needs assessment is performed, management would then be responsible to collaborate with staff to ascertain how those needs would be accommodated.

**Professional Development**

Certainly one very important strategy to enhance patient education in the hospital setting is to ensure that the preparation of nurses includes instruction on effective teaching/learning strategies (Trocino, Byers & Peach, 1997). By promoting adult learning theory in nursing school we can help future nurses embrace patient-centered care and symmetrical communication. If patient teaching strategies are taught in nursing programs, it may also aid in the perception of health teaching as a professional responsibility.

Experienced nurses also often lack the cognitive knowledge base for effective patient education (Trocino, Byers & Peach, 1997). Most colleges and universities offer a host of post-RN courses that cover a variety of clinical topics. Motivated staff members frequent these
opportunities for continuing education courses despite the cost and inconvenience of attending classes off-site. Support measures that institutions could consider would be financial compensation and time-off to attend classes and complete assignments.

Hospitals often offer workshops and in-services during a day shift. These in-services can offer quality, relevant information to nurses that can be used in the care of their patients. Classes in this case could cover topics relevant to cardiac disease to enhance the nurses’ clinical knowledge, as well as communication techniques congruent with adult learning theory. Other sessions could concentrate on tools such as the IPTG that would assist nurses with their patient education. These sessions are often offered several times in a shift to ensure that all nurses can attend. Nurses “cover” each others’ clinical assignments while off the floor. Attendance and participation at in-services are sporadic and poor. “The reality of providing patient care, with the resultant time constraints and preoccupation with the job, tends to interfere with a natural inclination to attend classes and concentrate on the in-service education provided” (White et al. 1998, p. 148). Ongoing education only works if staff are provided with the time, coverage, and support necessary to truly focus on the material discussed. If management wish to see a change in practice, adequate staffing to cover nurses when they are off the floor would be essential.

An interesting alternative to in-services or workshops is the idea of nursing-led rounds (Guin, Counsell & Briggs, 2002). In the case of a cardiac patient, the clinical nurse specialist (CNS) would present the pertinent points of the patient’s history and ask questions to the nursing staff. In the case of a patient that has an IPTG at his bedside, the CNS could challenge the staff to speak to one of the priorities identified by the patient. The staff gain on-site continuous learning and the patient receives information about the topics identified as important to learn. This
atmosphere would take time to develop. Team building, mutual respect and management support would be essential.

**Clinical Nurse Specialist**

Given the realities of today’s health care system—nursing shortages, time constraints, inadequate knowledge and increasing patient acuity—perhaps it is unreasonable to expect nurses to shoulder the entire burden of patient education. “The wisdom of involving all nurses…in patient education is challenged as an unrealistic and undesirable goal” (Luker & Caress, 1989). Perhaps it is time for all disciplines to become more involved in patient education and take a more active role in health promotion.

One role that has been utilized in a number of clinical settings to tackle the educational needs of cardiac patients is the clinical nurse specialist. The educational preparation of the CNS is typically at the Master’s in Nursing level and this program stresses the importance and application of patient and family education. The theoretical knowledge base and advanced clinical expertise of the CNS makes this professional an obvious choice for delivery of health education to in-patients (Trocino, Byers & Peach, 1997). If every medical program (for example, cardiology) were to employ a full-time CNS to meet the educational needs of the in-patients, the educational needs of patients might be better addressed. The clinical nurse specialist has both the knowledge to deliver patient education and the preparation to assess whether this information is received and understood (Luker & Caress, 1989). The CNS could work together with patients, using a tool such as the IPTG to ensure that the topics patients perceive to be important are covered while in the hospital setting. Teaching sessions could be formalized and planned according to the needs of the patients, rather than haphazard and incidental. The addition of a CNS to a staffing model would not excuse the nursing staff from all
health teaching responsibilities. They would still be responsible for answering questions posed by patients accurately and knowledgeably. Another advantage to the inclusion of a CNS is that staff could begin to model the teaching behaviors of this colleague and learn theoretical and practical information that would be useful in their own teaching.

A Change in Practice

Nurses are in the business of caring and I believe that most nurses truly wish that there was more time to identify patient’s learning needs and negotiate topics for consideration, and to sit down and effectively teach them everything they wish to know. The health care system as it is today does not leave a lot of room for engaging in teaching/learning opportunities. Nursing shortages, increased workload, increased acuity, poor social or institutional support, helplessness, increased stress and role conflict can all lead to nursing burnout (Thilagavathi, 2006). Many of the nurses who participated in this study indicated that they were feeling overworked, frustrated, emotionally drained and less productive. According to Espeland (2006) these symptoms are indicative of burnout. The fall-out from burnout–apathy and–discontent–is certainly detrimental to patient care. Institutions should consider acting now to avoid an epidemic of nurses suffering the professionally devastating symptoms of burnout.

In order to institute patient-centered care, structural, behavioral, and reeducation approaches would be necessary (Reineck, 2007). One structural change might be developing an institutional vision that embraces patient education as central to patient care. Managers would hold nursing staff accountable to patient teaching and provide them with the resources they would require to adequately meet patient’s perceived learning needs. “It is unrealistic to exhort nurses to undertake assessments in order to formulate teaching strategies if one does not provide them with clear guidelines and the time and material to act out the plan” (Luker, & Caress, 1989,
Thus, nursing managers should support the use of teaching tools such as the IPTG that would guide the patient teaching process. Their support and endorsement of specific tools and processes are essential: nursing staff cannot see patient education as an optional activity. The addition of clinical nurse specialists in the staffing mix could be another of the structural changes considered. Certainly the assurance of accurate staffing on each shift would be essential to ensure time is available for patient teaching purposes.

Some of the behavioral approaches to elicit a change in the amount of patient teaching done with cardiac patients that could be considered are: the institution of nurse-led rounds, patient education committees, and mentorship opportunities. Re-education opportunities should be based on a needs assessment of the staff caring for cardiac patients and could include any of the strategies discussed previously. Ultimately, for change to be sustainable, the hospital climate must be supportive and help to create an atmosphere where patient teaching is valued by both the institution and the front-line staff.

Suggestions for Future Research

Investigating the impact of the IPTG on patient teaching delivered by clinical nurse specialists (CNS) would be an exciting research topic. It would also be interesting to look at the impact that the CNS has on the satisfaction of patients with the quality and quantity of information delivered during their hospitalization. Another avenue for research may be a qualitative approach to ascertaining what elements are required to promote motivation and participation of staff nurses to attend professional development programs aimed at improving patient education.

While there are many avenues to explore, this research study has provided me with a new understanding of the complexities of delivering patient education. I have a new appreciation for the individual needs of the patients that I will care for in my professional life as a Registered
Nurse. While I may not have changed the way this hospital delivers health teaching, this study has certainly prompted a change in my own clinical practice. Despite time constraints, ever-increasing patient loads and high patient acuity, I am dedicated to treating each patient as an individual. Patients, like consumers, are beginning to realize what it is that they want from health care. Perhaps, in time, they will demand the education they feel is vital to their ongoing recovery and health. Short hospital stays will necessitate a shift in how patient teaching is delivered. Could it be the hospital is not the place for this teaching/learning; perhaps another interesting research opportunity . . . .

References


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APPENDIX A

LETTER OF INFORMATION FOR OUT-PATIENT CARDIAC PARTICIPANTS
An Investigation of the Impact of an Individualized Patient Teaching Guide
on the In-patient Education of Myocardial Infarction Patients.

I am writing to request your participation in research aimed at improving the in-patient education of cardiac patients in this hospital. The ultimate goal of my research is to promote individual patient input on their learning needs to determine if this style of education improves learning and satisfaction of patients. I am a graduate student in the Master of Education program at Queen’s University, in Kingston, Ontario. This research has been cleared by the Queen’s University General Research Ethics Board as well as this healthcare institution.

In this part of the research, I wish to identify the topics cardiac patients perceive to be most important to learn in the hospital setting. To do this, I am planning to conduct a group interview. This interview, called a focus group, will involve 8 to 10 recovering cardiac patients like yourself. One interviewer will lead the discussion and take notes periodically.

The focus group will take place at a time that is most convenient to participants taking part. The location will be neutral. The focus group will last no longer than 90 minutes and will be audio taped. In addition to the tape recording, the interviewer will take notes to make a written record of the sequence of questions and answers. These notes will be maintained as part of a computer file. The taped interview will be transcribed verbatim and the tape will then be destroyed. None of the data used will contain your name, or any other identifying characteristics. Data will be secured in a locked office, and confidentiality is guaranteed.

There are no foreseeable risks in your participation in this research. Your participation is entirely voluntary. You are not obliged to answer any questions you consider inappropriate. You are free to withdraw from the study without providing reasons at any point.

This research will result in the publication of a thesis document. Your name will not be attached to any form of the data that you provide, neither will your name appear within the text of my thesis work. A pseudonym will replace your name on all data that you provide to protect your identity.

If you have any questions about this study, please contact me (519-624-3591, or mohaupt@mcmaster.ca) or my research supervisor Dr. Susan Wilcox at (613-533-3252, or wilcoxs@post.queensu.ca). For questions, concerns or complaints about the research ethics of this study, contact the Dean of Faculty of Education, Dr. Rosa Bruno-Jofre (613-533-6210), or the chair of the General Research Ethics Board, Dr. Joan Stevenson (613-533-6081, or stevensj@postqueensu.ca).

Sincerely,

Jennifer Mohaupt, RN, BScN, MED(c)
APPENDIX B

CONSENT FORM FOR INCLUSION IN A FOCUS GROUP
An Investigation of the Impact of an Individualized Patient Teaching Guide
On the In-patient Education of Myocardial Infarction Patients.

Dear Researcher:

I have read and retained a copy of the letter of information concerning the study, An Investigation of the Impact of an Individualized Patient Teaching Guide on the In-Patient Education of Myocardial Infarction Patients, and have had all questions sufficiently answered. I am aware of the purpose and procedures of this study, and I have been informed that the focus group interview will be recorded by audio tape.

I have been notified that participation is voluntary and that I may withdraw at any point during the study without consequences to myself. I have also been told the steps that will be taken to ensure confidentiality of all information.

I am aware that if I have any questions about this study, I can contact Jen Mohaupt (519-624-3591, mohaupt@mcmaster.ca) or Dr. Susan Wilcox (613-533-3252, wilcoxs@post.queensu.ca). I am also aware that if I have any questions, concerns or complaints about the research ethics of this study, I can contact the Dean of the Faculty of Education, Dr. Rosa Bruno-Jofre, (613-533-6210,) or the Chair of the General Research Ethics Board, Dr. Joan Stevenson, (613-533-6081, or stevensj@post.queensu.ca).

Participant’s Name: ______________________________________________________

Signature: ______________________________________________________________

Date: ____________________________
APPENDIX C

LETTER OF INFORMATION FOR NURSES PARTICIPATING IN A FOCUS GROUP
An Investigation of the Impact of an Individualized Patient Teaching
Guide on the In-patient Education of Cardiac Patients

I am writing to request your participation in research aimed at improving the in-patient education of cardiac patients in this hospital. The ultimate goal of my research is to promote individual patient input on their learning needs to determine if this style of education improves learning and satisfaction of patients. I am a graduate student in the Master of Education program at Queen’s University, in Kingston, Ontario. This research has been cleared by the Queen’s University General Research Ethics Board as well as this healthcare institution.

In this part of the research, I wish to identify the topics nurses perceive to be most important to teach in the hospital setting. To do this, I am planning to conduct a group interview. This interview, called a focus group, will involve 8 to 10 nurses. One interviewer will lead the discussion.

The focus group will take place at a time that is most convenient to participants taking part. The location will be neutral. The focus group will last no longer than 90 minutes and will be audio taped. In addition to the tape recording, the interviewer will take notes to make a written record of the sequence of questions and answers. These notes will be maintained as part of a computer file. The taped interview will be transcribed verbatim and the tape will then be destroyed. None of the data used will contain your name, or any other identifying characteristics. Data will be secured in a locked cabinet, and confidentiality is guaranteed.

There are no foreseeable risks in your participation in this research. Your participation is entirely voluntary. You are not obliged to answer any questions you consider inappropriate. You are free to withdraw from the study without providing reasons at any point.

This research will result in the publication of a thesis document. Your name will not be attached to any form of the data that you provide, neither will your name appear within the text of my thesis work. A pseudonym will replace your name on all data that you provide to protect your identity.

If you have any questions about this study, please contact me (Jen Mohaupt at 519-624-3591, mohaupt@mcmaster.ca) or my research supervisor Dr. Susan Wilcox (613-533-3252, wilcoxs@post.queensu.ca). For questions, concerns or complaints about the research ethics of this study, contact the Dean of Faculty of Education, Dr. Rosa Bruno-Jofre, (613-533-6210), or the chair of the General Research Ethics Board, Dr. Joan Stevenson (613-533-6081, or stevensj@post.queensu.ca).

Sincerely,

Jennifer Mohaupt, RN, BScN, MED(c)
APPENDIX D

LETTER OF INFORMATION FOR NURSES USING TEACHING GUIDE

An Investigation of the Impact of an Individualized Patient Teaching
Guide on the In-patient Education of Cardiac Patients

I am writing to request your participation in research aimed at improving the in-patient education of cardiac patients in this hospital. The ultimate goal of my research is to promote individual patient input on their learning needs to determine if this style of education improves learning and satisfaction of patients. I am a graduate student in the Master of Education program at Queen’s University, in Kingston, Ontario. This research has been cleared by the Queen’s University General Research Ethics Board as well as this healthcare institution.

In this part of the research, I hope to recruit 20 nurses to deliver in-patient education to MI patients using a newly developed individualized patient teaching guide (IPTG). This tool was developed from the input of nurses and previous cardiac patients.

Interested participants will be given an orientation to the teaching guide at a time and place most convenient to them. Nurses will be given an opportunity to ask questions about the use of the tool at this time. At the end of the study, nurse participants will be asked to fill out a questionnaire about the usefulness of the tool in delivering in-patient education. The questionnaire should take no more than 15 minutes, and will include ample room for comments. None of the data will include your name or any other identifying data. Data will be secured in a locked cabinet, and confidentiality is guaranteed.

There are no foreseeable risks in your participation in this research. Your participation is entirely voluntary. You are not obliged to answer any questions you consider inappropriate. You are free to withdraw from the study without providing reasons at any point.

This research will result in the publication of a thesis document. Your name will not be attached to any form of the data that you provide, neither will your name appear within the text of my thesis work. A pseudonym will replace your name on all data that you provide to protect your identity.

If you have any questions about this study, please contact me (Jen Mohaupt at 519-624-3591, mohaupt@mcmaster.ca) or my research supervisor Dr. Susan Wilcox (613-533-3252, wilcoxs.post.queensu.ca). For questions, concerns or complaints about the research ethics of this study, contact the Dean of Faculty of Education, Dr. Rosa Bruno-Jofre, (613-533-6210), or the chair of the General Research Ethics Board, Dr. Joan Stevenson (613-533-6081, or stevensj@post.queensu.ca).

Sincerely,

Jennifer Mohaupt, RN, BScN, MED(c)
APPENDIX E

CONSENT FORM FOR INCLUSION IN A RESEARCH STUDY

Dear Researcher:

I have read and retained a copy of the letter of information concerning the study, An Investigation of the Impact of an Individualized Patient Teaching Guide on the In-Patient Education of Myocardial Infarction Patient, and have had all questions sufficiently answered. I am aware of the purpose and procedures of this study.

I have been notified that participation is voluntary and that I may withdraw at any point during the study without consequences to myself. I have also been told the steps that will be taken to ensure confidentiality of all information.

I am aware that if I have any questions about this study, I can contact Jennifer Mohaupt (519-624-3591, mohaupt@mcmaster.ca) or Dr. Susan Wilcox (613-533-3252, wilcoxs@post.queensu.ca). I am also aware that if I have any questions, concerns or complaints about the research ethics of this study, I can contact the Dean of the Faculty of Education, Dr. Rosa Bruno-Jofre, (613-533-6210), or the Chair of the General Research Ethics Board, Dr. Joan Stevenson, (613-533-6081, or stevensj@post.queensu.ca).

Participant’s Name: __________________________________________________________

Signature:  _________________________________________________________________

Date:  _________________________________________________________________
APPENDIX F

LETTER OF INFORMATION FOR CARDIAC INPATIENTS
An Investigation of the Impact of an Individualized Patient Teaching Guide
On the In-patient Education of Cardiac Patients.

I am writing to request your participation in research aimed at improving the in-patient education of cardiac patients in this hospital. The ultimate goal of my research is to promote individual patient input on their learning needs to determine if this style of education improves learning and satisfaction of patients. I am a graduate student in the Master of Education program at Queen’s University, in Kingston, Ontario. This research has been cleared by the Queen’s University General Research Ethics Board as well as this healthcare institution.

In this part of the research, I wish to provide individualized education to twenty patients diagnosed with heart attacks. To do this, I am planning to use a newly developed teaching guide that includes topics that previous patients and nursing staff have identified as important to learn in the hospital setting. Each patient will discuss their individual learning needs and learning styles with the nurse caring for them to customize their education plan. Prior to discharge, participants will be asked to fill out a questionnaire that evaluates the learning achieved while in hospital.

The questionnaire will contain questions dealing with how effective you consider the health teaching you have received in the hospital has been. The questionnaire should take no longer than 15 minutes to complete and will include sufficient space for you to include any comments you wish to make. None of the data used will contain your name, or any other identifying characteristics. Data will be secured in a locked cabinet, and confidentiality is guaranteed.

There are no foreseeable risks in your participation in this research. Your participation is entirely voluntary. You are not obliged to answer any questions you consider inappropriate. You are free to withdraw from the study without providing reasons at any point. Withdrawal from this study will have no effect on your future nursing care.

This research will result in the publication of a thesis document. Your name will not be attached to any form of the data that you provide, neither will your name appear within the text of my thesis work. A pseudonym will replace your name on all data that you provide to protect your identity.

If you have any questions about this study, please feel free to contact me (Jen Mohaupt at 519-624-3591, mohaupt@mcmaster.ca) or my research supervisor Dr. Susan Wilcox (613-533-3252, wilcoxs@post.queensu.ca). For questions, concerns or complaints about the research ethics of this study, contact the Dean of Faculty of Education, Dr. Rosa Bruno-Jofre, (613-533-6210), or the chair of the General Research Ethics Board, Dr. Joan Stevenson (613-533-6081, jstevens@post.queensu.ca).

Sincerely,
Jennifer Mohaupt, RN, BScN, MED(c)
APPENDIX G

Evaluation Survey for the Individualized Patient Teaching Guide (IPTG)


This evaluation survey is designed to determine how complete, accurate and ‘user-friendly’ a newly developed instrument, the individualized in-patient teaching guide (IPTG), is according to a variety of healthcare professionals. The input of nurses with direct care responsibilities for MI patients will be used to assess the developed teaching guide in terms of: ease of use, communication amongst healthcare providers, input from both patients and nurses, and continuity of health teaching within the hospital environment. The information provided will be included as part of a research project for a Masters of Education program at Queen’s University. Please be assured of the confidentiality of any information you supply. Your participation is voluntary. You may decline to answer any question(s) you are uncomfortable with. Your participation and/or completion of this survey implies consent. You may add any additional comments on the back pages of the survey. Please return the survey in the envelope provided through the hospital’s internal mail delivery system.

Please check appropriate boxes:

1. How long have you been practicing as a nurse?
   - □ Less than 1 year
   - □ 1-5 years
   - □ 6-10 years
   - □ More than 10 years

2. Do you consider the teaching guide attached to be ‘user-friendly’
   - □ Yes
   - □ No
   - □ Undecided

3. Are you satisfied that all topics that should be covered in an in-patient education program are included in the guide?
   - □ Yes
   - □ No
   - □ Undecided
If your answer is No, what topics would you like to see added?

4. Is the tool easy to use?
   - Yes
   - No
   - Undecided

   If your answer is No, please elaborate.

5. Does the tool foster negotiation of a teaching plan between a patient and nursing staff?
   - Yes
   - No
   - Undecided

6. Do you have any other comments to add?
Thank you for your participation in this survey.
Please return the completed survey in the envelope
Provided by:
(insert date)

If you have any questions or comments related to the survey, please don’t hesitate to contact me.

Jennifer Mohaupt
(519) 624-3591 or mohaupt@mcmaster.ca
APPENDIX H

Evaluation Survey of In-Patient Education Experience

This survey is designed to investigate how satisfied cardiac patients are with the in-patient teaching they have received in this hospital. Teaching was directed by the use of an in-patient teaching guide that allowed patients to identify which topics they felt were important to learn. Healthcare professionals used this guide to provide the education patients identified as important to them, as well as delivering this information in a manner best suited to patients’ stated learning preferences. The information provided will be included as part of a research thesis for a Masters of Education program at Queen’s University. Please be assured of the confidentiality of any information you supply. Your participation is voluntary. You may decline to answer any question(s) you are uncomfortable with. You may add any additional comments on the back pages of the survey. Please return the survey in the envelope provided to the Registered Nurse caring for you.

Please check the appropriate boxes:

1. Which of the following topics did you learn about while in hospital? (Please check all that apply)
   - Introduction to the CCU
   - Anatomy and Physiology of the heart
   - Psychologic Factors
   - Risk Factors for heart disease
   - Medications
   - Diet
   - Activity
   - Miscellaneous topics.

2. Of the above topics, were there any that you identified as important to learn that you did not learn about while in hospital?

   - Yes
   - No
   - Unsure

If you answered yes to the above question, please identify what topic(s) was (were) not covered in your in-patient teaching.
3. Overall, how would you rate the information you received while in hospital?
   - [ ] Completely met my needs
   - [ ] Somewhat met my needs
   - [ ] Did not meet my needs
   - [ ] Unsure

4. Please identify which healthcare professionals delivered patient education (check all that apply).
   - [ ] Registered Nurse
   - [ ] Occupational Therapist
   - [ ] Physiotherapist
   - [ ] Dietician
   - [ ] Social Work
   - [ ] Respiratory Therapist
   - [ ] Physician
   - [ ] Other ____________________

5. Of the healthcare professionals identified above, which would you say provided the most amount of your in-patient teaching?

   ____________________________________________________________

6. What teaching tools were used in the delivery of patient education? (check all that apply)
   - [ ] Videos
   - [ ] Informal conversation
   - [ ] Use of heart model
   - [ ] Written literature
   - [ ] Structured sessions
   - [ ] Group sessions
   - [ ] Other __________________________________________________

7. Of the above tools, are there any that weren’t used that you would have found helpful?

   ____________________________________________________________
8. Do you feel that you had an opportunity to identify your individual learning needs to healthcare staff?

☐ Yes
☐ No
☐ Unsure

9. Do you feel that your individual learning needs guided the patient education you have received while hospitalized?

☐ Yes
☐ No
☐ Unsure

Comments?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

10. Were your family members invited to take part in teaching sessions?

☐ Yes
☐ No
☐ Unsure

11. What is the single most important thing you have learned since your heart Attack?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

11. Did you find the amount of health teaching you received in the hospital to be;

☐ Just Right
12. Looking back on the first day you were admitted, do you think your information needs have changed throughout your recovery?

☐ Yes
☐ No
☐ Unsure

Comments?________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

13. When do you think you were ready for health teaching to begin?

☐ On admission    ☐ On transfer to the step-down floor
☐ Day 2 in CCU    ☐ Immediately prior to discharge
☐ Day 3 in CCU    ☐ Other ________________________

15. If you could change one thing about your in-patient learning experience, what would that be?

__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

16. Do you feel confident that you will be able to look after yourself when you are discharged from the hospital?
Comments?________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

17. Are you ☐ Male ☐ Female

18. What is your present age?
   ☐ 19-35 Years ☐ 56-65 Years
   ☐ 36-45 Years ☐ 65-79 Years
   ☐ 46-55 Years

19. Do you have any comments to add?
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________
__________________________________________________________________

Thank you for your participation in this research study.
Please return the completed survey to your Nurse.
If you have any questions or comments related to the survey, please don’t hesitate to contact me.

Jennifer Mohaupt

(519) 624-3591, or mohaupt@mcmaster.ca
APPENDIX I

DRAFT QUESTIONNAIRE GUIDE
FOCUS GROUP WITH NURSING STAFF

1. Please comment on when you think in-patient education should begin for post-MI patients.
2. On the average shift, how much time would you say you devote to health teaching?
3. How do you decide which topics you will teach to a patient recovering from an MI?
4. Please tell me about which member of the health care team you feel should be responsible for in-patient education.
5. What is the most important thing you consider MI patients should be taught in the hospital environment?
6. What teaching method do you prefer to use (i.e. informal, structured, group)
7. Of the topics provided to you in your handout, namely Introduction to the CCU, Anatomy and Physiology, Psychologic Factors, Risk Factors, Medications, Diet, Activity, and Miscellaneous topics, which do you perceive to be the most important? Which do you perceive to be less important? Which do you perceive to be unimportant?
8. To what extent do you think MI patients’ information needs change as they begin to recover. For example, on admission to CCU, throughout their stay on the medical floor and immediately prior to discharge?
9. To what extent do you think the health teaching you provide in the hospital prepares patients for continued rehabilitation at home?
10. Could you comment on which teaching tools (i.e. Videotapes, printed materials, group sessions) you use to promote your patients’ learning, and how effective are they? How do you decide which tools to use?
11. How would you say patients best learn (i.e. Through conversation, watching videos, reading carefully through materials, looking at concrete examples such as model of the heart)?
12. If you could change one thing about the in-patient education that you provide what would that be?
13. If you could give one piece of advice to someone interested in promoting the education of patients that are recovering from heart attacks, what would that be?
14. If you could help design a teaching tool to guide staff in their patient education, what do you see as key elements to include?
APPENDIX J

DRAFT QUESTIONNAIRE GUIDE
FOCUS GROUP WITH POST-MI PATIENTS.

1. Everyone here is recovering from a recent heart attack. Please tell me what this experience has been like for you.
2. Having recently been discharged from the hospital could you please comment on the health teaching you received from health care staff?
3. Which member of the health care team would you say provided the most amount of patient teaching?
4. Please tell me about which member of the health care team you feel should be responsible for in-patient education.
5. What is the most important thing you learned about while you were hospitalized with your heart attack?
6. What do you think are the most important topics that should be covered by nurses in a patient education program?
7. Of the topics provided to you in your handout, namely Introduction to the CCU, Anatomy and Physiology, Psychologic Factors, Risk Factors, Medications, Diet, Activity, and Miscellaneous topics, which do you perceive to be the most important? Which do you perceive to be less important? Which do you perceive to be unimportant?
8. Looking back on your hospital experience, to what extent do you think your information needs changed as you began to recover. For example, on admission to CCU, throughout your stay on the medical floor and immediately prior to discharge.
9. To what extent do you think the health teaching you were provided in the hospital prepared you for continued rehabilitation at home?
10. Could you comment on which teaching tools (i.e. Videotapes, printed materials, and group sessions) were used to promote your learning, and how effective were they?
11. How would you say you best learn (i.e. Through conversation, watching videos, reading carefully through materials, looking at concrete examples such as model of the heart).
12. If you could change one thing about the in-patient education that you received what would that be?
13. If you could give one piece of advice to someone interested in promoting the education of patients that are recovering from heart attacks, what would that be?
As a patient recovering from a cardiac event you likely have many questions. People best learn new information in a variety of ways. This tool is intended to give you an opportunity to show staff what you need to know and how you prefer to learn this information.

Please rate the following topics according to how important they are to your current learning needs.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Very Important</th>
<th>Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking Cessation</td>
<td></td>
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<td></td>
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<tr>
<td>Medication Information</td>
<td></td>
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<tr>
<td>Tests or Procedures to expect</td>
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<tr>
<td>Dietary Information</td>
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<tr>
<td>Risk Factors</td>
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<tr>
<td>Anatomy of the Heart</td>
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<tr>
<td>Category</td>
<td>Very Important</td>
<td>Important</td>
<td>Not Important</td>
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<tr>
<td>Stress Reduction</td>
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<tr>
<td>Community Resources</td>
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<td>Exercise</td>
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<td>Emotional concerns/changes</td>
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<td>Driving/work restrictions</td>
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<td>How and when to take my pulse</td>
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<td><strong>Other items I want to learn in the hospital are:</strong></td>
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