In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Nursing

The University of British Columbia
Vancouver, Canada

Date Aug 20, 2003
ABSTRACT

There is limited knowledge regarding how women interpret their pre-hospital experiences of acute coronary syndrome. In this study, an interpretive descriptive method was used to analyze interviews with eight women who experienced acute coronary syndrome. Analysis of these interviews revealed several factors, including previous experience with cardiac symptoms and interactions with health care professionals that influenced how these women interpreted their pre-hospital experiences.

The participants' interpretation of these factors of their pre-hospital experience determined whether they followed a clear path or an unclear path to diagnosis and hospital admission. An understanding of how women interpret their experiences with cardiovascular disease will assist health care professionals to provide better services for women who are at risk of, or who are living with, cardiovascular disease.
TABLE OF CONTENTS

Abstract.............................................................................................................. ii
Table of Contents............................................................................................... ii
Acknowledgements............................................................................................ vi

CHAPTER ONE: INTRODUCTION................................................................. 1
Purpose............................................................................................................... 4
Research Question.............................................................................................. 4
Clarification of Terminology............................................................................... 5

CHAPTER TWO: REVIEW OF THE LITERATURE............................................. 7
Gender Differences in the Occurrence and Outcomes Of Cardiovascular Disease... 8
Gender Differences in the Recognition and Management of Cardiovascular Disease........................................... 12
Delay in Seeking Treatment for Cardiac Symptoms............................................. 19
Women’s Experiences With Cardiovascular Disease............................................ 29

CHAPTER THREE: METHODS................................................................. 35
Research Design................................................................................................. 35
Recruitment Procedures..................................................................................... 38
Sampling Method................................................................................................. 41
Ethical Considerations......................................................................................... 42
Data Collection................................................................................................... 44
Data Analysis....................................................................................................... 46
Rigor..................................................................................................................... 51

CHAPTER FOUR: FINDINGS................................................................. 54
Demographic Data............................................................................................... 54
Category Definition and Interview Findings......................................................... 57
Physical Symptoms.............................................................................................. 57
Emotional Response to Physical Symptoms....................................................... 60
Previous Experience With Cardiac Symptoms.................................................... 62
Choice of Health Care Practitioner..................123
Enhance Interactions with Primary Care Provider.......124
Validation of Women’s Lives..124
Measures to Empower Women to Be Involved with Their Health.................................125
Emphasis on Prevention........126
Integrated Services and Improvements in Continuity of Care.................................127
Recommendations for Future Research........131
Summary.................................134

REFERENCES..........................................................136

APPENDIX A: Sample Letter of Introduction...........148
APPENDIX B: Sample Consent Form.........................150
APPENDIX C: Sample Interview Questions...............153
APPENDIX D: Demographic Data.................................154
APPENDIX E: Ethics Approval Letter.........................155
APPENDIX F: Facility Approval Letter.......................156
Acknowledgements

This thesis would not have been possible without the generous support of eight women who were willing to share their experiences with me. I am thankful for their bravery and their honesty as they opened their lives to me.

I would also like to thank the members of my thesis committee, Dr. Angela Henderson, Dr. Carol Jillings, and Professor Alison Rice. They provided guidance and expertise as I journeyed through this process. They also demonstrated endless patience.

Finally, I have to thank my family for their love and support. Thank you to my mother Barbara, and my father Arthur who taught me to believe in myself, and to my husband Scott who was willing to share all the ups and downs with me.
CHAPTER ONE: INTRODUCTION

Cardiovascular disease (CVD) remains the number one cause of death for adult Canadian women despite significant improvements in the detection and management of this disease process (Heart and Stroke Foundation of Canada, 2000). As a registered nurse working in the field of cardiovascular health for approximately fifteen years, I have always been interested in how people understand their cardiovascular events. In particular I have often wondered why people make the decisions they do about their health and what health care professionals can do to support people to make the best possible decisions for themselves.

Early in my career the emphasis in client education for people with cardiac disease was on cardiac rehabilitation because by the time people had presented to a hospital for treatment of their cardiac symptoms, the damage had already been done to their hearts. Most of the education from health care professionals during this time was aimed at helping people to change their lifestyles to reduce their chance of a second cardiac event.

With the development in the 1980's of thrombolytic therapy, a time-sensitive treatment that can limit the amount of damage to the heart muscle during an acute myocardial
infarction (AMI) (GISSI, 1986), researchers began to focus on educating people about going to the hospital as soon as they recognize the symptoms of AMI. The expression "time is muscle" became popular, and researchers began exploring the factors that influence how long it takes people to get to a hospital once they recognize that they are having an AMI (Leslie, Urie, Hooper, & Morrison, 2000; McKinley, Moser, & Dracup, 2000).

A review of the results of these studies identifies a number of factors that influence the time it takes people to report to a hospital for symptoms of an AMI (Johnson & King, 1995; Lambrew, Bowlby, Rogers, Chandra, & Weaver, 1997; Meischke et al., 2000). As I explored these studies I noted a number of differences related to women with CVD when they are compared to men. Women with CVD are treated less aggressively (Kudenuchuk, Maynard, Martin, Wirkus, & Weaver, 1996; Redberg, 1998; Roger et al., 2000; Weaver et al., 1996), have different symptom presentation (Hochman et al., 1999; Larson, & Eisenberg, 1998; McSweeney, 1998; Meischke, Penque et al., 1998), and have poorer short-term outcomes after an acute cardiac event than men with CVD (Kudenuchuk et al., 1996; Moen et al., 1997; Weaver et al., 1996). Women also delay longer than men when seeking treatment for their symptoms of CVD
(Barakat, Wilkinson, Sullivan, Ranjadayalan, & Timmis, 2000; Lambrew et al., 1997; Meischke et al., 1998; Weaver et al., 1996) and this delay is unchanged by intense educational campaigns (Luepker et al., 2000). Another interesting aspect about these studies is that the voices of the women who are experiencing these cardiac events seem to be missing.

There have been a limited number of studies that have explored women’s experiences with CVD. Most qualitative studies that explore women’s experiences with CVD focus on coping with the diagnosis of CVD (LaCharity, 1997), coping with the experience of cardiac surgery (Hawthorne, 1993; King & Jensen, 1994), identifying the needs and experiences of women following the diagnosis of CVD or AMI (Bensen, Arthur, & Rideout, 1997; Helpard & Meagher-Stewart, 1998; Murray, Farrell, & Houston, 2000), and adjusting to life after an AMI (Johnson & Morse, 1990). The one qualitative study that does explore women’s experiences of their cardiac symptoms focuses predominantly on the physical symptoms with only a brief discussion of the emotional symptoms (McSweeney, 1998).

From this review of the studies on women with CVD I found a lack of information on women’s experiences prior to receiving treatment for their cardiac symptoms. Through the exploration of women’s experiences prior to hospitalization
for their cardiac events health care professionals may be able to identify the factors that influence women's decision to seek treatment. When we can understand these factors we can try to work with women to help them receive better health care.

**Purpose**

The purpose of this study is to explore women's experiences prior to their hospitalization for an acute coronary syndrome to determine what influences their decision to seek treatment for their cardiac symptoms.

**Research Question**

With the intention of a focus on the issues related to the experiences of women with cardiac symptoms, the following research question is used in this study:

*How do women's interpretations of their experiences prior to hospitalization for an acute coronary syndrome influence their treatment-seeking behaviour?*

In order to answer the above question the following aspects of the women's experiences with acute coronary syndrome (ACS) are explored:

- What are women's symptoms with ACS?
• How do women understand their symptoms of ACS?
• What actions do women take when they experience their symptoms of ACS?
• Why do women take the actions that they do for their symptoms of ACS?
• What are the factors that influence women to take action for their symptoms of ACS?

Clarification of Terminology

In the following discussion a number of different terms related to CVD, such as acute myocardial infarction and unstable angina are used. This reflects the terminology that was in use at the time that many of the studies were conducted. For the purpose of this study, the term ‘acute coronary syndrome’ (ACS) will be used to encompass these earlier terms. The American Heart Association (1999) states that the term ‘acute coronary syndrome’ includes unstable angina, non-Q wave myocardial infarction, and acute Q-wave myocardial infarction to reflect the progressive nature of CVD. For the purpose of the following literature review, the original term used by the author will be maintained.

This thesis is presented in six chapters. This chapter included an overview of the issues related to cardiovascular
disease in women, the purpose of this study, and the research question that is used, as well as a statement of clarification to assist the reader to understand the varied terminology that is used in the research studies on CVD in women. Chapter Two includes a review of both research and non-research based literature on cardiovascular disease in women. Chapter Three provides an overview of the research methods that are used in this study. Chapter Four presents the findings from the interviews with the women who participated in this study, while Chapter Five includes a discussion of the most significant findings from those interviews. Finally, Chapter Six contains a discussion of the conclusions of this study and the implications for nursing practice.
CHAPTER TWO: REVIEW OF THE LITERATURE

The literature that is presented in this chapter was obtained through a number of electronic searches of both the CINAHL (Compendium of International Nursing and Allied Health Literature) and Medline databases. The initial literature searches that I conducted combined the key terms of 'cardiovascular disease' and 'women'. I completed more focused searches by combining one or both of these two initial terms with other terms including 'decision making', 'pre-hospital experience', 'qualitative', 'heart disease', and 'acute myocardial infarction'. I obtained a large volume of literature from these searches, and the literature that I present below was selected to provide a critical review of the literature that supports the need for a study exploring the pre-hospital experiences of women with cardiovascular disease.

I begin by exploring the differences in the occurrence and outcomes of CVD in men and women and the differences between men and women in the recognition and management of CVD. I then provide an overview of the literature examining delays in seeking treatment for cardiac symptoms. In the final section I review the literature on women’s experiences with CVD, and I identify the gaps in the literature that are
Gender Differences in the Occurrence and Outcomes of Cardiovascular Disease

Cardiovascular disease (CVD) is the leading cause of death for adult women in Canada (Heart and Stroke Foundation of Canada, 2000). In 1997, thirty-eight percent of deaths in women were a result of CVD (Heart and Stroke Foundation of Canada). Cardiovascular disease is the leading cause of hospital admission for women when pregnancy and childbirth are excluded (Heart and Stroke Foundation of Canada). The Heart and Stroke Foundation of Canada also indicates that, although women are older than men when they experience CVD and that men have a higher overall incidence of CVD than women, women have a higher mortality rate from CVD than men.

When the data for CVD in women in British Columbia are analyzed, it initially appears more optimistic than the national data. In 1997 the mortality rate for women with CVD in British Columbia was one of the two lowest mortality rates in Canada (Heart and Stroke Foundation of Canada, 2000). Unfortunately, when the data are reviewed further, significant regional differences within British Columbia become apparent. Between 1994 and 1998 the Fraser Valley
region, which includes Hope, Chilliwack, Abbotsford, Mission, and Agassiz-Harrison, showed a higher mortality rate for women with CVD than expected when compared to the provincial mortality rate for women with CVD (Heart and Stoke Foundation of B.C. & Yukon, 2000). The difference in the expected and actual mortality rate for women with CVD in the Fraser Valley during this time period is adjusted to account for differences related to age, and it is statistically significant when compared to the provincial mortality rate for women with CVD (Heart and Stoke Foundation of B.C. & Yukon). The mortality rate for men with CVD in the Fraser Valley region between 1994 and 1998 is also higher than the British Columbia average, but the difference is not statistically significant (Heart and Stroke Foundation of B.C. & Yukon). Even within this region where the mortality rate for both men and women is higher than the provincial average, women demonstrate a higher mortality rate than men. This difference in mortality rate may be due to the availability of health care services in the Fraser Valley or some other aspect of rural life.

The Heart and Stroke Foundation of B.C. & Yukon (2000) does not attempt to account for the different mortality rates of men and women with CVD, but many researchers do explore
this topic. A number of authors study the difference in outcomes for men and women who have experienced an acute myocardial infarction (AMI). In studies that use the short-term (up to 35 days) mortality rates after an AMI as the outcome, where age and other disease-related factors (such as diabetes and hypertension) are accounted for, researchers find conflicting results on the mortality rates between men and women. Kudenchuk et al. (1996), Moen et al. (1997), and Weaver et al. (1997) find significantly higher short-term mortality rates for women; Kober et al. (1996) and Maynard, Every, Martin, Kudenchuk, and Weaver (1997) find higher in-hospital mortality rates for women, but equal mortality rates for men and women after discharge; and Malacrida et al. (1998) find only small differences in the mortality rates of men and women at 35 days following the initial event. All of these authors note that, overall, the women in their studies are older than the men, which is consistent with the data from the Heart and Stroke Foundation of Canada (2000).

In an attempt to account for the conflicting results in the studies listed above, Vaccarino, Parsons, Every, Barron, and Krumholz (1999) analyze the data on 384,878 American men and women between 30 and 89 years of age who were enrolled in the National Registry of Myocardial Infarction (Two) between
1994 and 1998. These authors not only control for age and disease-related variables, they also compare the short-term mortality rate for the men and women in specific age groupings. By dividing the participants into smaller groups at five-year age intervals (i.e. 30-35 years, 35-40 years, etc) Vaccarino et al. find much greater short-term mortality rates for women under the age of 75 and that the mortality rates for women get higher as the women get younger. They note that the risk of death for women after an AMI increases 11.2% with every five-year decrease in age. They also note that the mortality rates for men and women equalize after the age of 75. These authors contend that the contradictory findings of the previous studies are due to age related differences among women, with younger women having a significantly greater, short-term risk of death after an AMI.

The preceding discussion suggests an increased risk of death for women, particularly younger women, with CVD immediately following an acute cardiac event. It is important to explore whether women who survive the initial event survive on a longer-term basis. Vaccarino et al. (1999) do not study the long-term mortality rate of either gender, but in the studies that did examine gender differences in long-term mortality rates (up to one year) following an AMI,
researchers demonstrate consistent findings for the women in their studies. Kober et al. (1997), Maynard et al. (1997), and Moen et al. (1997), comparing results from men and women, demonstrate equal or lower long-term mortality rates for women following an AMI, despite conflicting results regarding the short-term mortality rates. This suggests that if women with AMI can survive their initial cardiac event then they have as much or greater probability of long-term survival as men.

The discussion above indicates that women with CVD have a higher overall mortality rate than men, and that following an AMI women, particularly younger women, have higher, short-term mortality rates but equal or lower long-term mortality rates. Perhaps there are influences, other than those connected with age or the disease-related factors present in the above studies that account for the higher mortality rates for women with AMI.

Gender Differences in the Recognition and Management of Cardiovascular Disease

Researchers explore the issue of gender differences in the recognition and management of cardiovascular disease from a variety of viewpoints. Roger et al. (2000) evaluate the
care delivered to 2,271 men and women who present with clear symptoms of unstable angina to an emergency department in Minnesota between 1985 and 1992. These researchers discover that, after adjusting for baseline characteristics such as age, risk factor analysis, and co-existing medical conditions, cardiac procedures were used 24% more often for men than for women (Roger et al., 2000). These procedures include stress tests, echocardiography, and coronary angiography and angioplasty.

Kudenchuk et al. (1996), Maynard et al. (1997), and Weaver et al. (1996) in their studies on gender differences in the mortality rates after an AMI note that women are less likely to receive a variety of cardiac diagnostic and interventional procedures including coronary angiography and angioplasty, coronary artery bypass surgery, and thrombolytic therapy. Redberg (1998) supports this conclusion regarding gender difference in the use of cardiac diagnostic procedures and interventions, particularly coronary angiography, although this author notes that women are referred at an equal rate for coronary artery bypass surgery once they receive coronary angiography.

Green and Ruffin (1993) note a gender difference in the management of patients with a suspected AMI. Between 1988 and
1989, 93 patients in a community hospital in Michigan were evaluated with regard to the care they received for their cardiac symptoms. These authors note "physicians view women presenting with suspected acute myocardial infarction with less urgency than men presenting with similar symptoms" (p. 389).

The difference in the degree of aggressiveness in treating men and women with CVD is described in more recent literature. Lambrew et al. (1997), in their study of 1,755 patients, explore the reasons for delay in the delivery of thrombolytic therapy to patients in 42 American emergency departments enrolled in the National Registry for Myocardial Infarction. Thrombolytic therapy, the administration of clot-dissolving medication during an AMI, has become a hallmark of the emergency management of AMI's over the last two decades (GISSI, 1986), and its effectiveness decreases as the length of time to deliver it increases. Lambrew et al. find that health care professionals delay longer when deciding to provide thrombolytic therapy to women with AMI than they do to men. In addition, these authors find that health care professionals also delay longer when delivering the medication to women once the treatment decision had been made. It is unclear as to why this happens, but it does
suggest a need to educate health care professionals about the importance of identifying and appropriately treating women with AMI.

Barakat et al. (2000) link the difference in the treatment with adverse outcomes in women with AMI. These authors find that women are less likely to receive aspirin in the emergency department, have delays in receiving thrombolytic therapy, and are less likely to receive medications for secondary prevention when they are discharged from hospital. Barakat et al. state “the data suggest that the failure to treat women as vigorously as men made a significant contribution to their worse outcome” (p.740).

The findings regarding gender differences noted in the quantitative studies above are supported by a qualitative study that explores the experiences of 14 Canadian women who survived an AMI. Bensen et al. (1997) present their phenomenological study and outline four themes in the experiences of these women: validation, role expectations/role tensions, helps and hindrances to recovery, and perceived gender bias. In regard to the theme of perceived gender bias, Bensen et al. state “participants in this study felt they experienced differences from men in
assessment and treatment, prior to and following their MI” (p. 21).

The apparent difference in the treatment of women with CVD may be due, in part, to differences in the presenting symptoms of women when they seek treatment for CVD. Health care professionals may not recognize that a woman is experiencing a cardiac event if she does not present with the 'classic' picture of crushing left-sided chest pain that radiates down the arm. Hochman et al. (1999), in their review of the 12,142 study participants, note that women with acute coronary events are less likely to demonstrate ST elevation on their electrocardiogram. The presence of ST elevation is one of the criteria used to determine whether thrombolytic therapy will be administered. The less common occurrence of ST elevation in women could explain why they are less likely to receive thrombolytic therapy. Meischke, Larsen, and Eisenberg (1998) review the records of 4,497 patients in a Washington coronary care unit between 1991 and 1993. They find that women in this study reported more nausea and shortness of breath than the men.

Other authors also note differences in the symptoms experienced by women during an AMI. Penque et al. (1998), in their study of 51 women and 47 men with the diagnosis of AMI,
find that men and women do share common symptoms of fatigue, chest pain at rest, shortness of breath, and weakness, but that significantly more women experience loss of appetite, difficulty breathing at night, and back pain. These authors also identify that the women receive less aggressive treatment once their AMI is diagnosed. McSweeney (1998) conducted a naturalistic inquiry with 20 women to explore their evolving symptoms of AMI. This author finds that only 30% of the women in this study experienced severe pain with the most common symptoms in this group being breaking into a cold sweat, fatigue, and generalized chest discomfort.

Evidence supporting the differences in symptom presentation between men and women experiencing an AMI is now strong enough to be presented in lay publications. In a recent issue of *Hearts and Minds*, a publication from the Heart and Stroke Foundation of B.C. & Yukon (2001) that focuses on public education about CVD and information about the Foundation, the feature story is about a woman who recognized the early warning symptoms of an AMI. The author notes: "often, women’s symptoms are more vague than those experienced by men. For example, women aren’t likely to have pain in the chest radiating into the arms" (p.3).
Another consideration in the recognition and management of CVD in women is that women have different cardiovascular anatomy and physiology than men (Romeo, 1995). Smaller hearts and coronary arteries in relation to body surface area and different resting and exercise-induced cardiac physiology may account for the different symptom presentation that women have during an acute cardiac event. Romeo also comments that women tend to have more atypical chest pain than men. This author does not define what 'atypical' is.

A final consideration in the differences in the treatment and recognition of CVD in women is that women are less likely to be included in clinical drug trials than men (Lee, Alexander, Hammill, Pasquali, & Peterson, 2001). In a review of 593 randomized clinical trials (RCTs) published between 1966 and 1990 women were enrolled in only 20% of the studies. Between 1991 and 2000 the percentage increased to 25, but Lee et al. note that this is still unacceptable when one considers that women account for 43% of the population in the United States who experience an AMI. It is possible that with so few women being included in RCTs that health care professionals still view cardiovascular disease as a predominantly male disorder, and they may not be aware of the
benefits to women from the various interventions that are used in these studies.

Differences in the presenting symptoms of men and women with an acute cardiac event, different cardiac anatomy and physiology, and exclusion from RCTs are all significant factors that may result in a discrepancy between the management and recognition of CVD in women and men. In addition to these issues, there are also issues associated with the women who seek treatment for their cardiac symptoms that must be considered. This will be the focus of the following discussion.

**Delay in Seeking Treatment for Cardiac Symptoms**

With the advent of thrombolytic therapy for the treatment of AMI, health care professionals have begun emphasizing the importance of seeking treatment for the symptoms of an AMI as soon as possible. Early treatment with thrombolytic therapy, which is most effective when administered within four to six hours of the onset of symptoms of an AMI, is associated with significant improvements in the outcomes of individuals who are experiencing an AMI (GISSI, 1986). Due to the time-sensitive nature of the administration of thrombolytic therapy, a
phenomenon referred to as 'delay time' is becoming more prevalent in the cardiovascular literature. This term refers to the time interval from when a person starts to experience cardiac symptoms until they seek treatment for these symptoms. Some people take longer than others to seek treatment for their cardiac symptoms.

In an effort to reduce the time for people to receive treatment for an AMI, researchers explore the factors that influence people's decisions to seek treatment. Researchers explore delay time from a variety of perspectives. Meischke et al. (2000), in their study of 426 patients who reported to emergency departments with cardiac symptoms, find that patients who are educated about the correctness of their decision to seek treatment for their symptoms experience less embarrassment about their decision and are less likely to delay for similar symptoms in the future than those who do not receive education about their decision.

Johnson and King (1995) interview 65 patients who had experienced their first AMI regarding their expectations about the symptoms they thought they would have with this event and how those expectations compared to their actual symptoms. They find that 74% of the participants' expectations do not match their symptoms. These authors also
note that those whose expectations do not match with their experience have much longer delays in seeking treatment than those whose expectations do match their symptoms.

Leslie et al. (2000) and McKinley et al. (2000) also explore delays in seeking treatment for symptoms of an AMI. In both studies participants who delay the longest tend to attribute their symptoms to non-cardiac causes and minimize the seriousness of these symptoms. Leslie et al. also note that many participants are reluctant to utilize emergency services such as ambulances and tend to seek the care of their general practitioner rather than the emergency department. According to Leslie et al. this may be due, in part, to the participants not realizing the seriousness of their symptoms. McKinley et al., who compared treatment-seeking behaviour in people with an AMI in North America and Australia, find that North Americans tend to be older and have concerns about the consequences of seeking care. The authors discuss the possibility that the concerns are due to the financial burden of emergency care in the United States. Australians who have longer delays in seeking treatment tend to have lower educational levels, a history of hypertension, and a feeling of embarrassment about seeking help.
Dracup, Moser, Eisenberg, Meischke, Alonzo, and Braslow (1995) provide a synthesis of the research available to date regarding the causes of delay for symptoms of an AMI. They list a number of factors that are associated with longer delay times: older age; low socio-economic status; history of angina or diabetes; the presence of a family member when symptoms occurred; self treatment; failure to perceive or recognize symptoms as cardiac in origin; consultation with a physician (outside the emergency department); low somatic or emotional awareness; and being female. It is worth noting that in a later study Dracup and Moser (1997) do not associate gender with a longer delay in seeking treatment for symptoms of an AMI. However other researchers have documented such delays. While exploring other topics such as gender differences in the symptoms associated with AMI (Meischke et al., 1998), delays in treatment for the symptoms of an AMI (Lambrew et al., 1997) and adverse outcomes in women with AMI (Barakat et al., 2000; Weaver et al., 1996), researchers find that women delay longer than men when seeking treatment for cardiac symptoms. Van Tiel, Vliet and Moerman (1998) in their study on sex differences in illness beliefs and behaviours also find that women delay longer in seeking treatment for CVD symptoms than men.
From all of these research findings, it is apparent that there are a variety of factors that influence a person’s decision to seek treatment for acute cardiac symptoms, and that any or all of these factors can impact on the time it takes to seek treatment for these symptoms. Ruston, Clayton and Calnan (1998) attempt to clarify the complex interaction of these factors. They use qualitative, semi-structured interviews to explore the actions of 43 patients' actions during their cardiac event, and they identify that the decision-making process occurs in phases. These phases are warning, interpretation, preliminary action, re-evaluation, and final action phases, and the phases vary in time and are influenced by a number of variables. The most significant variable influencing the length of each phase is the person’s ability to recognize the symptoms as cardiac in origin. Ruston et al. note that the less likely a person is to attribute their symptoms to a cardiac event, the longer the phases, and the longer the delay to seek treatment.

Scherck (1997) uses a grounded theory approach to explore the process by which people determine that they are experiencing an AMI. This author confirms that the process of determining illness and recognizing the need for treatment occurs in phases, and notes that participants who seek
treatment the soonest are the ones who experience the most disruptive and identifiable symptoms. If symptoms are vague, mild, or easily attributed to another cause then the decision to seek treatment is delayed.

The preceding two studies included both men and women. With the inescapable fact that women delay longer than men when seeking treatment for symptoms of an acute cardiac event it is worth reviewing studies that examine the specific way in which women reach their decisions to seek treatment for their cardiac symptoms. I located two such studies. The first study is by Dempsey, Dracup, and Moser (1995) who use a grounded theory method to explore the process by which women make the decision to seek treatment for symptoms of an AMI. Dempsey et al. interview sixteen women with the diagnosis of an AMI, and the researchers report that the process by which these women decide to seek treatment involves two core processes: maintaining control and relinquishing control. The longer that the women attempt to maintain control over their symptoms the longer they delay in seeking treatment. Dempsey et al. note that within the two core categories are five subcategories: symptom awareness; perceived insignificance; self-treatment; perceived threat, and lay consultation. The authors observe that the lower the symptom awareness and
perceived threat associated with the symptoms and the greater the perceived insignificance of the symptoms, the amount of time spent at self-treatment, and in lay consultation, the greater the delay in seeking treatment.

The second study is by Miller (2002). Miller interviews 10 women with CVD, two women at risk for CVD, three advanced nurse practitioners, and one cardiologist to understand factors that influence how women seek care for their cardiac symptoms. This author uses a grounded theory and finds that women engage in a cue sensitivity process as they make their decisions to seek treatment for their cardiac symptoms. Miller describes this process as having three stages. The first stage is cue apprehension where the woman evaluates whether her symptoms require attention based on her previous knowledge and experience with similar symptoms, the intensity and persistence of her symptoms, and feedback from both lay people and health care professionals. The second stage is cue assimilation that begins when the woman decides the symptoms cannot be discounted, and involves the use of self-treatment strategies based on the woman's beliefs about the cause of the symptoms. During this phase the woman may seek further consultation with lay people or health care professionals. The final stage is medical consultation, and it occurs when
the woman can no longer discount the significance of her symptoms and her self-treatment measures are ineffective. Miller notes "the central category in this study, refers to the process of apprehending, appraising, sorting, and verifying the embodied cues for cardiac disease as they present themselves to women and healthcare professionals" (p. 87), and acknowledges the importance of the interplay between the woman experiencing the symptoms and the health care professionals that she presents her symptoms to.

It is possible that, in addition to the processes that woman and health care professionals engage in when determining the significance of a woman's cardiac symptoms, there are other factors that may increase the delay time for women seeking treatment for their cardiac symptoms. One of these factors may be that health care professionals do not always recognize CVD in women as easily as they do in men. I did not locate any studies that explored the knowledge of health care professionals regarding CVD in women. This topic is not the focus the study presented in this thesis, but I discuss it in Chapter Six in my recommendations for future research.

Another factor that may increase the delay time for women seeking treatment for their cardiac symptoms is a lack
of knowledge on the part of study participants regarding the signs and symptoms and the treatment of CVD. If people, particularly women who may experience less obvious symptoms than men, are not adequately informed about the signs and symptoms and treatment options of CVD there is a chance that they will delay seeking treatment. In 1997 the American Heart Association publishes a survey of 1,000 women and notes that the majority of women interviewed do not recognize CVD as the leading cause of death in women, that only one-third of the respondents consider themselves well-informed about CVD, and that over half of the women do not recognize the differences in CVD between men and women and consider CVD to be more of a male health problem.

It would seem that many of the delays associated with seeking treatment for CVD could be solved through the use of public education campaigns. A recent study called REACT, the Rapid Early Action for Coronary Treatment trial, attempts to demonstrate a reduction in the time from the onset of an individual's cardiac symptoms to the time he/she reports to hospital for treatment through the use of a large public education campaign (Luepker et al., 2000). The results are disappointing. This study takes place in 20 US cities (10 matched pairs) in 10 states between 1995 and 1997, and
involves an 18 month, intensive public education program that "targeted mass media, community organizations, and professional, public, and patient education to increase appropriate patient actions for AMI symptoms" (Luepker et al., p. 60). Comparisons between the intervention and control cities reveal that, although the general level of knowledge regarding AMI is increased in the intervention cities, there is no significant difference in the delay times for seeking treatment for the symptoms of AMI between the two groups. The authors speculate that there may have been fault with the educational messages or the delivery of these messages to the intervention population. Luepker et al. suggest that a more intense educational campaign over a longer period of time may result in a reduction in delay time for individuals seeking treatment for an AMI.

Obviously people's experiences with cardiac symptoms are complex phenomena that cannot be addressed through education alone. An exploration of individual's experiences with CVD may provide more insight into the factors influencing women's decisions to seek treatment for their cardiac symptoms.
Women's Experiences with Cardiovascular Disease

The available research on women's experiences with CVD is limited. One of the reasons for this is that the majority of research involving women with CVD is conducted using quantitative methods. Although researchers using quantitative methods provide valuable information about the occurrences, trends, and associated factors involved with women and CVD, a qualitative method is needed to explore the nature of the experience for women. As noted by Morse and Field (1995) "qualitative inquiry usually answers questions pertaining to what the experience is like, that is, what it is like to have a particular illness, have surgery, or be in a car accident" (p.16).

Most of the qualitative studies that investigate the topic of women's experiences with CVD focus on topics other than the pre-hospital experiences of woman. Hawthorne (1993), and King and Jensen (1994) explore women's experiences of cardiac surgery. Hawthorne interviews 10 women in order to explore their experiences while recovering from cardiac surgery and then compares the findings to the findings from studies that explore men's experiences of recovery from cardiac surgery. Hawthorne identifies the following seven themes:
“Women understate and minimize the impact of the cardiac surgical experience” (p. 229).

“Gender bias was strikingly apparent in the evidence of delayed recognition of symptoms of coronary disease in these women” (p. 231).

“Women’s interactions with caregivers reflect traditional sex-role and status differences” (p. 233).

“A major task during the period of recovery is the remapping of relationships so that patient needs are met and family functions continue” (p. 234).

“Women and men associate different meanings and feelings with the surgical incision and scarring” (p. 236).

“Women recovering from coronary bypass surgery report greater mediastinal incisional discomfort than men” (p. 238).

“Women attend to different signs and symptoms than men as cues to activity resumption during recovery and rehabilitation” (p. 239).

King and Jensen (1994) focused on the surgical experience itself when interviewing 10 women who have undergone cardiac surgery. These authors describe the process of cardiac surgery for the participants as one of “preserving the self” (p. 99). King and Jensen identify five stages in the
process of preserving the self during cardiac surgery: waiting, getting there, surviving, being there, and moving on. They also discuss how the women work to preserve their sense of self as they go through these five stages.

Other authors explore the needs and experiences of women following an acute cardiac event other than cardiac surgery. Johnson and Morse (1990) do not interview women exclusively, but in their study with seven men and seven women who have experienced an AMI they explore the process of adjusting to life after an AMI. The authors find that participants struggle to regain personal control following an AMI. Johnson and Morse identify four stages in this process: defending against a loss of control, coming to terms with the AMI, re-establishing a sense of control, and adjusting to life again after their AMI.

LaCharity (1997) interviews 12 post-menopausal women and explores how these women were coping with the diagnosis of coronary artery disease (CAD). This author finds four major themes: experiencing the effects of the diagnosis of CAD, managing lifestyle changes, identifying support systems, and adapting and coping.

Bensen et al. (1997) conduct focus groups with 14 women who have experienced their first AMI. They outline four
themes from these focus groups: validation of their experience, perceived gender bias prior to, during, and after their AMI, role expectations and tensions, and helps and hindrances to recovery.

Murray et al. (2000) also conduct focus groups with women who have experienced an acute cardiac event. These authors find that women both over and under the age of 60 had difficulties identifying their symptoms as cardiac in origin, but that following their cardiac event the women had different needs based on age. The participants who were older than 60 years of age are concerned mostly with maintaining their functional abilities and focusing on their physical recovery, whereas the younger participants are concerned mostly with the emotional aspects of recovery.

Helpard & Meagher-Stewart (1998) focus on the experiences of women over the age of 60 who are adjusting to life following an acute exacerbation of coronary artery disease. The authors of this study discuss the women’s experiences as they redefine themselves following their hospitalization. Helpard and Meagher-Stewart describe the process the women go through as “finding a voice” (p. 15) where the women are “given the opportunity to be heard, to be listened to, and to be understood” (p. 15)
McSweeney (1998) presents a qualitative study that did explore women's cardiac experiences prior to hospitalization, but the findings from this study focus predominantly on physical symptoms. McSweeney interviews 20 women and provides a detailed overview of the physical symptoms that participants experienced. The author categorizes these symptoms into 10 categories including one for emotions.

Although the literature presented in the above section on women's experiences with CVD provides valuable insight into the varied experiences of the study participants, there is limited information on women's pre-hospital experiences. Also, when the entire review of the literature is examined a number of issues become evident: CVD is a significant health concern for women; the majority of the research involving women with CVD uses quantitative methods and is conducted in large urban centres with women who have a diagnosis of AMI; women's experiences with their cardiac events are different from the experiences of men; women delay longer than men when seeking treatment for cardiac symptoms; the decision to seek treatment for cardiac symptoms is a multi-faceted, little understood process that may be influenced by an awareness of the significance of the symptoms experienced; but education regarding the significance of these symptoms does not appear
to improve treatment delay times. This leads to an obvious research question: How do women’s interpretations of their experiences prior to hospitalization for an acute coronary syndrome influence their treatment-seeking behaviour?

In this thesis I address this question by exploring women’s pre-hospital experiences with their symptoms of cardiac disease. A better understanding of these experiences will provide insight into the decisions that women make about seeking treatment for their cardiac symptoms.

In this chapter, I have provided a focused overview of the literature pertaining to women with CVD. This literature review provides the background for the need for the study that is described in this thesis. In the following chapter I provide an overview of the research methods that are used in this study.
CHAPTER THREE: METHODS

Research Design

This study involves women in a rural setting who have a variety of cardiac diagnoses, including AMI and stable and unstable angina. Women with diagnoses other than AMI are included in this study because, at the time they experience their cardiac symptoms, they do not necessarily have a diagnosis. It is possible that women with cardiac symptoms share similar experiences even though their eventual diagnoses may be different. For example, a woman with AMI may have a similar pre-hospital experience as a woman with unstable angina although their diagnoses may differ once they are admitted to hospital.

A qualitative research design is best used when the focus of a study is to explore the experiences of the study participants (Morse & Field, 1995). The specific method I use in this study is an interpretive descriptive method. Thorne, Kirkham, and MacDonald-Emes (1997) provide an argument for the use of the interpretive descriptive method for nurse researchers who wish to explore the experience of human health and illness from a nursing perspective. These authors recognize the importance of the knowledge gained by researchers who used traditional, non-nursing, qualitative
research methodologies such as ethnography, grounded theory, and phenomenology in their classic forms, but they contend that these same researchers often had to blend components of these methodologies to answer the questions that are of interest to the nursing profession.

Thorne et al. (1997) note that one of the foundations of nursing knowledge is that there are shared aspects within an illness experience even though each person lives that illness from his/her own perspective within the context of his/her unique life circumstances. They argue that the interpretive descriptive research approach can be used to explore the uniqueness of each person’s health or illness experience while identifying the aspects of the phenomenon that are common to everyone who lives through it. The interpretive descriptive research approach "is grounded in an interpretive orientation that acknowledges the constructed and contextual nature of much of the health-illness experience, yet also allows for shared realities" (Thorne et al., 1997, p.172).

The interpretive descriptive method is a form of naturalistic inquiry (Streubert & Carpenter, 1995). Naturalistic inquiry is a methodology that is guided by two principles: investigations of phenomena take place in the setting where the phenomena occur and research outcomes are
derived inductively (Streubert & Carpenter). Streubert and Carpenter emphasize the importance of researching a phenomenon in its natural setting because the context in which a phenomenon occurs is central to an understanding of its nature. They note: “phenomena are inextricably intertwined with their context and can only be understood within that context” (p. 248). They also note that if a phenomenon cannot be observed in its natural setting then it can be investigated by interviewing people who have experienced the phenomenon. Interviews with women who have experienced ACS are the data collection method that I use in this study.

The other guiding principle for naturalistic inquiry is the use of inductive inquiry. The use of an inductive method such as the interpretive descriptive method allows the researcher to find the common themes within an experience rather than exploring the experience with a predetermined set of concepts as occurs with a deductive method (Morse & Field, 1995). The data analysis methods that I describe later in this thesis ensure that the resultant themes are firmly grounded in the data itself.

The previous review of the literature related to women with CVD reveals that although women’s experiences have
common attributes, such as symptom presentation and delays in seeking treatment, there are aspects of this multidimensional phenomenon that can only be understood by exploring each woman's personal experience of her cardiac symptoms. An interpretive descriptive research approach implemented as described by Thorne et al. (1997) is the appropriate choice to investigate the "constructed and contextual nature’" (p. 172) of women’s experiences with their cardiac symptoms.

**Recruitment Procedures**

I recruited participants for this study from the Intensive Care and Telemetry Units of Chilliwack General Hospital and MSA Hospital in the eastern Fraser Valley region of British Columbia. This location was selected to provide a rural context for the study. As discussed in the literature review chapter of this thesis, the majority of studies involving women with CVD are conducted in urban centres.

The eastern Fraser Valley is an area in southwestern British Columbia that, at the time that the study in this thesis was initiated, was served by the Fraser Valley Health Region for its health care services. The Fraser Valley Health Region is presently a part of the larger Fraser Health Authority.
The Fraser Valley Health Region encompassed four acute care hospitals: MSA Hospital in Abbotsford, Chilliwack General Hospital in Chilliwack, Mission Memorial Hospital in Mission, and Fraser Canyon Hospital in Hope. The hospitals in the eastern Fraser Valley are community hospitals and do not provide invasive cardiac diagnostics or interventions, such as cardiac angiography, angioplasty, or cardiac surgery. Women who require these services are transferred to a tertiary care centre in New Westminster or Vancouver.

Only two of the hospitals in the eastern Fraser Valley, Chilliwack General Hospital in Chilliwack and MSA Hospital in Abbotsford, have Intensive Care and Telemetry Units. Women who experience an acute cardiac event in either of the other two acute care hospitals are transferred to Chilliwack or Abbotsford for further treatment. In this way, women who are recruited from the Intensive Care and Telemetry Units in Chilliwack and Abbotsford have the potential to be from any community in the eastern Fraser Valley.

The eight women who participated in this study represent four different communities. There are no participants in this study from the Hope and Agassiz/Harrison areas, the most eastern portions of the Fraser Valley.
Women who I considered for inclusion in this study were over the age of 18, had been hospitalized with a diagnosis of acute coronary syndrome (acute Q-wave or non Q-wave MI or unstable angina), understood English, and lived in the area served by these facilities. I obtained the names of 12 women from the four nursing units where recruitment took place, but I interviewed only eight women. Women who were initially interested in participating in this study, but declined once I contacted them, all cited concern for their health as the reason for not participating in this study. One woman was recovering from cardiac surgery, two were recovering from an AMI, and one was waiting for further intervention for her cardiac symptoms. At the end of the study I contacted all of these women and thanked for their interest in the study.

Unit staff in the recruitment hospitals gave letters of introduction to potential participants when the women were being discharged from hospital. By having the unit staff give the women the letter of introduction at the time of discharge, I tried to ensure that the women were as close as possible to the time of their pre-hospital experiences while being out of the most acute phase of their illness. The unit staff also asked potential participants who voiced an interest in the study if their names and telephone numbers
could be placed on a confidential list that I could use to contact participants by telephone. This ensured that participants had the opportunity to participate in the study if they lost or forgot about the letter of introduction.

I scheduled interviews with interested participants as soon as was convenient for both the participant and myself. See appendix A and appendix B for samples of the letter of introduction and consent forms. The content for any telephone contact, after the initial introduction by a hospital nurse, had the same content as the letter of introduction in Appendix A.

**Sampling Method**

Thorne et al. (1997) advocate the use of theoretical sampling for sample selection in studies taking direction from the interpretive descriptive method. Theoretical sampling, a component of grounded theory, is based on the premise that the size of the sample is not predetermined, but rather, is determined by the results of ongoing data analysis (Morse and Field, 1995). As themes are developed during data analysis, participants are interviewed to expand on the information already obtained. Subsequent interviews may confirm or conflict with developing themes, and will continue
until no new themes are identified. This process is referred to as theoretical or informational redundancy and it determines the sample size (Sandelowski, 1995).

In this study eight women were interviewed. As the first few interview tapes were reviewed, I identified broad categories of data that I then explored with participants in subsequent interviews. This process ensured that I met the criteria for theoretical sampling in this study. I discuss these categories in the section on data analysis, and I present them in detail in Chapter Four of this thesis.

**Ethical Considerations**

The University of British Columbia Ethics Committee reviewed this study for approval prior to my recruiting of any participants. A copy of the ethics approval form is found in Appendix E of this thesis. I also obtained approval to conduct the study from the associated health care facilities where participant recruitment took place. A copy of this approval letter is found in Appendix F of this thesis.

At the start of each interview I explained the consent form each participant, and participants received a copy once they had signed it. See Appendix B for a sample of the consent form. I also reminded participants that participation
in the study was completely voluntary and would in no way affect any present or future health care they may receive. Robley (1995), in her article on ethics in qualitative research, notes that the needs of the study participants always supersede the needs of the researcher. To ensure that this occurred, I reminded participants that they could withdraw from the study at any time, and they could choose not to answer any specific questions during the interview. I also encouraged participants to notify me if they found the interview in any way upsetting, tiring, or stressful. One participant was experiencing bronchitis during her interview, and another had a hoarse voice from requiring large amounts of nitroglycerin while waiting for further cardiac intervention. I kept these two interviews short to minimize stress to the participants. No other participants experienced any physical or emotional stress during the interviews. I also reminded participants that the interviews are confidential and that their identities will not be known to anyone but me.

I kept the identities of participants confidential through the use of anonymous codes that I assigned to their taped interviews and to the written interview transcripts. I kept all information pertaining to this study, including
Data Collection

I interviewed participants who consented to be involved in this study on at least one occasion. I conducted second interviews with participants who were interviewed early in the study to clarify questions that arose during data analysis. The first interview with each participant was the longest and included a discussion of the participant's pre-hospital experience. The first interviews ranged in length from 40 minutes to one hour and 20 minutes. The second interviews were much shorter and were designed to provide each participant with a brief overview of the study findings to that point. Also, during the second interview I was able to ask the participants who were interviewed at the beginning of the study two additional questions that evolved during the data analysis process. These questions were:

- When you think back to what you experienced prior to being admitted to hospital what would you have done
differently?

❖ How has this experience changed things for you?

For participants who were interviewed later in the study, these questions were part of their initial interview.

The second interviews ranged in length from 25 minutes to one hour and five minutes. I interviewed participants in their homes to increase their comfort with the interview and to limit the amount of travelling they had to do.

I tape-recorded the interviews, and I used an unstructured format that included a number of open-ended interview questions and probing questions to guide the interviews. See Appendix C for examples of the questions that were used. I also collected basic demographic data from each participant. I used this information during data analysis to determine whether the themes that I developed were associated with the demographic data in any way. See Appendix D for a sample of the demographic data.

I made field notes immediately following each participant interview. Morse and Field (1995) note that field notes supplement the interview data and include not only the researcher’s objective observations about the interview, but also feelings and thoughts, and interpretations about the interview. In this study my field notes also helped to
provide information when participants made comments after the
tape recorder had been shut off and when I lost part of the
first participant's interview due to large amounts of static
on the tape.

Data Analysis

In this study data analysis occurred concurrently with
data collection. As I reviewed the initial interview data
significant aspects of the women's experiences became
apparent. Categories of data that I identified during data
analysis include:

- Physical symptoms
  - Initial, often unrecognized and/or misdiagnosed
    physical symptoms
  - Physical symptoms just prior to hospital admission
- Emotional response to physical symptoms
  - Emotional response to initial, often unrecognized
    and/or misdiagnosed physical symptoms
  - Emotional response to physical symptoms just prior to
    hospital admission
- Previous experience with cardiac symptoms
- Interactions with health care professionals
- Expectation of cardiac symptoms
• Response of family and/or friends

• Measures to cope with symptoms
  o Measures to cope with initial, often unrecognized and/or misdiagnosed physical symptoms
  o Measures to cope with physical symptoms just prior to hospital admission

• Identification of personal cardiac risk

I define these categories in Chapter Four where I present the findings from the interviews with the participants.

As I uncovered these categories during data analysis they became part of the interviews with new participants. In this way, analysis of the data obtained during initial interviews provided guidance for the structure of subsequent interviews. This is congruent with the process of theoretical sampling that I presented in the section on sample size.

Thorne et al. (1997) advocate the use of inductive analysis when analyzing the data in an interpretive descriptive study. In this study, I used thematic analysis to analyze the interview data. Thematic analysis is an inductive method of data analysis that "involves the search for and the identification of common threads that extend throughout an entire interview or set of interviews" (Morse and Field,
1995, p. 139). I outline the processes that I used in this study to identify these themes below.

Morse and Field (1995) identify four cognitive processes that are essential for qualitative data analysis, and these processes are common to all types of data analysis including thematic analysis. Thorne et al. (1997) and Morse and Field (1995) believe that the researcher must review the data a number of times before beginning the process of sorting and coding it into common themes. Morse and Field (1995) identify this intense data review as the process of comprehending, the first of the four cognitive processes in qualitative data analysis. During this process the researcher begins to understand what is going on in the interviews and starts to make sense of what the participants are saying.

During the process of comprehending for this study a medical transcriptionist transcribed the data from the audiotapes, and I reviewed the transcripts while listening to the tapes to identify any omissions or errors on the written transcripts. While I listened to the tapes I also was able to consider the written transcript within the context of the interview. I made notes on the transcripts of any emotion or voice inflections that are audible on the tapes. I also reviewed the field notes to add further insight in to the
content of the interviews. During these activities I searched the data for themes or categories that describe the participants' experiences. Once I identified a theme or category I gave it a descriptive code, and I linked the codes together through further analysis to provide an overview of the women's experience with their cardiac symptoms and to determine the factors that appear to be influential in their decision to seek care for their cardiac symptoms.

The next process in data analysis identified by Morse and Field (1995) is synthesizing. Synthesis occurs when the researcher is able to bring the commonalities of the participants' experiences together and provide "composite descriptions of how people act or are able to relate or respond" (p. 127). After I reviewed each interview and I identified the underlying themes from it, I reviewed the themes in the context of the findings of all the other interview data. In this way I was able to find the common threads among the participants' experiences. It was during this process of synthesis that I developed the concept of two different paths to eventual cardiac diagnosis and hospital admission for the participants in this study. By comparing and contrasting the unique experiences of each of the participants to that of the other participants I identified
these two broader divisions for the participants' experiences. I describe the different paths further in Chapter Five where I discuss the findings of this study.

The third process identified by Morse and Field (1995) is theorizing. During the process of theorizing, the researcher searches for a model or theory that best explains the findings in the data. Morse and Field (1995) recommend that the researcher use a number of strategies to complete this task including identifying the beliefs and values in the data, examining the data in the context of similar settings, and through the use of theoretical sampling where themes from one interview are explored in subsequent interviews to either support or refute their validity. In this study I used theoretical sampling, and I discuss it in the section on sample size. Also, I explore the themes that I identified as a result of the data analysis in the context of the literature relating to women's experiences with CVD. This links the findings from this study with the larger body of knowledge on this topic. I present the process of theorizing in Chapter Five of this thesis.

The final process of data analysis identified by Morse and Field (1995) is recontextualizing. During this process the researcher identifies the implications of the study
findings in relation to the larger body of nursing knowledge. The researcher makes links between the current study and the "published work of other researchers and established theory" (p. 130). In Chapter Six of this thesis I discuss the implications of the study findings for health care professionals who work with women with CVD, and I discuss the study findings in the context of the larger issues related to women's health.

Thorne et al. (1997) support the three processes of synthesizing, theorizing, and recontextualizing in their discussion of data analysis for the interpretive descriptive research method. They note "interpretive description in nursing requires that nurse researchers come to know the cases intimately, abstract relevant common themes from within these individual cases, and produce a species of knowledge that will itself be applied back to individual cases" (p. 175). I believe that the steps I have described above for the data analysis process in this study do just that.

Rigor

The issue of rigor relates to how accurately the data collected during the study and the interpretation of this data by the researcher reflect the actual phenomenon being
studied (Morse & Field, 1995). Morse and Field (1995) and Sandelowski (1986) acknowledge the difficulties associated with applying traditional quantitative measures for reliability and validity to qualitative studies, but they identify steps that qualitative researchers can take to ensure rigor within their studies. Both authors endorse the use of clear documentation of the decision-making used by the researcher in the selection of participants, data collection, and data analysis. Sandelowski refers to this as auditability, and Morse and Field refer to it as an audit trail. In this study I have kept notes of my data analysis process that outline the decisions that I made during the study. Select members of my thesis committee also reviewed my data analysis processes.

Sandelowski (1986) and Morse and Field (1995) also encourage qualitative researchers to confirm their data analysis with study participants to ensure that it accurately reflects their experiences. In this study, I accomplished this during interviews when participants confirmed or denied emerging themes from the data analysis of initial interviews. Also, in subsequent interviews I discussed my analysis of the interview data with participants to determine whether it was a correct interpretation of their experiences.
In this chapter I have presented the research methodology and the research methods that were used in this study. Also, I provided descriptions of the data analysis processes that I used to interpret the study findings. In the next chapter I present the findings from the participants' interviews.
CHAPTER FOUR: FINDINGS

In this chapter, I provide an overview of the study participants as a group based on the data gathered from the questions asked during each interview. This includes the close-ended questions regarding demographics that I asked at the beginning of each interview and the open-ended questions that comprised the remainder of each interview.

In Chapter Five I describe the participants in two different ways based on my analysis of the interview data: those who experienced a clear path to their cardiac diagnosis and hospital admission, and those who experienced an unclear path to their cardiac diagnosis and hospital admission. I describe the clear and unclear paths at the beginning of Chapter Five of this thesis. In Chapter Five I also discuss my decision to interpret the interview data in this manner within the context of the current literature on the subject of women's experiences with CVD.

Demographic Data

The questions that I used to obtain the demographic data I present below are outlined in Appendix D of this thesis. The participants in this study were between 44 and 78 years of age at the time of their interviews. The mean age of
the group was 62.75 years and the median age was 61.5 years. Five of the participants were married, two participants were divorced, and one participant was widowed at the time of their interviews. I did not interview any of the participants' husbands, but I did meet each of them, and they appeared to be in generally good health. All of the spouses were older than the participants. This could have implications for whether the older spouse was dependent on a participant for care needs. This is discussed below.

All of the participants have had children, and none of the participants had any of their children living at home at the time of the interview. One participant identified an elderly parent as a dependent, but her concern for her parent was not presented in her interview as an impediment to her seeking treatment for her cardiac symptoms. None of the participants identified their spouse as being dependent on them for care.

Another participant did not identify it as such with specific questioning regarding dependents, but it became apparent later in her interview that her pet was a significant influence on her decision to seek treatment for her symptoms:

Nobody knew of course that I was in the hospital,
nobody knew the dog was home alone, loose. And so that was another factor why I didn’t want to go back (to the hospital), and so by the time I went back, finally, it was past midnight and I was apparently cyanotic.

For this woman the needs of her pet were an important consideration when she was deciding whether to return to the hospital.

Three of the participants were employed at the time of their interview, and three were retired. Two of the participants had never worked outside of the home. None of the participants who were employed identified their employment as a consideration in their decision to seek medical attention.

All of the participants had been in the hospital previously for a variety of reasons including childbirth, and gynecological, gastrointestinal, and orthopedic procedures. Three of the participants had previously been in hospital for cardiac reasons: one for coronary artery bypass surgery, one for valve replacement, and one for a previous AMI.

Three of the participants were told that they had an AMI during their recent hospitalization; four were told that they had angina; and one participant was still unsure whether or not she had had an AMI at the time of the interview. None of
the participants had cardiac surgery during their most recent admission but six had undergone angioplasty.

**Category Definition and Interview Findings**

In the next section of this chapter I outline the categories that I identified during the data analysis process. These categories represent the aspects of the participants' experiences that impacted the participants' decisions to seek medical treatment for their cardiac symptoms. I also provide a definition for each category.

**Physical symptoms**

This category includes all of the bodily sensations that the participants experienced with their cardiac event. During data analysis I discovered that there are two distinct types of physical symptoms: initial, often unrecognized and/or undiagnosed physical symptoms and physical symptoms that occurred immediately prior to hospital admission.

The initial, often unrecognized and/or undiagnosed physical symptoms were more vague and less urgent than the physical symptoms immediately prior to hospital admission, and were often attributed to non-cardiac causes by both participants and some health care professionals. These symptoms are varied and include fatigue, mild shortness of breath, back pain, esophageal pain, indigestion, hearing
loss, tightening of the neck or throat, and chest pressure. One participant described her symptoms this way:

I had been mentioning to my doctor for quite some time, probably nine months or a year anyway, that every once in a while, I would get this feeling like I have got almost like a golf ball sitting in my esophagus and as I realized it’s there, it feels as if it’s trying to move upwards in the esophagus, but of course, there is not enough room for it and the further up it goes, the more uncomfortable it gets, to the point where I will have pain, even in my jaw and now, of course, since having had the heart attack and describing that to ..., the cardiologist, ..., he felt that that could have been angina that I was experiencing.

Another described her initial symptoms this way: "...I am walking on an incline, I get these, as if somebody is closing my throat, no chest pain nothing else." And another: "About a month and a half ago, I started having pain under my right arm, underneath there. I just thought it was that I had lifted something heavy".

The symptoms that participants experienced immediately prior to hospital admission were more severe and were the reason that participants sought medical treatment. These
symptoms were also less varied than the participant’s initial symptoms. These symptoms include chest pain, with or without pain in one or both arms or in to the back, that often woke participants up during the night or early morning, extreme shortness of breath to the point of feeling suffocated, and extreme dizziness and fatigue. It is interesting to note that the three participants who reported arm pain had it predominantly in their right arm as opposed to the classic left sided arm pain that is frequently associated with AMI.

One participant stated: “But I feel like I am going to pass out...I feel like I am going to faint...I felt like all of my body was starting to shut down.” Another described it this way:

> Not being able to breathe and then the pain through here was so bad, and then I always remember them saying that if you are having a heart attack, it hits your arm and my left arm was so bad and so I figured, this must be it.

The urgency of the participants’ pre-admission symptoms is obvious, and was associated with intense emotional responses. These are described below.
Emotional response to physical symptoms

These symptoms include anything non-physical that the participants experienced during their ACS. In a similar fashion to the section above on physical symptoms, I have identified two types of emotional responses: those that occurred in relation to initial, often unrecognized and/or undiagnosed physical symptoms; and those that occurred in relation to physical symptoms just prior to hospital admission.

The emotional responses to initial, often unrecognized and/or undiagnosed physical symptoms, were as varied as the physical symptoms and include uncertainty, frustration, lack of concern, depression, and worry that the physical symptoms were just in the participant’s imagination. When discussing her feelings about her initial physical symptoms of her AMI one participant stated: “I don’t know if its muscle twinges or what it is, but we just kind of sloughed it off. You know, you feel like you’re, everything seems so blown out of proportion when something happens.” I asked her: “What do you mean by that?” She replied: “Well, I am feeling that I am just imagining that or so I just kind of push it aside.”

Other participants stated similar emotional responses to their unrecognized or undiagnosed symptoms:
Well, sometimes, you know, you kind of think well, my gosh, am I imaging all this, you know, or you need that bit of reassurance talking to a friend or to your husband and saying, oh my God, it can't be all in my head, you know.

Another participant voiced similar feelings: "They say you've got angina, but do I really, or is it stress, am I just just feeling insecure because of the family history?"

Participants would also attribute these initial symptoms to non-cardiac causes such as muscle strain, stress, or indigestion, or would minimize their symptoms:

...up to just recently, I have been tired and I thought, oh well, it's just something that caused it and I could not figure out why, why was I so tired and why I was really puffing when I would walk a few stairs and but, even then, I didn't think anything about it...

Another participant stated: "Ah just twinges in my chest and it felt like I had a lot of indigestion, but I would take something for it and it would go away, so I thought that's what it was..." And a third: "I just thought it was part of my back and I have some problem with that".

In contrast to the emotional responses to initial, often unrecognized or undiagnosed physical symptoms, the emotional
responses to physical symptoms just prior to hospital admission were dominated by a feeling of fear that was identified by most of the participants. Anxiety was also reported and was described, as a feeling that something was wrong even when a participant could not identify exactly what they thought was wrong.

Participants described these feelings in similar ways: “I was anxious, I know that. I didn’t have a clue what was going on, I just knew that something was very wrong...sort of a vague fear.” Another stated: “I felt very scared and I realized it must be my heart that is giving me problems.” A third participant had similar feelings: “…so I thought I am just not going to make it, you know. I panicked because it was something that was really disturbing me...” This strong emotional response combined with an increased severity of symptoms appears to be a motivating factor for all participants to seek medical attention.

**Previous experience with cardiac symptoms**

During the interviews I asked participants whether they had been admitted to hospital prior to their hospital admission for their ACS. The data from this question are presented above in the demographic data section. Three of the participants had been in hospital for cardiac symptoms
previously, but this question did not capture whether participants had a previous cardiac history regardless of whether they had been hospitalized for it.

It became apparent to me during the interviews that previous experience with cardiac symptoms unrelated to hospital admission was a factor influencing some of the participants' interpretation of their symptoms and their decision to seek medical attention for these symptoms. Four of the participants had previous experience with cardiac symptoms. In addition to the three participants mentioned above who has been hospitalized previously with a cardiac diagnosis, a fourth participant had been diagnosed with angina previously although she had never been hospitalized because of it. Also, the participants who had been hospitalized previously for a cardiac event had previous episodes with their cardiac symptoms that they had managed at home. The participants that had previous experience with cardiac symptoms knew when they were experiencing symptoms of cardiac disease: "Well, because I had it before (referring to her cardiac symptoms), I kind of know." Another stated: "...but by the time you have the third angina, you know what it is." A third participant stated: "See, I have another problem too, because I have a hiatus hernia and I have a very
large one. So everybody wants to say, well it's that. Well, no it's not that, because I know the difference between the two."

These participants were clear about the cause of their symptoms and were able to communicate this to family, friends, and health care professionals. The responses of various health care professionals are discussed below.

**Interactions with health care professionals**

This portion of the data analysis includes information from the study participants in relation to their interactions with health care professionals, most often physicians, when the participants presented their symptoms. During the interviews and subsequent data analysis of the interviews I noted that some of the participants had very positive and supportive interactions with health care professionals while others did not. The participants who had positive interactions with health care professionals were listened to about their symptoms, or had encounters with health care professionals who were suspicious of the symptoms that the participants presented with.

One participant described her conversation with her physician when she told him she was having symptoms after her bypass surgery:
I thought I was getting an ulcer and that's the way it has kind of felt and he said that's not an ulcer, that's angina pain. And I said, no I don't think so. I think it's an ulcer. I think I am getting an ulcer and he said no, it sounds to me like angina...So, when they did the procedure, sure enough it was angina and he opened up both of the bypasses and so he opened them up and he put in another stent.

Another participant describes how a pharmacist that her daughter was speaking with about the participant's symptoms alerted the participant and her daughter to the potential significance of the symptoms:

...I started getting bad pain in my arm, in the top and then I just started getting a heavy chest and then the Wednesday before I went in I was in a lot of pain. It was up in both arms and up my neck, and I just thought it was indigestion. My daughter went down to the drug store to get something for it, but they said it didn't sound like indigestion, that I should go and see my doctor...

Other participants described very positive relationships with their physicians: "I have to say my GP has been very good and he has, when I say to him, I am having angina, he
treats it seriously. Um, and doesn’t wait around.” This participant elaborated further: “He always treated me like we were partners in this you know.” Another participant stated:

So I phoned the doctor and I asked if I could get right in and my doctor is very good, for getting you in when you really need it and so I went and said I don’t have an appointment but I have chest, or I have chest heaviness, and so she got me right in...

Yet another participant had an ear, nose, and throat specialist identify her cardiac symptoms. This participant had a sudden loss of hearing and was questioned during her visit with the specialist:

He said your hearing looks fine. The test is fine. Um, he said is there anything unusual, anything else that happened to you unusual at the time that this (the hearing loss) happened? I said, well I noticed that same week, when I was walking up a hill, I would get this tightening in my neck. So he said, I think you need to have a cardiovascular check up...I said okay. So I phoned my doctor the next day, and made an appointment...

The participants who felt they had less positive interactions with health care professionals often felt that
they were not being listened to about their symptoms or were given reassurance that their symptoms were not due to a cardiac problem. One participant discussed why she called the 24-hour Nurseline when she was experiencing extreme shortness of breath: "...I was really debating whether I should go in (to the hospital). I didn’t want to show up at their doorstep and then them turn around 10 minutes later and tell me, oh it’s just hyperventilating." This raises the point of how this participant’s decision to go to emergency was being influenced by her past interactions with health care professionals. I asked her: “And what, if I can just ask a question about that, would have been so awful about that? Why would that have been something that prevented you from going to the hospital when you were feeling short of breath?” The participant replied:

Well, I get the impression, personally that the, women aren’t taken as seriously I guess, it’s such a cliché but seems to be so true, as men are...I just know how I personally feel and um, I had a lot of medical issues and just about every operation that I have had, has come down to emergency surgery, because I am not listened to.

We explored this further and I asked why she felt the need to
speak to the nurse on the B.C. Nurseline: "I knew this wasn't a situation of hyperventilating. Um, so I kind of just wanted another person to say, you had better go in." It is interesting to note that despite the fact that this participant knew that something was wrong she contacted the nurse to validate her decision to go to the hospital. This discussion also raises the question of what could have happened if the nurse had instructed this participant to wait to see her physician rather than calling an ambulance for her.

Other participants had interactions with health care professionals that caused them to doubt their own suspicions about their symptoms. One participant described how she was suspicious that her symptoms were cardiac in origin, and that reassurance by her physician after some non-invasive diagnostic tests convinced her otherwise:

The echocardiogram was basically normally except for a small leak at the tricuspid and also the mitral valve. He said, well don't worry about it. A lot of people at your age, you know, have those kind of things and I said fine. He said otherwise your heart is completely normal. You have nothing to worry about.
The same participant also stated: "... I asked him specifically, you know, when nothing showed, and it still was, you know, in April, May, and I said could there be a blockage. And he said oh no, no, no, no. Your heart is fine, everything is okay." This is from an interview with a seventy year-old woman who had hypertension, and who underwent coronary artery angioplasty and stenting within six months of the conversation with her physician.

**Expectations of cardiac symptoms**

During the interviews with participants, I asked each woman what she thought the symptoms of an acute cardiac event would be and how that compared to what she had actually experienced. The participants who had previous experience with cardiac symptoms found their symptoms were as they expected. Those who had no previous experience with cardiac symptoms had quite different experiences from what they would have expected during an acute cardiac event: "My arm felt funny. It did not feel like the classic symptoms of pain in the arm or any tingling, it just felt heavy." Another woman commented: "Yeah, and a pain in my back, but I never, I've never heard of pain in the back for a heart problem."

When one participant was asked what she would expect she described the classic symptoms of left arm and jaw pain or
pressure, and vomiting. I asked her if she experienced any of these symptoms:

Not that I recall. Not with this. Um, I know that that's the part that is so frustrating, that women have heart attacks but the symptoms are so obscure almost, um that they probably end up dying and not even realize that they had a heart attack, just because they are so different for each person.

Participants' expectations of their cardiac symptoms appear to have influenced how they interpreted these symptoms and their eventual decision to seek treatment for these symptoms.

Response of family and/or friends

During each interview I also asked participants who they spoke to about their symptoms or about their decision to seek treatment for their symptoms. All of the participants mentioned family members, and they discussed their family and friends in a positive light. In many instances it was the participant's family member that convinced the participant to go to the hospital. One participant described how, when she was feeling so ill that she could barely walk, her daughter had to argue with her about going to the hospital:

So I said well let's go and she said, well we are going to the hospital. I said I think I will be all right if I
just go home and lay down, I probably just need to go to bed. No we are going to the hospital...She said how could you even argue with me about going to the hospital, you can’t even talk.

Another participant describes her reluctance to get medical attention for her symptoms:

...my husband was quite proud of me because usually I don’t like going to the doctor for every little thing, and he was quite proud of me because I decided myself that I was going to the doctor and find out what was wrong. He said well usually I have to drag you kicking and screaming...

One woman, who has a cardiologist as a close friend, talked about how she discusses her cardiac problems with him and finds him to be very supportive, but when she needed help for an acute attack she called on her family who responded promptly:

I did share with my one younger brother and sister-in-law, who is a nurse, and interestingly enough the worst attack I had was about one in the morning and I was in bed and it never even, they said to me afterwards, M. we would come. They came and took me to the hospital. Why
didn’t you phone 911? You know it never even occurred to me.

A fourth participant, who has been managing her angina for about four years, described her husband as supportive, but she clarified that she decides when she goes to the hospital:

This last time, I was in bed and it woke me up from my sleep, with the pain in my chest. But it’s just like a huge, huge weight sitting on there and it starts going down the arm and up into the neck and then I called my husband and said I think I had better go into the hospital...

I asked what her husband’s response was: “Well, he took me right away, yeah.”

There are other instances when this and other participants who have had previous experience with cardiac symptoms describe managing their symptoms at home and then making the decision to go to the hospital. I describe the participants’ experiences with managing their symptoms in the following section. In this section it is apparent that the family members of the participants were supportive of the participants’ decisions to seek medical attention for their cardiac symptoms.
Measures to cope with symptoms

Measures to cope with symptoms include anything that participants did in an attempt to relieve their cardiac symptoms. As with the sections on the participants' physical symptoms and their emotional response to their symptoms, the data that I present in this segment are divided into two sections: measures to cope with initial, often unrecognized or undiagnosed symptoms and measures to cope with symptoms immediately prior to hospital admission. The measures that participants used to cope with their initial symptoms were again as varied as the physical symptoms themselves. All of the participants used some type of measure to self-manage their cardiac symptoms, but the measures to cope with these symptoms varied depending on whether the participant had previous experience with cardiac symptoms.

Participants who had not experienced cardiac symptoms prior to this event frequently treated their symptoms based on what they believed was causing their symptoms. This included medications to cope with back pain, indigestion, and shortness of breath. One participant, who had no previous experience with cardiac symptoms, chose to continue with her routine despite her symptoms: "So I still was not feeling well, but this time, it was already now into June and I was
expecting company, and I thought I have to get better you know."

Another participant who was being investigated for probable cardiac disease but did not have a previous cardiac history described how, when she found that her symptoms improved with the use of nitroglycerin, she still did not feel that her symptoms were anything significant:

Yeah, I didn’t think it was anything really serious. I guess maybe I live in La-La land. You know, I downplay. I am the person who if I have something wrong with me, I wait and it usually goes away, so I am thinking this (her cardiac symptoms) is probably nothing too serious. This participant did not accept that her symptoms were serious until she was being admitted to the intensive care unit. She described her realization as she is being informed that she has had a cardiac event: "...so we are going to put you up in ICU, so he looks at my husband and says you might as well go home. Then I am like, oh, it is serious."

For the participants who had previous experience with cardiac symptoms management of their initial symptoms involved the use of nitroglycerin. These women stayed home if their cardiac symptoms were relieved by their nitroglycerin. If their symptoms progressed or were unrelieved by the
nitroglycerin they sought medical attention. One participant described her decision-making based on her use of nitroglycerin for her cardiac symptoms:

...I just say, well use the nitroglycerin spray, if it takes it away, fine. If using the nitro spray, you still have it and you use the nitro spray again about five minutes later and if it hasn’t cleared it up, use the nitro spray at five minutes later than that, and if it still hasn’t helped, then get to the hospital.

Another participant used a similar process with her use of nitroglycerin as a guide to when she will seek medical attention: "...I took it three times before I went into hospital, that’s why after the third time, and it still wasn’t changing it any, I thought, well I had better go in."

The measures to cope with symptoms just prior to hospital admission were similar for all the participants, except for one. For seven of the participants, the combination of increased symptoms severity, a sense of fear or anxiety about the symptoms, and, for the participants who used nitroglycerin, an inability to get relief from their symptoms motivated them to seek medical attention. These participants either spoke to a family member who took them to hospital, made urgent arrangements to see their family
physician, or called another health care provider, such as the BC Nurseline. The eighth participant, who was quoted earlier as not realizing that her symptoms were significant until she was admitted to an intensive care unit, continued to discount her symptoms, and was brought to hospital by her daughter. This participant's inability to acknowledge her symptoms may be related to her sense of personal cardiac risk. This is discussed in the following section.

**Identification of personal cardiac risk**

This category pertains to whether or not participants, regardless of documented cardiovascular risk factors, such as age or hypertension, perceived themselves to be at risk for CVD. The participants who had previous experience with cardiac symptoms all perceived themselves as having a strong cardiac risk. What is interesting about this group is that even with their initial cardiac event, which for some participants had occurred 20 or 30 years prior to their most recent hospital admission, they perceived themselves to be a risk for CVD. One participant, who first cardiac symptoms were four years prior to the time of her interview, was suspicious of her initial cardiac symptoms due to a strong family history of CVD:

It's in the family. My grandmother died when she was
about 36 years old. Ah, and my mother has had triple bypass, my uncle has had triple bypass. I have had other ones that have passed away, and it’s on both sides of the family.

Another participant who was first diagnosed with angina in 1986 was also suspicious of her original symptoms due to a family history of CVD: “I do have heart problems in my family. My dad died of a heart attack and my brother died of a heart attack.”

The other two participants who had previous experience with cardiac symptoms have had cardiac surgery for a valve replacement. One participant had a valve replaced in 1960 and the other one in 1990. Both women experienced symptoms of fatigue and shortness of breath with their valve disorders. This previous experience with these less specific cardiac symptoms enabled these participants to be suspicious of their later symptoms, and to consider the possibility that their later symptoms were related to a cardiac disorder. The participant who had her valve replaced in 1990 described how, when her angina symptoms started in 1997, she quickly sought attention for them: “And so, I had a couple of sessions of that (angina symptoms) and I, of course, went to my GP and told him, and he, oh well, it doesn’t sound very good, we’d
better get you into see somebody.”

For the participants with no previous experience with cardiac symptoms, the diagnosis of CVD came as quite a surprise. They did not perceive themselves to be at risk for CVD. One participant described her confusion at her diagnosis: “I’d sure like to figure out how come I had the heart attack. I mean, I’m 44, I don’t hardly ever eat fried foods. Grant you my exercise level isn’t the greatest. And, I am a semi-quitter-smoker, semi-quitter.” The other three participants who had no previous experience with cardiac symptoms were similarly surprised by their eventual diagnoses of CVD:

Uh, at the time, I thought to myself, uh I am too young for that. That was the first thought, you know. And I don’t think I can have that right now because, you know, I wasn’t ready for it, you know, and I thought, well I have been so active. I have been, you know, and I mean, sure we did smoke, but we quit, you know. And there is nothing that we are doing, we are not eating a lot of junk food, what would contribute to, you know, cholesterol. We are active and not really that much overweight and I thought, this can’t be happening to us. Other participants were similarly surprised:
Because, I don't know why, I just would never think that I would have a heart attack, because I have never had any problems with my heart that I knew of, so why all of a sudden, out of the blue would you have a heart attack.

A third stated her surprise at her diagnosis of CVD very clearly: "I never thought I would have a heart attack." The participants' sense of perceived risk for CVD influenced how they interpreted their symptoms, and for those who did not perceive themselves to be at risk, having this knowledge may have caused them to react differently to their symptoms. This is discussed below.

**Things that participants would have done differently**

I asked participants what they would have done differently during their pre-hospital experience, knowing what they know now. The participants who had previous experience with cardiac symptoms did not identify anything that they would have done differently with regard to their pre-hospital experiences. As stated earlier in the section on measures to cope with symptoms, these participants are very clear as to the cause of their symptoms and when they need to report to the hospital.

The participants who had no previous experience with cardiac symptoms did identify things that they would have
done differently if they had known that their symptoms were caused by a cardiac disorder. One participant has taken her experience with her cardiac symptoms as an opportunity to reflect on her tendency to look after the needs of others at the expense of caring for herself:

I am one of these types of people that does everything for everybody else and forgets myself and takes care of everybody else first and that I needed to stop doing that, that I had to build a little gate around me and say I am sorry, I need my time now.

Other participants would have taken their symptoms more seriously if they had understood that the symptoms were a sign of a cardiac disorder:

Here I am trotting through the bush, having these angina pains and saying, oh it will go away, it is just bronchospasms, you know. If I had have known that my heart was at risk, do you think that I would have been climbing through the hills?

Linked with this discussion is the data on how things have changed for the participants as a result of their experience with their ACS. I discuss this in the following section.

**How things have changed for the participants**

Each of the participants' experiences with their cardiac
symptoms was unique. Interestingly, when asked how things had changed for them as a result of these experiences, I find a similar pattern to the participants' responses: a profound sense of mortality. One participant described the change in her life:

And I am not quite sure how to express it, but I think it might have been something to do with the fact that I am not a little girl, and I already knew that I was not a little girl, but I am now in a place where...I don’t know how to say it, um heart attack, death.

Another participant described how she has been able to come to terms with her mortality as a result of her experiences with her ACS. This participant has experienced numerous cardiac procedures and manages her cardiac symptoms on a daily basis:

I don’t know, I have problems with this, but not as bad as this that if I ever have a heart attack, that’s of no concern to me, like if I have a heart attack and die. I am ready to die. I know I will go to heaven when I die. I have trust in the Lord Jesus for to take care of me, and that’s what I mean by if that’s what the case would be then I would go.

Interestingly, another participant thought she was not afraid
to die until she experienced her ACS:

It’s very funny you know, because I have often said since my husband died, I am really not afraid to die. I am not. Like you know, a car accident or something like that. But it’s interesting, when you are faced with it, or the thought of it, suddenly you are, you know.

Some of the participants saw their experience with their ACS as an opportunity to help others. One participant identified that her interest in the present study was due in part to a desire to help health care professionals to understand women’s experiences with CVD:

So I am really hoping something like this will bring about a set of guidelines where doctors can follow and say, okay she is having this and this and this, this is very similar to a heart attack, because a lot of doctors don’t know.

Another participant has started sharing her experience with others so they will not have to go through what she did:

I actually have told a couple of women that I only am acquaintances with, that are my age, what happened to me because I wanted to tell them the secret that it could happen to them. I am not saying it in those words, but just give them my experience and tell them that it was a
big surprise to me and it could happen to anybody, maybe
to save them.

It is apparent that these participants have had their lives
changed significantly as a result of their experiences with
ACS.

The interview findings that I have presented in this
chapter provide an overview of the participants' pre-hospital
experiences with ACS. I have also presented how these
experiences have altered the participants' lives and explored
what they would have done differently if given the
opportunity. In the following chapter I discuss the findings
from these interviews in the context of the current
literature on women's experiences with CVD.
CHAPTER FIVE: DISCUSSION

Differentiating the Clear Path from the Unclear Path

I developed the categories that I presented in the
preceding chapter during the data analysis process of this
study, and I used these categories to compare and contrast
the experiences of the study participants. Through this
comparison I found that the data illustrated that each
participant experienced either a clear path or an unclear
path to diagnosis and hospital admission. The participants
who experienced a clear path either recognized their symptoms
as cardiac in origin or had their symptoms recognized as
cardiac in origin and had prompt access to hospital services.

The participants who experienced an unclear path
attributed their symptoms to non-cardiac causes or their
health care professionals attributed their symptoms to non-
cardiac causes, and this had implications for their eventual
diagnosis and treatment. Five of the participants appear to
have experienced a clear path and three of the participants
appear to have experienced an unclear path. With the
participants described this way I outline the similarities
and differences between the participants who experienced each
of the two different paths.

My analysis of the data suggests that the aspects of the
participants' pre-hospital experiences with ACS that are the most significant in relation to how the participants interpreted these experiences and influenced whether they experienced a clear or unclear path to diagnosis and hospital admission are:

- The intensity of physical symptoms
- The intensity of the emotional response to physical symptoms
- Previous experience with cardiac symptoms
- Interactions with health care professionals
- Expectation of cardiac symptoms
- The response of family and friends
- The perceived effectiveness of measures to cope with symptoms
- Perception of personal cardiac risk

In the following section of this chapter I discuss these aspects of the study participants' experiences in the context of the literature on women and CVD. Following this I outline how these aspects of the individual participant's pre-hospital experience interact to determine the path that each woman takes to diagnosis and hospital admission.
**Physical symptoms**

As a group the participants experienced physical symptoms that are similar to those found in the literature. As with other women who experience CVD these women experienced a lot of fatigue, back pain, and shortness of breath, and the majority of the participants did not experience the classic symptoms of left-sided chest and arm pain. When comparing the physical symptoms experienced by the participants who experienced a clear path with those who experienced an unclear path, I noticed that the participants who had a clear path experienced more chest pressure or pain early in their cardiac experience, but that as all of the participants come closer to the time that they decide to seek medical attention their symptoms become more severe and more similar.

Dracup and Moser (1997), in their study with men and women who had experienced an AMI, find that individuals who considered their symptoms to be serious reported to hospital for treatment sooner than those who did not. These authors differentiate between the participants' evaluation of the seriousness of their symptoms and the severity of the discomfort they experienced. Interestingly, the more serious the symptoms are perceived to be the sooner participants
report to hospital but the severity of the participants’ discomfort does not show the same correlation.

This discrepancy between seriousness and severity may be related to what Scherck, (1997) describes as the disruptive nature of an individual’s cardiac symptoms. Scherck interviews 30 men and women to explore their process of determining that they were having an AMI. This author finds that the more disruptive a participant’s symptoms, the sooner he/she seeks treatment for them. I find that this is true for the participants in the present study as well. This broader notion of 'disruption' as described by Scherck encompasses both the seriousness and severity of symptoms: Scherck describes it this way:

Disruptive signs and symptoms interfered with the normal flow of everyday events. These signs and symptoms were so bothersome, intense, persistent or overwhelming that they conflicted with the subject’s ability to focus on the usual activities of the day or disturbed nighttime rest. The disruptive nature of the symptoms left no question that they were significant, although their precise meaning was unknown at this point in the recognition process (p.269).
In the present study, seven of the eight participants sought treatment when their symptoms became disruptive. The eighth participant continued to ignore her increasing symptoms. This may be related to other factors that were influencing this participant’s decision to seek treatment. This is discussed in the section on the identification of personal cardiac risk.

**Emotional response to physical symptoms**

As I described in the preceding chapter on the study findings, participants’ emotional responses to their symptoms were closely linked to the type and intensity of the physical symptoms they experienced. For participants with no previous experience with cardiac symptoms initial symptoms were attributed to more benign causes and did not cause a lot of emotional distress. For participants who had previous experience with cardiac symptoms, their emotional response was linked to the whether or not they could manage their symptoms with their nitroglycerin. For all the participants, the more disruptive symptoms the stronger the emotional response they had to them. Even when participants did not know the source of their symptoms they knew that something was wrong.
These findings are similar to those found by other authors (Dempsey et al., 1995; Scherck, 1997; Sutherland & Jensen, 2000). Dempsey et al. (1995) in their study that explores women’s decisions to seek treatment for symptoms of AMI note, “anxiety emerged when strategies were ineffective in resolving symptoms. The women’s sense of control over their symptoms began to erode and was replaced by a sense of threat or foreboding” (p. 451). For the participants in the present study their emotional response to their physical symptoms is an important force in their pre-hospital experience. This has implications for both women and the health care professionals who work with them in terms of recognizing these emotional responses as part of the pre-hospital experience with ACS and ensuring that they do not interfere with a woman seeking and receiving treatment for her ACS. These implications are discussed in Chapter Six of this thesis.

**Previous experience with cardiac symptoms**

None of the participants in this study who experienced an unclear path to diagnosis and hospital admission had previous experience with cardiac symptoms. Four out of the five participants who experienced a clear path had previous experience with cardiac symptoms. The fifth woman who had a
clear path but no previous experience with cardiac symptoms had a very rapid progression of her cardiac symptoms just prior to hospital admission. Perhaps the severity of her symptoms was the dominant influence on her decision to seek attention for these symptoms. I have presented the impact of physical symptoms earlier in this chapter.

Interestingly, in the literature exploring an individual's decision to seek treatment for cardiac symptoms, some authors find that individuals with previous cardiac symptoms tend to delay longer than those without previous cardiac symptoms (Dracup et al., 1995). This despite the fact individuals who have previous experience with cardiac symptoms are more likely to attribute their symptoms to a cardiac cause than are those with no previous experience (Leslie et al., 2000). Perhaps this discrepancy is related to the measures that individuals utilize to manage their cardiac symptoms. I explore this later in this discussion. In the present study, previous experience with cardiac symptoms was influential for the majority of participants in determining whether they experienced a clear or unclear path to diagnosis and hospital admission. Conceivably the women in this study who had previous experience with cardiac symptoms had a good understanding of what to expect when they had a cardiac
event. This may account for their clearer path to diagnosis and hospital admission.

**Interactions with health care professionals**

Health care professionals can have a powerful impact on the illness experiences of the people. In this study, participants experienced both positive and negative interactions with health care professionals. The women who experienced a clear path to diagnosis and admission reported positive, supportive interactions with the health care professionals they interacted with, whereas the women who experienced an unclear path frequently had negative, unsupportive interactions with health care professionals. Participants who experienced an unclear path often felt that they were not listened to or had their symptoms minimized.

The perception of not being listened to and having their symptoms minimized by health care professionals are common themes in the literature pertaining to women with CVD (Bensen et al., 1997; Hawthorne, 1993; LaCharity, 1997; Murray et al., 2000; Sutherland & Jensen, 2000). This may be due, in part, to a lack of knowledge on the part of health care professionals regarding the clinical presentation and prevalence of CVD in women. Until recently, CVD has been considered primarily a male health issue, and, as discussed
in the literature review section of this thesis, women have been under-represented in quantitative studies on CVD (Lee et al., 2001).

It is also possible that participants with previous experience with cardiac symptoms are better able to articulate their symptoms to health care professionals. For those participants who had no previous experience with cardiac symptoms, the combination of their 'non-classic' symptom presentation and a health care professional who was lacking the knowledge of the differences in symptom presentation between men and women with CVD may have contributed to an incorrect interpretation of the participant’s symptoms.

I did not locate any studies that explore the relationship between a woman’s description of her cardiac symptoms and a health care professional’s response, but one author does note the impact of health care professionals’ responses on women’s decision to seek treatment for symptoms of CVD. Miller (2000) utilizes a grounded theory approach to explore the process that women use to determine the need for health care for their cardiac symptoms. This author discusses the importance of the response of health care professionals
in assisting participants in the process of either
discounting or validating their cardiac symptoms.

It is also possible that women with CVD do not have
their symptoms recognized as cardiac because of broader
gender-bias issues within health care professions. Again, I
did not locate specific studies that discuss women's pre-
hospital experiences with CVD from this perspective. The
authors of two references that do explore the socio-political
aspects of women's health acknowledge that CVD is the leading
cause of death for North American women and that there are
differences in the treatment of men and women with CVD, but
they do not go on to include CVD as a significant topic in
their work (Doyal, 1995 and Lee, 1998). These authors provide
excellent arguments against the medicalization of women's
health and the need to consider women's health issues within
the larger context of women's social and cultural
experiences, but to the exclusion of the topic of CVD.

Lee (1998) argues:

In general, however, research seems to suggest that the
major risk factors of smoking, sedentariness, stress and
social isolation are broadly the same for women and men,
and that the central experiences associated with heart
disease, such as pain, anxiety, intrusive medical
procedures, and major life changes, are also much the same for women as they are for men. What is needed is not so much a search for women’s unique experiences of heart disease as a less biased programme of biomedical research and intervention. (p. 3).

This perspective may have been accurate at the time that this reference was published, but current literature, as presented in my earlier literature review, shows that women’s physical and psychological experiences with CVD are different from those of men. Based on the findings from the women in the present study, I argue that further research is needed in the area of women’s experiences with their cardiac symptoms, including their interactions with health care professionals. This topic is explored further in the final chapter of this thesis.

On a more positive note, Meischke et al. (2000) interview 426 people who have been admitted to an emergency department with a complaint of chest pain and then subsequently released. These authors find that participants report they are less likely to delay seeking help for similar symptoms in the future if they have received positive feedback from a health care professional regarding their decision to seek treatment for their chest pain, regardless
of the fact that the pain turned out to be non-cardiac. It is possible that the response an individual receives from a health care professional could have an impact on his/her future decisions to seek treatment for cardiac symptoms.

**Expectations of cardiac symptoms**

A number of studies in the literature discuss the finding that the closer an individual’s symptoms are to the ‘classic’ presentation of an AMI, the sooner they will seek treatment for these symptoms (Dempsey et al., 1995; Johnson & King, 1995; Leslie et al., 2000; Ruston et al., 1998). When individuals experience symptoms that differ from those that they expected during a cardiac event they may attribute their symptoms to a non-cardiac event. Also, health care professionals who have certain expectations regarding cardiac symptoms may also incorrectly attribute an individual’s symptoms to a non-cardiac cause.

All of the participants in the present study who experienced a clear path to diagnosis and hospital admission had cardiac symptoms that were similar to what they expected. Participants who had an unclear path had symptoms that differed significantly from the symptoms that they would have expected with an ACS. It is possible if these women had a better understanding of what to expect with cardiac events
they would have experienced a clear path to diagnosis and hospital admission.

Response of family and/or friends

There are different reports in the literature as to the influence of family and friends on study participants’ decisions to seek treatment for their cardiac symptoms. Dracup and Moser (1997) find that there is no significant difference in the time delay between symptom onset and reporting to hospital for individuals who experienced their AMI symptoms whether they were alone or with a family member or a friend. Conversely, McKinley et al. (2000) find that the presence of a family member or spouse when AMI symptoms occurred increases delay time for individuals with AMI symptoms.

In the present study, participants presented their family members and friends in a positive and supportive manner. There was no indication from participants that their family or friends had discouraged them from seeking medical attention for their cardiac symptoms. In fact, as identified in the preceding chapter, it was often a family member who convinced a participant to seek medical attention for her cardiac symptoms.
What is missing from this discussion is information regarding how the participants presented their symptoms to their friends and family. Did the women in this study minimize their symptoms to their families and friends until the symptoms became disruptive to the women? I did not collect this information in this study, but Bensen et al. (1997) and Helpard and Meagher-Stewart (1998) find that women who are experiencing symptoms of an AMI often do not share the severity of their symptoms or their own concerns with their family members until they have to. These authors discuss the idea of the women wanting to 'protect' others from their concern about their cardiac symptoms. Perhaps this desire to protect others is part of a woman’s coping strategies to control her own feelings about her symptoms. If a friend or family member believes that the symptoms are serious then the woman may have to acknowledge the seriousness as well.

**Measures to cope with symptoms**

Participants in this study used a range of measures to cope with their cardiac symptoms. A number of authors discuss how participants attempt to self-manage their cardiac symptoms (Dempsey et al., 1995; Dracup & Moser, 1997; McKinley et al., 2000; Miller, 2000; Ruston et al., 1998;
Scherck, 1997). These authors also note that as long as study participants' measures to cope with their symptoms are effective they are unlikely to seek treatment for them. As discussed in the section of this chapter on physical symptoms, it may be the disruptive nature of an individual's cardiac symptoms and their inability to manage them effectively that influence when he/she will seek treatment for those symptoms (Scherck, 1997). This appears to apply to the women in this study as the majority of the participants sought treatment for their symptoms when they became disruptive and unmanageable.

In the present study, participants with previous experience with cardiac symptoms used nitroglycerin to manage their symptoms and then reported to hospital when this was ineffective. These participants had been taught by a health care professional to use their nitroglycerin to manage their cardiac symptoms, and if the nitroglycerin does not relieve the symptoms they should report to the emergency department. The use of nitroglycerin may help to account for the finding by Dracup et al. (1995) that study participants with a previous cardiac history delay longer when reporting to hospital for their symptoms of AMI.
Three of the four participants with no previous experience with cardiac symptoms managed their symptoms based on their perception of what it was (back pain, indigestion) and then sought treatment as the symptoms became more disruptive and unmanageable. As previously mentioned in the section on physical symptoms, one participant continued to deny the seriousness of her symptoms until she was admitted to the intensive care unit. Her style of coping with her cardiac symptoms was emotional compared to the other participants who chose a self-treatment approach to managing their symptoms.

Dempsey et al. (1995) find that women experiencing an AMI often deny the significance of their symptoms or attribute them to a more benign cause. These authors note that denial serves to reduce the anxiety associated with the symptoms enabling the individual to cope. Unfortunately, they also note that denial is associated with longer delays when an individual reports to hospital with cardiac symptoms. The participant in the present study who used denial to cope with her symptoms experienced an unclear path to cardiac diagnosis and hospital admission. Perhaps if she had used a different method to cope with her symptoms she would have experienced a clear path to diagnosis and hospital admission.
Identification of personal cardiac risk

The final category for consideration is the area of the participants' perception of their personal risk for CVD. In the present study, four out of five of the participants who perceived themselves to be at risk for CVD experienced a clear path to diagnosis and hospital admission, whereas participants who did not perceive themselves to be at risk for CVD experienced an unclear path. The fifth participant, who experienced a clear path but did not see herself at risk for CVD, had a sudden increase in the intensity of her physical symptoms that may have contributed to her experiencing a clear path.

Ruston et al. (1998) find that an individual's perception of their personal cardiac risk influences their treatment-seeking behavior when they experience symptoms of AMI. These authors explore the attributes of individual's who delay reporting to emergency for an acute cardiac event with the attributes of those who do not delay. They find that participants who perceive themselves to be at risk for CVD delay less than those who do not perceive themselves to be at risk.

In addition to an individual's perceived risk for CVD, it is important to consider an individual's actual risk
factors for CVD. Oliver-McNeil and Artinian (2002) interview 33 women admitted for their first time for ACS to explore the relationship between women's beliefs about their risk factors for CVD and their documented risk factors. These authors find that the participants are unable to accurately identify their personal risk factors for CVD, and frequently underestimate the impact of specific risk factors, such as hypertension and post-menopausal status, on their risk for CVD. I did not explore the documented risk factors for participants in the present study, but it is apparent that their perception of their cardiac risk was influential in determining which path to diagnosis and hospital admission they followed.

Women's Interpretation of Their Pre-Hospital Experiences

When the above categories are reviewed in light of the study participants' experiences and the current literature on women and CVD, it is apparent that the participants' paths to diagnosis and hospital admission are complex and are shaped by a number of aspects within their individual experiences of ACS.

Three authors examine the experiences of individuals with CVD, and each provides a process for understanding how study participants interpret their cardiac symptoms. In
Scherck's (1997) study with 30 men and women who experienced an AMI, the author explores the process that participants use to determine that they are having an AMI. Scherck accounts for the disruptive nature of participants' symptoms, how these symptoms compare to the participants' previous experiences, the effectiveness of the participants' self-treatment measures, and how the participants' symptoms compare to their expectations of cardiac symptoms.

Miller (2000) interviews 10 women about their experiences with CVD and finds that the participants' process for seeking treatment for their cardiac symptoms is determined by the intensity of the symptoms or cues and the emotional response to them, the participants' perception of cardiac risk and expectations of cardiac symptoms, the effectiveness of self-treatment strategies, and the response of health care professionals and lay people.

In the third study, Dempsey et al. (1995) explore the decision-making processes of 16 women who experienced an AMI. These authors describe the process for these women as one of initially working to maintain control of their cardiac symptoms, and then relinquishing control when they sought medical attention. Dempsey et al. identify that the nature of the physical symptoms, the emotional response to these
symptoms, the participants' beliefs about the risk factors and symptoms of an AMI, the participants' past symptom experience, their concern for others, and the use of self-treatment and lay consultation are factors that influence the participants' decision to seek treatment for their cardiac symptoms.

All of these authors provide insightful understanding into the experiences of the participants in their studies, but these analyses do not account for all of the factors that appear to have influenced the pre-hospital experiences of the women in the study presented in this thesis. For the women in this study, there appears to be interplay between the aspects of their pre-hospital experiences that influences the path they will take to diagnosis and hospital admission. The data from the participants' interviews suggest that, for each woman, these aspects of their experience interact in a unique way. To illustrate this point I outline a few of the participants' individual experiences focusing on how the various aspects interact to shape the participant's interpretation of these events.

One of the participants who experienced a clear path to diagnosis and hospital admission had previous experience with cardiac symptoms and knew what to expect for her symptoms.
She perceived herself to be at risk for CVD, and had a supportive family. This participant used her nitroglycerin to manage her cardiac symptoms, and when she was unable to control her symptoms with her nitroglycerin, she sought medical attention. For this woman, her inability to manage her symptoms appears to be the most influential aspect in her interpretation of her pre-hospital experience.

Another participant who experienced a clear path to diagnosis and hospital admission had no previous experience with cardiac symptoms and did not perceive herself to be at risk for CVD. She did however have an interaction with a health care professional who was knowledgeable about women's symptoms of CVD, which the participant had attributed to indigestion. Shortly after her interaction with this health care professional, this participant had a sudden increase in the severity of her physical symptoms and strong feelings of fear and anxiety about them. At this time she spoke to her daughter who took her to emergency. For this participant the gravity of her physical symptoms and her emotional response to them appear to have been the strongest influences in her interpretation of her pre-hospital experience and her decision to seek treatment for her symptoms.

A third participant who experienced an unclear path to
diagnosis and hospital admission was younger than most of the other participants and did not perceive herself to be at risk for CVD. She experienced vague but progressive symptoms that were appropriately investigated by her health care providers, but she denied the seriousness of her symptoms until she was being admitted to intensive care. Fortunately this participant had a family member who took her to emergency despite her objections.

Obviously, each participant did not have a similar pre-hospital experience. For each of the women in this study the eight components of their experiences that are listed at the beginning of this chapter are interpreted in a unique way, and their individual interpretation is what determines whether she experiences a clear or unclear path to diagnosis and hospital admission. The eight components of their experiences are the common threads for the women in this study, but it is their understanding of these components that determines their individual experience. Perhaps it is the personal, social, and cultural context of each participant’s experience that determines, not only the interplay of these experiential components, but also the dominant component that compels a participant to seek treatment for her symptoms.

Each woman is a distinct individual who will experience
and interpret the aspects of her cardiac event in a unique manner. The role of the health care professional is to support women to understand their pre-hospital experiences so they can make the best possible choices for their health.

In this chapter I have presented the key findings from this study in the context of the current literature pertaining to women and CVD. I have also explored how the study participants interpreted the components of their pre-hospital experiences to determine their eventual path to diagnosis and hospital admission. In the final chapter of this thesis I discuss the implications of the findings from this study and provide recommendations for future research.
CHAPTER SIX: IMPLICATIONS FOR PRACTICE, SUGGESTIONS FOR
FUTURE RESEARCH, AND SUMMARY

In the preceding chapter I outlined the factors that influence the interpretation of the study participants' pre-hospital experiences with ACS. I did not discuss two areas of the findings from this study in the preceding chapter because they are a result of the women's experiences with their cardiac symptoms rather than a component of the women's pre-hospital experience, and I believe that a discussion of these findings is better placed in this discussion on implications for practice. These two areas are what the women would have done differently and how things have changes for the women since their ACS.

I did not locate any studies that explore what women would have done differently if they had known that their symptoms were due to a cardiac event. The participants in this study who acknowledged that they would have done something differently either examined health related behaviors to identify changes they could make to reduce their risk for another cardiac event, or they re-evaluated the seriousness of their symptoms. This time of reflection after a cardiac event is a time of opportunity for health care professionals to support women to evaluate their pre-hospital
experiences so they can improve their cardiac health after their ACS, and, potentially, alter their actions in relationship to future cardiac events.

I also asked the participants in this study how things have changed for them since their experience with ACS. As I presented in Chapter Four of this thesis, participants were acutely aware of their mortality. Johnson and Morse (1990) identify this sense of mortality as part of the process of coming to terms with the diagnosis of AMI for both men and women who participated in their study. Although other authors do not focus on the aspect of mortality, they do discuss that experiencing a cardiac event is a life-altering occurrence for the women involved in their studies (Hawthorne, 1993; Helpard & Meagher-Stewart, 1998; LaCharity, 1997).

It is clear from the above discussion that women’s experiences with their cardiac events are life-altering experiences, and that women often use these experiences as opportunities to reflect on decisions that they have made about their cardiac health. The findings from the study presented in this thesis demonstrate the complex interpretations that are involved with women’s experiences with an acute cardiac event. Health care professionals are in a role to support women to understand these experiences,
however they must ensure that they consider the complexity of these events when they work with women to understand their cardiac events or to make changes in their lifestyle to reduce their cardiac risk. Unfortunately, authors of a recent study with women who have experienced AMI find that women are still not receiving the information they need to understand their cardiac events. Doiron-Maillet and Meagher-Stewart (2003) conduct a qualitative study with 10 women who were recovering from an AMI, and they find that the participants often received information from health care professionals that was incongruent with the realities of their lives. These authors note that participants often felt confused about the information given to them and how they could incorporate this information into their lives.

In the following discussion I outline strategies for health care professionals to assist women to understand their cardiac events in ways that are meaningful to them, and I provide guidelines for health care professionals to ensure that the messages that they are sharing with women about their cardiac health are congruent with the lived experiences of the women. Following this I provide recommendations for future research regarding women's experiences with CVD. I conclude this chapter with a summary of major components of
Implications for Practice

Streubert and Carpenter (1995), in their discussion on new generation approaches to qualitative research which includes naturalistic inquiry and the methodology of interpretive description, identify that the goal of some methodologies, such as action research, is to effect change within the actual research study. These authors concede that not all methodologies have this mandate at their core, but they emphasize the need for all researchers to "narrow the theory-practice gap through considerations of application to practice as a crucial entity in the scientific investigation" (p.245). This is my goal for the discussion that I present in this chapter.

In the following discussion I present strategies to enable women to experience clearer paths to cardiac diagnosis and, potentially, to avoid diagnosis and hospital admission all together. Health care professionals cannot change a woman's age or the fact that she has had previous experience with cardiac symptoms, and they cannot control the intensity of the physical symptoms that a woman with CVD may experience or her emotional response to these symptoms. They can however
have an impact on such influences as expectation of cardiac symptoms, measures to cope with cardiac symptoms, identification of personal cardiac risk, response of family and friends, and empowering women to be involved with their cardiac health. I now move to a more specific examination of how health care professionals can change their practice to be better prepared to work with women who are at risk for CVD or who may already be living with CVD.

**Education for health care professionals**

The first area where health care professionals can improve their practice is in regard to their own knowledge concerning women and CVD. The women in this study who experienced an unclear path to diagnosis and hospital admission often had negative interactions with health care professionals. These health care professionals misinterpreted the participant's symptoms, underestimated the participant's risk for CVD, or minimized the participant's concerns about her symptoms. A well-informed health care professional will be able to identify the common signs and symptoms of CVD in women and will appreciate the factors that influence how women interpret these signs and symptoms. To this end, the Canadian Cardiovascular Society (2000) has produced a consensus statement that provides a comprehensive overview of
the quantitative studies related to ischemic heart disease in women. Specifically, Isaac and Walling (2000) provide objective guidelines, in the form of an algorithm, to assist health care professionals to determine more objectively whether a woman’s symptoms are likely due to a cardiac cause. The algorithm includes both typical and atypical symptom presentation and links these with the known cardiovascular risk factors, such as postmenopausal status, hypertension, diabetes, family history, peripheral vascular disease, lipid abnormalities, obesity, and a sedentary lifestyle. Health care professionals in private practice, health care centers, and emergency departments can use these guidelines to remove some of the subjective interpretation of women’s cardiac symptom presentation.

While the consensus statement from the Canadian Cardiovascular Society (2000) provides assistance for determining the likelihood that a woman’s symptoms are related to a cardiac event, the authors do not include the findings from the qualitative studies that explore women’s experiences with CVD. As well as providing the most current information on the assessment and treatment of women at risk for or diagnosed with CVD, educational presentations and publications regarding women and CVD must include both the
qualitative and quantitative aspects of the phenomenon.

The data from the interviews in this study demonstrate that a woman's experience with her cardiac event is more than just an analysis of her cardiac risk. The women in this study engaged in very complex interpretations of their pre-hospital experiences with ACS. The combined knowledge of the results of quantitative and qualitative studies will provide health care professionals with a more comprehensive understanding of women's experiences with CVD.

**Education for women about CVD**

Once health care professionals have ensured that they have the most current knowledge regarding women and CVD they must ensure that women understand the differences between men's and women's experiences with CVD. The REACT trial, (Luepker et al., 2000) that provides a large public education campaign designed to decrease the delay time for people reporting to emergency for an AMI, demonstrates an increase in people's knowledge about AMI, but does not show a reduction in delay time. The question that is raised from the results of this study is how do you personalize the message of cardiovascular risk to people, and in particular for the purpose of this study, how do you personalize that message for women? McKinley et al. (2000) comment on the results of
the REACT trial, and, while they do not dismiss the benefits of public education they suggest "an alternative to mass campaigns with potential to have some effect on this problem is more personalized programs for people at high risk for coronary artery disease" (p. 245).

Health care professionals can personalize the messages to women about their cardiovascular health. Women in the present study who were aware of their personal cardiac risk experienced a clear path to diagnosis and hospital admission. Based on this finding it is reasonable to expect that if women are aware of their personal cardiac risk they will experience clearer paths to diagnosis and hospital admission if they develop cardiac symptoms. Ideally, women who are aware of their personal cardiac risk will make changes to their lifestyle so they will not have to experience CVD. Some of the participants in the present study indicated that they would have changed some aspect of their cardiovascular health or would have paid more attention to their symptoms if they had known they were at risk for CVD.

Health care professionals can use a number of strategies to assist women to understand their cardiac risk, and thereby personalize the message about women and CVD. Screening for cardiovascular disease and cardiovascular risk factors must
become a routine part of women's health care. At the same time that health care professionals screen for cervical, ovarian, and breast cancer, they can screen for each woman's present risk for CVD. This includes an evaluation of blood lipids, blood pressure, menopausal status, the presence of diabetes, family history of CVD, body mass index, smoking history, and a review of present diet and exercise patterns (Abramson, 2000). This is also an opportune time for health care professionals to talk to women about their understanding of women's experiences with CVD and to clarify any misconceptions that women may have about this topic.

The results of the health care professionals evaluation of a woman's risk for CVD can be analyzed to provide the woman with an objective measure of her risk for developing cardiovascular disease or experiencing a cardiac event, such as AMI. One such tool for this evaluation is the Framingham Risk Score (National Institute of Health, 2003) that includes an evaluation of a person's blood lipid levels, age, gender, smoking, blood pressure, and presence of diabetes. This tool provides a prediction for a person's 10-year risk for developing cardiovascular disease based on a point system that compares a person's risk to a similar person without risk factors. This tool is limited to use with people who
have not yet developed CVD, and it was developed through studies with Caucasian populations and may not be applicable to individuals from different ethnic backgrounds.

Goldberg (2002) has developed a more comprehensive tool for evaluating a woman's risk for CVD. In addition to evaluating the components included in the Framingham Risk Score tool, this tool includes an evaluation of body mass index, menopausal status, activity level, stress management, and family history. Although this tool does not provide a probability prediction for a person's risk for CVD, it does provide a more comprehensive analysis of a woman's risk factors, and defines a woman's risk for CVD at none, low, moderate, or high, which may have more meaning for an individual than a statistical analysis of their 10-year risk for a cardiac event.

Women also need to be aware of the different signs and symptoms that they may experience with an acute cardiac event, and they need to know the appropriate actions to take. In the present study, the women who knew their cardiac symptoms and had received instruction about the actions to take for their symptoms experienced a clear path to diagnosis and hospital admission. At the same time that they assist women to understand their personal cardiac risk, health care
professionals can talk with women about their understanding about women's experiences with CVD and about the appropriate actions to take if they experience any signs and symptoms that may indicate a cardiac disorder.

There are also opportunities for women who are living with CVD to share their experiences with others, and health care professionals can facilitate these opportunities. Sullivan and Sullivan (1997) discuss the role of altruism in volunteers who have experienced CVD and share their stories with others to help them through their cardiac rehabilitation. Two of the women in the present study voiced a desire to have other women learn from their experiences with CVD. It is possible that a message about women's experiences with CVD would have more impact coming from a woman who has experienced CVD than it would if it came from a health care professional. The role of the health care professional in this situation would be that of a facilitator. Health care professionals who work with women who are at risk for or who are living with CVD can explore with these women the possibility of coming together to share their experiences with and understanding of CVD. While exploring the possibility of such a meeting with the women, the health care professional can also determine the unique
needs of the group, in terms of such issues as childcare or
dercure and availability to attend such a program.

Health care professionals can also consider having women share their experiences on a more informal basis. One participant in this study has already started to share her experiences with others. Women can be encouraged to talk to friends and family about their experiences to increase the knowledge that others have about women and CVD. Women who have experienced CVD may also be willing to share these experiences in a public forum, such as television ads or magazine articles, and become a spokesperson for women and CVD. Health care professionals can help these women to link with groups such as the Heart and Stroke Foundation who are involved with public education campaigns about cardiovascular health.

Health care professionals also need to consider alternative programs for women who are unable to attend more structured or traditional programs pertaining to cardiovascular health. Allen and Scott (2003) discuss the use of community health workers (CHW's) who work with individuals at risk for CVD. These authors note "CHW's are characteristically indigenous to the community being served, and are therefore uniquely aware of the ethnic, linguistic,
socioeconomic, cultural, and experiential factors that may influence that community's utilization of primary and secondary preventive health care services" (p.151).

These community health workers are aware of the complex nature of people's interpretation of their cardiac health, and they work within these unique experiences to provide preventive cardiac health services. Allen and Scott (2003) note that the community health workers work with people in their environment, act as a link to health care resources, and provide direct health education. The use of alternative methods to provide cardiac health services is congruent with an appreciation for the complex nature of women's cardiac experiences.

Education about women and CVD should not be limited to women who are at risk for or who are living with CVD. The participants in the present study identified their family and friends as positive forces in their pre-hospital experience, but the literature pertaining to women and CVD shows conflicting findings (Dracup & Moser, 1997; McKinley et al., 2000). It is apparent that the significant others of women who experience CVD play an important role in the decisions that women make about their cardiac health and they can be included, with the consent of the women, in health care
education opportunities.

**A responsive health care system**

Once a woman is aware of the unique experiences of women with CVD and her personal cardiac risk for CVD, she needs to be supported to seek ways to modify any risk factor that she may have for CVD. This can be very challenging for the health care professional. What the health care professional believes to be appropriate health choices may not be congruent with the choices of the woman herself. It is essential that the health care professional appreciates that the choices are the woman’s to make, and the role of the health care professional is to provide the woman with the most current knowledge and treatment options in a supportive and non-judgmental fashion. The health care professional needs to be aware of any socioeconomic barriers, such as income, transportation, or childcare needs that may prevent a woman from making health choices.

British Columbia’s Women’s Hospital and Health Centre Society (1995) provides an overview of a community consultation report that outlines the health care needs of the women of British Columbia. Although these authors do not address the issue of cardiovascular health specifically, the recommendations that they present are applicable to this
discussion in so far as they relate to the complex nature of women's experiences with ACS, and the more specific aspects of the experience such as interactions with health care professionals, emotional response to symptoms, and perceptions of personal cardiac risk. In this report the authors find that women have very specific needs in relation to their health care. These needs form the basis of the discussion that follows.

Holistic health care

Dossey (1997) describes holism "as a way of viewing everything in terms of patterns and processes that combine to form a whole, instead of seeing things as fragments pieces or parts" (p. 5) Health care services that incorporate a holistic approach are congruent with the need to include CVD risk screening as a part of routine health screening and to consider a women's risk for CVD in the context of her life. As stated previously, the findings from the study presented in this thesis demonstrate the complex nature of women's interpretations of their cardiac experiences. A health care professional who practices a holistic approach to health care would consider CVD as only one aspect of a woman's life, and would work in partnership with women to find ways to make cardiovascular health recommendations fit within their lives.
Emphasis on mental health issues

Psychosocial factors, such as stress, anxiety, anger, hostility, social isolation, and depression are associated with an increase risk of CVD (Lonn, 2000). It is also apparent from the interviews with the women in this study that the emotional aspects of their experiences were important considerations in the interpretations of the pre-hospital experiences. These emotional and psychological aspects of health must be included with the routine screening of physical parameters such as blood pressure and lipid measurements. Health care professionals can incorporate discussions with women about their emotional health and their feelings about CVD in to their regular visits and screening for cardiovascular health. They also need to be aware of treatment, counseling, and support services for women who have mental health issues in relation to or in addition to CVD and how to provide or access these services.

Access to health care services

Providers of health care services must consider potential access barriers for women. This includes consideration of geography, income level, language, cultural considerations, hours of operation, and childcare services. Health care services need to be located within local
communities and need to be affordable and consider the complex roles of women that often includes responsibilities for childcare or eldercare. Although the participants in this study did not describe any barriers to accessing health care services, it is reasonable to believe that women would utilize health care services that accommodate the complex roles and responsibilities of their lives.

Choice of health care practitioner

Women who were interviewed for the *B.C. Women's Community Consultation Report* (1995) discuss the option of being able to see other health care professionals, including nurses, for many of their health care needs. Nurses could easily provide the cardiovascular health screening and education that it discussed in this chapter. More collaborative models of cardiovascular health can also be explored where multidiscipline teams work in partnership with women to address their heart health needs. This would allow women more choice in selection of a health care practitioner while allowing access to the expertise of all the team members. Allen and Scott (2003) discuss the positive impact of advanced practices nurses on enabling people to better understand and manage their cardiovascular risk. These authors note: "nurse-directed models may be one of the most
effective strategies for managing hypercholesterolemia and other cardiovascular risk factors, particularly when delivered as part of multidisciplinary teams" (p.151).

Enhanced interactions with primary care providers

Women who participated in the B.C. Women’s consultation report comment that they often feel that they have inadequate time with their primary care provider, frequently a physician, to address their health needs. This is a similar message to the one provided by the participants in the present study who experienced an unclear path to diagnosis and hospital admission. Other authors have also sited this concern about the response of health care professionals to the needs of women with CVD (Bensen et al., 1997). Improved education for health care professionals regarding women’s experiences with CVD, in combination with multidiscipline teams who provide services in ways that are structured to fit the complex roles of women will help to alleviate some of these concerns.

Validation of women’s lives

The participants in the B.C. Women’s consultation report also “talked about not feeling heard or validated by health care providers. Women reported feeling dehumanized and having their own knowledge of their bodies discounted” (British
Columbia's Women's Hospital and Health Centre, 1995, p. 30).
Some of the participants in the present study also felt that health care professionals minimized their concerns about their pre-hospital experiences, particularly when the woman's beliefs about her symptoms differed with those of the health care professional. Other women who participate in studies that explore their experiences with CVD also identify this issue (Bensen et al., 1997; Hawthorne, 1993; LaCharity, 1997; Murray et al., 2000; Sutherland & Jensen, 2000). It is logical to consider that improved knowledge on the part of health care professionals regarding the experiences of women with CVD, and restructuring of the health care team and service delivery as discussed above, can assist to alleviate this negative component of women's experiences with their health care providers.

**Measures to empower women to be involved with their health**

Participants in the present study who experienced an unclear path to diagnosis and hospital admission were unaware of their personal cardiac risk and had incorrect expectations about their cardiac symptoms. Women can only be involved with their cardiovascular health if they have the necessary knowledge and skills available to them. Women also have to have interactions with health care professionals that are
non-threatening and supportive of the decisions that they make about their health. Health care professionals must assist women to understand their risk for CVD, to understand the signs and symptoms of CVD in women, and know the actions to take in the event they experience ACS. I have presented strategies to meet these requirements, and therefore, empower women to be involved with their cardiovascular health in the discussion above.

Emphasis on prevention

Changes in health care practices must focus on prevention of CVD in women and well as the treatment of CVD. There is clear evidence that strategies to prevent CVD in women not only reduce the morbidity and mortality for women, but also improve the quality of lives for women at risk for CVD (Canadian Cardiovascular Society, 2000). In earlier sections of this chapter I discussed strategies that health care professionals can use to assist women to understand their risk for CVD and to support them to make decisions about their cardiovascular health. These strategies can be used for primary prevention with women who are at risk for CVD, but have not experienced a cardiac event, and for secondary prevention with women who have experienced a cardiac event.
Integrated services and improvements in continuity of care

These two aspects of the British Columbia’s Women's Hospital and Health Centre Society’s (1995) community consultation report link together, and are identified as areas of concern for the participants in this consultation. They are also areas of importance for women with CVD, particularly for women who live in rural areas, such as those who participated in the present study. Although the focus of the present study is on women’s pre-hospital experiences, the women in this study did discuss the how their lives had changed as a result of their experiences. The women’s experiences with CVD appear to involve a continuum that starts before diagnosis and continues after discharge from hospital. This has implications in terms of health care services that are available to women after they experience ACS. I have already discussed the need for a preventative approach to women’s cardiovascular health. The following discussion will focus on health care services for women after they experience ACS.

The benefit of cardiac rehabilitation services is well documented in the literature. Ignaszewski and Lear (1999) provide an overview of these benefits including a discussion of both the physical and psychosocial benefits.
Unfortunately, a review of the literature also shows that women are less likely to be referred to cardiac rehabilitation programs and are more likely to drop out even when they are referred to these programs (Arthur, 2000).

An important consideration in women’s involvement in cardiac rehabilitation programs is access to and availability of these programs (Arthur, 2000). Specialized health care services for cardiovascular health are located 50 to 100 kilometers from the Eastern Fraser Valley where the present study was located. This distance to health care services frequently leads to a breakdown in communication between health care providers and a lack of continuity of care for clients. A recent needs analysis for the Fraser Valley Health Region demonstrates a lack of cardiac rehabilitation services in the Eastern Fraser Valley (Snyder, 2000), and at present, the only preventative health services available focus on nutrition and physical activity, and these services are not part of comprehensive program for cardiovascular health (B.C. Heart Health Society, 1999). One participant in the present study stated that she is attending a cardiac rehabilitation program twice a week in a community that is over 50 kilometers from her home. There are no programs available to her in her home community, and fortunately, she has the means
to participate in this program. This participant was also discharged home after a sudden, first AMI and emergency angioplasty with no follow-up support or teaching about her condition.

Preventative and rehabilitative heart health services must be available and accessible to women in their home communities. An essential component of improving local cardiovascular health is to ensure sufficient funding is available to provide these services. Cardiovascular disease is expensive. In 1997 the hospital cost for ischemic heart disease in the Fraser Valley Health Region was approximately $5.3 million (Heart and Stroke Foundation of B.C. & Yukon, 1998). Primary and secondary prevention of CVD through risk factor management and education about lifestyle modification are both cost-effective interventions for people with CVD (Grover, 1999). Members of Regional Health Boards and individuals who make decisions about health funding need to be informed about the cost associated with a lack of local services for cardiovascular health. Health care professionals are in key positions to lobby politicians for support for improved funding and to share their knowledge about CVD and cardiovascular health services at community health forums and health board meetings. Health care professionals can also
work with women who are willing to share their experiences with CVD to advocate for improved local resources for cardiovascular health.

There also must be processes in place to ensure that women receive the follow-up care that they need once they are discharged to their home communities. This involves the development of communication plans to ensure continuity of care. Health care providers in urban, tertiary centers can work with their colleagues in rural health centers to develop processes where key health information is transferred with a woman when she is discharged to her home community. This could include the use of transfer forms that a woman can take with her or the use of phone or electronic notification of a woman’s transfer. Processes must also be in place to ensure good communication between primary care providers and specialists so that women receive consistent messages from their health care providers. Again, this requires collaboration between different tertiary and community centers to develop health care information that is consistent and meaningful for women who are being discharged home.

The discussion I presented above outlines strategies for health care professionals to use in their practice to support women to interpret their experiences with CVD in a more
positive way. In the following section, I outline recommendations for research that will enhance the knowledge that already exists regarding women and CVD.

**Recommendations for Future Research**

The earlier discussion in this chapter on practice implications and the discussion in the preceding chapter regarding the findings from this study have raises a number of questions that could be answered through future research on the subject of women and CVD. Both quantitative and qualitative research projects are needed to provide a broad base of knowledge on this topic.

An area for future research to help understand women's experiences with CVD involves understanding how women present their symptoms to family and friends. As described previously in this thesis there are conflicting findings on the influence of interactions with family and friends in relation to women's decisions to seek treatment for cardiac symptoms (Dracup & Moser, 1997, McKinley et al., 2000). How do women present themselves to friends and family, and how do friends and family interpret these presentations? A qualitative study could be designed that explores the experiences of the friends and family members of women with CVD.
The findings from this study demonstrate that women's interactions with health care professionals are influential in their interpretations of their pre-hospital experiences with ACS. This indicates another area that requires research in relation to the knowledge that various health care professionals have about women and CVD, and how health care professionals make treatment decisions about women with CVD. These topics could be explored using either quantitative methods to determine the actual knowledge that health care professionals have or qualitative methods to determine the factors that influence the decision-making processes that health care professionals use to treat women with CVD. It also would be worthwhile to conduct such studies with different disciplines to determine whether there are any differences between the groups.

In relation to the preceding discussion on practice implications, health care professionals need to perform outcome studies to determine whether the proposed changes, such as improved cardiovascular health screening and education about CVD for women, have any impact on women's health outcomes. For example, researchers could explore whether routine screening and education about CVD improves women's knowledge about CVD and their perception of personal
cardiac risk. Another question that can be explored is whether access to health care professionals such as advanced practice nurses improves women's knowledge of CVD risk or whether they have reduced their CVD risk as indicated by measures such as smoking, lipid profiles, and hypertension. It would also be important to determine, possibly through the use of questionnaires or focus groups, whether the women are satisfied with any implemented practice changes and to determine any additional changes that they would like to see in terms of their relationships with their health care providers or the services provided.

A final area of consideration is in regards to the study presented in this thesis. The women who participated in this study are Caucasian and receive their primary health care services in the eastern Fraser Valley. It would be beneficial to repeat this study with women who live in different health regions and who are from a variety of ethnic backgrounds. The findings from this study indicate that these women's interpretations of their pre-hospital experiences involve complex interactions with a number of factors. It is possible that other factors such as income level, geographic location, type of health care system, language barriers, and cultural beliefs and traditions about health and health care can also
be influencing factors for women’s interpretations of their pre-hospital experiences with ACS. Further research that explores these factors would add to our knowledge of this multifaceted phenomenon.

The experience of CVD is a complex phenomenon that cannot be explained through the use of one research method or with one study population. Researchers who use a variety of research methods with diverse groups of study participants will provide a comprehensive body of knowledge that can be applied in clinical practice to enhance the experiences of both women with CVD and the health care professionals who work with them.

Summary

The study that I have presented in this thesis examines the pre-hospital experiences of eight women with ACS who reside in the eastern Fraser Valley. In this thesis I have examined the literature pertaining to women and CVD and found that the occurrences, symptom presentation, diagnosis, management, treatment and outcomes for women with CVD are different from those of men. I have also discovered that there is limited research on women’s pre-hospital experiences with CVD. Following this analysis of the literature, I
outlined the methods and methodology that I utilized in this study, and I presented an overview of the key findings from my interviews with the study participants. Through my analysis of these interviews I determined that the prehospital experiences of the women in this study are a result of a complex interaction between a number of factors. These factors are common to all of the women’s experiences, but each woman interprets these factors in a unique way that influences whether she experiences a clear or unclear path to diagnosis and hospital admission. The common aspects of these unique experiences have implications for health care professionals and the services that they provide to women with CVD, and in the final chapter I discussed these implications and made recommendations for future research in to the area of women’s experiences with CVD.

Individuals’ experiences with health and illness are diverse events that have profound effects on their lives. I am hopeful that the study presented in this thesis adds to the knowledge that health care professionals have about women’s experiences with CVD, and that it serves as a positive influence on the future relationships that women have with their health care providers.
REFERENCES


Canadian Cardiovascular Society.


myocardial infarction. Canadian Journal of Cardiovascular Nursing 13(2), 14-23.


of suspected myocardial infarction in men and women. The

cardiovascular disease. The Canadian Journal of
Cardiology, 15(Suppl G), 114G-116G.

bypass surgery. Scholarly Inquiry for Nursing Practice:

Heart and Stroke Foundation of B.C. & Yukon. (1998). Regional
summary for the Fraser Valley Health Board. Vancouver:
Author.

Heart and Stroke Foundation of B.C. & Yukon. (2000). Heart

Mailing a lifesaver. Hearts and Minds, 2-3.

Heart and Stroke Foundation of Canada. (2000). The changing
face of heart disease and stroke in Canada 1999. Ottawa:
Author.

experience for elderly women living with coronary artery
disease. Canadian Journal of Cardiovascular Nursing,
9(3), 11-23.

Hochman, J.S., Tamis, J.E., Thompson, T.D., Weaver, W.D.,


APPENDIX A

Sample Letter of Introduction

Thank you for taking the time to read this information letter. My name is Diane Snyder. I am a Registered Nurse and a graduate student completing my Master’s Degree in Nursing at the University of British Columbia.

For my thesis I am interested in learning more about women’s experiences with heart disease. I hope that this study will provide health care professionals with information that will help us to meet the needs of women with heart disease.

If you are interested in sharing your experiences with me for my research I will ask you for approximately two hours of your time for an interview with the possibility of a second in-person interview and/or a short telephone interview. The amount of time you might spend with this study is a minimum of two hours and a maximum of five hours if you are involved in both interviews and a telephone follow-up. The place and time for these interviews will be selected for your convenience.

Your involvement in this research is completely voluntary, and it will in no way affect the health care that
you receive. If you do choose to participate in this research you may withdraw from the study at any time.

If you would like to participate in this research or if you would like more information, please notify your nurse who will place your name and phone number on a contact list, and I will contact you by phone. You may also contact me directly at 604-792-8475 or by e-mail at bde@shaw.ca. You may also contact my UBC faculty advisor Dr. Angela Henderson at 604-822-7426.

Thank you again for your attention to my request. I hope to hear from you in the future.

Sincerely,

Diane Snyder, RN, BSN, CNCC(C)
APPENDIX B

Sample Consent Form

Informed Consent Form

Study Title: The Pre-Hospital Experience of Women with Acute Coronary Syndrome

Principal Investigator:

Diane Snyder, RN, BSN, CNCC(C)

Faculty Advisor:

Dr. Angela Henderson
Professor, School of Nursing
The University of British Columbia
Vancouver, B.C.
604-822-7426

Purpose:

I understand that the purpose of this study is to explore the experiences of women who have had an acute coronary syndrome.

Study Procedures:

During interviews with the principal researcher, Diane Snyder, I will be asked to describe my experiences prior to my admission to hospital for heart disease. The interview will be audio taped and will take a maximum of two hours to complete. The researcher may ask me for a second interview
and may contact me for a telephone follow-up interview to clarify questions or information obtained in the first interview.

Confidentiality:

Any information from this research study will be kept strictly confidential. All documents will be identified by code number and will be kept in a locked filing cabinet. All computer disks and audiotapes will also be kept in a locked cabinet, and will be destroyed at the completion of this study. Participants will not be identified by name in any reports of the completed study.

Contact:

If I have any questions or desire further information with respect to this study, I may contact the researcher Diane Snyder at 604-792-8475 or the UBC faculty advisor Dr. Angela Henderson at 604-822-7426.

If I have any concerns about my treatment or rights as a research subject I may contact the Director of Research Services at the University of British Columbia, Angus Livingstone at 604-822-8587.

Consent:

I understand that my participation in this study is entirely voluntary and that I may refuse to participate or
withdraw from this study at any time without jeopardy to my health care.

I have received a copy of this consent form for my own records.

I consent to participate in this study.

Subject Signature ___________________________ Date __________

Signature of a Witness ___________________________ Date __________
APPENDIX C

Sample Interview Questions

1. Tell me about the events that led up to you being admitted to the hospital.
2. What was happening at that time?
3. What were you feeling at that time?
4. Who was with you during this time?
5. When did you decide to go to the hospital?
6. What made you decide to go to the hospital?
7. How did you get to the hospital?
8. What about this experience really stands out for you? Tell me more about this.
9. Tell me about your previous experiences with CVD—personal and of others, i.e. family or friends
10. Is there anything else that you would like to share with me? (At the end of the interview)

Probing Questions

1. Tell me about what you were thinking at that time/when you did that.
2. How did that make you feel?
3. Tell me about your feelings at that time/when that happened?
APPENDIX D

Demographic Data

1. Age
2. Marital Status
3. Number of children
4. Number of children living at home
5. Other dependents
6. Employment status
7. Previous hospital admissions
8. Cardiac diagnosis at the time of admission
9. Support networks, formal and informal