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# Barriers to Cardiac Patients Returning to Work: Program Planning Guidelines for Social Workers in Outpatient Cardiac Rehabilitation Programs

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**Barriers to Cardiac Patients Returning to Work:  
Program Planning Guidelines for Social Workers in Outpatient Cardiac  
Rehabilitation Programs**

**Anne Powers**

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MASTER OF SOCIAL WORK  
AUGSBURG COLLEGE  
MINNEAPOLIS, MINNESOTA

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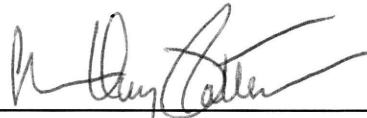
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\_\_\_\_\_  
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*has been approved by the Examining Committee for the thesis requirements for the Master of Social Work Degree.*

*Date of Oral Presentation:* 4/12/95


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*Thesis Reader*

### **Dedication**

This is dedicated to all the special people who helped me reach this milestone.

To Gary, my partner and computer consultant, for his abounding patience, support and encouragement through this venture.

To my parents and family for their understanding and support.

To the personnel at the Hutchinson Community Hospital, especially Sara Nelson for her willingness to cover my time off and Darlene Kotelnicki for her assistance with this project.

To Sharon Patten, my thesis advisor, who read all my drafts and offered helpful feedback and suggestions.

## ABSTRACT OF THESIS

### BARRIERS TO CARDIAC PATIENTS IN RETURNING TO WORK: PROGRAM PLANNING GUIDELINES FOR SOCIAL WORKERS IN OUTPATIENT CARDIAC REHABILITATION PROGRAMS.

Methodology: Exploratory

ANNE M. POWERS

APRIL, 1995

The purpose of this study is to explore barriers to cardiac patients under the age of 65 in returning to their jobs following cardiac events and create program planning guidelines based on the findings. Reasons why patients do not return to work noted in the literature include job stress, anxiety and depression, cardiac invalidism, and/or physical limitations. Former outpatient cardiac rehabilitation patients were surveyed as well as professionals who work in hospitals or clinics with cardiac patients to assess barriers to returning to work following a cardiac event and how outpatient cardiac rehabilitation programs can assist patients in returning to work. Findings show 94% of the respondents returned to work after their cardiac event (n=17). However, cardiac patients may experience psychosocial problems which delay return to work including depression, job stress, and cardiac invalidism which supports social work involvement in outpatient cardiac rehabilitation programs.

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## **CHAPTER I INTRODUCTION**

### **Overview of Research Topic**

Cardiovascular disease is the number one killer in America today (Chan & Ward, 1993). Cardiac events affect not only elderly persons but also younger persons. One in seven women and one in six men between the ages of forty-five and sixty-four have some form of heart disease in the United States. On an annual basis, more than one-sixth of all persons killed by cardiovascular disease are under the age of sixty-five.

In 1994, the estimated economic cost of cardiovascular disease in the United States was \$128 billion; this estimate includes physician fees, nursing services, hospital and nursing home services, the cost of medication, and lost productivity due to disability. More than 132 million workdays are lost each year in the United States because of heart attacks in workers (Chan & Ward 1993). Coronary artery disease occurring in individuals under the age of sixty-five can mean a significant loss in individuals' earning power during their most productive time of their life.

Persons who experience cardiac events may participate in outpatient cardiac rehabilitation programs. These programs are designed to improve the quality of the lives of individuals who have experienced a cardiac event such as a myocardial infraction (heart attack), bypass surgery, angioplasty, angina, pacemaker insertion,

heart valve surgery, and congestive heart failure. Cardiac rehabilitation in outpatient settings also address vocational aspects of recovery.

In 1981, Thoreson and Ackerman report that not enough attention is given to the social and psychological aspects of cardiac illness, especially in relation to return to work. In the 1980's, more emphasis was on care in the coronary care unit and not on long-term management of the illness. Return to work is a necessary part of the long-term management of cardiac illness because most patients are physically able to return to work (Thoreson & Ackerman, 1981). Individuals in the workforce experiencing a cardiac event may encounter problems returning to work during the recovery phase. Recent research concludes that cardiac rehabilitation programs improve the resumption of work rate and decrease the delay in resumption of work for cardiac patients (Boudrez, De Backer, & Comhaire 1994).

In recovery from cardiac illness and learning to live with cardiovascular disease, there are psychosocial issues that may prevent those under the age of sixty-five from returning to work. One issue is job stress. Researchers have shown that there is a relationship between life stress, specifically job stress, and coronary heart disease, although the strength of the relationship is not determined. Other psychosocial issues that may prevent a person from returning to work are fear of physiological symptoms that may occur on the job, cardiac invalidism, lack of social support, depression and anxiety.

### **Purpose of the Study**

The purpose of this study is to complete a needs assessment with persons who are under the age of sixty-five, who were employed at the time of their cardiac event, and who participated in an outpatient cardiac rehabilitation program. The needs assessment will be used to identify barriers to cardiac patients returning to work following a cardiac event. Professionals who have worked with persons with cardiovascular disease in hospital and clinic settings will also be interviewed to identify barriers to individuals to returning to work. The findings of the needs assessment will be used to create program planning guidelines for outpatient cardiac rehabilitation programs to facilitate return to work for individuals employed at the time of their cardiac event. The researcher also explores the role of social workers in outpatient cardiac rehabilitation programs.

### **Research Questions**

The study addresses the research questions:

1. What are the barriers to cardiac patients returning to their jobs?
2. How can outpatient cardiac rehabilitation programs help cardiac patients to return to their jobs?



## **CHAPTER II REVIEW OF THE LITERATURE**

### **Conceptual and Theoretical Framework**

The literature discusses several different concepts that provide groundwork for discussion of cardiovascular disease and cardiac patients' return to work. They are reviewed in the following paragraphs.

#### **Cardiac Rehabilitation: Historical Perspective**

Cardiac rehabilitation is documented as early as the 1930's (Squires et. al, 1990). The usual treatment for acute myocardial infarction during the 1930's and until the 1950's was six weeks of bedrest. In the 1950's, Levine and Lown (cited in Squires et al., 1990) began to advocate to increase activity earlier. Therefore, it was during the 1950's that formal programs consisting of detailed activities, which included sitting in a chair for progressive periods, were organized for inpatients who experienced an acute myocardial infarction.

Earlier mobilization was continued to be practiced in the 1960's (Squires et al., 1990). Then, cardiac rehabilitation programs focused on physical exercise and some vocational adjustment. In the 1970's, cardiac rehabilitation became a multi-disciplinary program in which healthcare professionals teamed together to provide a comprehensive program.

#### **Cardiac Rehabilitation: Current Trends**

The focus of today's cardiac rehabilitation programs is to improve the patient's quality of life and reduce effects of psychological and social impairment (van Dixhoorn, Duivenvoorden, Staal, Pool, & Verhage, 1987). According to

Kottke (1992, p. 123), "The goal of cardiac rehabilitation is to optimize function through 1) identification and management of medical needs, 2) risk factor control, 3) physical reconditioning, and 4) management of the patient's psycho-social needs." Research shows that cardiac rehabilitation programs improve the psychosocial functioning of patients and their families.

Anyone who has had angioplasty, bypass surgery, a myocardial infarction, angina, or congestive heart failure can participate in outpatient cardiac rehabilitation. A multidisciplinary team approach is used in outpatient cardiac rehabilitation to meet the multiple needs of cardiac patients (Squires et al., 1990). The various professionals who provide services to patients in cardiac rehabilitation may include exercise physiologists, cardiac rehabilitation nurses, medical directors, dietitians, nurses, psychologists, social workers, and other healthcare professionals as needed (Squires et al., 1990). Rural outpatient cardiac rehabilitation programs are typically coordinated by cardiac rehabilitation nurses who consult with other professionals as needed.

Individualizing the components of the cardiac rehabilitation program and using the skills of various healthcare professionals is emphasized (Squires et al., 1990). Cardiac rehabilitation programs often consist of exercise training along with education about stress, diet, heart disease, smoking cessation, and psychosocial adjustment. These programs also offer support to the patient and spouse, and encourage spousal participation. Individuals identified as requiring additional assistance with emotional issues are often referred for individual counseling to either a mental health

professional with the program, if available, or with a mental health professional outside the program. Standard programs run three days a week to provide exercise, education, and support.

Outpatient cardiac rehabilitation programs can also reduce individuals' fears. However, these fears are often overlooked by medical and rehabilitation professionals. It is quite common for cardiac patients to experience fear after a myocardial infarction; fear that they have a chronic disability that will result in progressive deterioration in their functioning overall (Thoreson & Ackerman, 1981). Other fears include having another myocardial infarction that will lead to death and fear regarding sexual dysfunction, economic concerns, and dependency.

### **Biopsychosocial Model of Healthcare**

Outpatient cardiac rehabilitation programs demonstrate the philosophy of the biopsychosocial model of healthcare in which ". . . biological, psychological, and social factors are implicated in all stages of health and illness, ranging from those behavior and states that keep people healthy to those that produce severe, long-term, and debilitating disease" (Taylor, 1990, p. 40). In this model, disease is seen as an interplay between environmental, physical, behavioral, psychological, and social factors.

The goal of the biopsychosocial model of healthcare is of health as defined by the World Health Organization (Kelner, 1985, p. 18), a "state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity." The biopsychosocial model of healthcare views disease as an interactive

process between the disease process and psychological and social functioning. Therefore, the focus is on closing the gap between physical and mental health services. Social work in healthcare is not a new trend. The relationship between social work and healthcare is documented as early as the late 1800's in the prevention of tuberculosis, work conditions, and housing problems (Shannon, 1989). According to Shannon, social workers should be the primary providers of psychosocial services to close the gap between physical and mental health services. Consequently, a social worker's role in the biopsychosocial model of healthcare is to help individuals and their family members find adaptive coping mechanisms.

Contrary to the biopsychosocial model is the biomedical model of healthcare. The biomedical model, which is quite common in healthcare, views health as the absence of disease. This model of healthcare assumes that diseases are a result of biochemical agents or physical injury, which produce certain symptoms or signs. (Cioffi, 1991). Because each injury or disease has unique symptoms and signs, symptoms can be used to identify a specific causal biological process. Therefore, the biomedical model presumes that there is a cause-effect relationship between illness and its symptoms and it does not consider the psychosocial aspects of the illness process (Cioffi, 1991).

### **Systems and Ecological Systems Theory**

One of the theories used for this research is systems theory. Systems theory explains that people are affected by interactions between themselves and their environment. In this research, the environment identified is the work environment of

people who have had a cardiac event. Malcolm Payne (1991, p. 137) states, "The aim (of systems theory) is to help people perform life tasks, alleviate distress and achieve aims and value positions which are important to clients." This statement will be the crux of the research and program planning guidelines.

The ecological systems model states that a reciprocal adaptive balance with the environment occurs when a person is able to change in the environment. The change is a result of either the person wanting to change or the environment changing the person. Therefore, there is a transactional relationship between person and environment. When the adaptive balance is upset by transactions, stress results. There are three sources that can create stress. They include life transitions, environmental pressures, and interpersonal processes (Payne 1991). When a cardiac event occurs, an individual's adaptive balance is upset.

### **Stress Theories**

Recovery from cardiac illness may be impeded by physiological, psychological, and social factors that contribute to a patient's stress level because cardiac symptoms may be exacerbated by stress (Berkman, Millar, Holmes, & Bonander 1990). Researchers have recognized that physiological, psychological, social, and environmental responses affect the recovery of cardiac patients and affect return to work. Abbott and Berry (1992) found in their research that occupational stressors were noted more frequently by those men who returned to work than by those men who did not return to work.

One purpose of outpatient cardiac rehabilitation is to decrease stress related to employment. Job stress may be a factor in a person not returning to work (Kowalski, 1992). Stress has physiological effects that may cause a person to be afraid to return to work. The individual may relate the physiological symptoms of stress to the symptoms of his or her cardiac event when stressed at work.

Several theories explain the connection between the body and stress. Walter Cannon in the late 1920's originated the idea of "fight or flight" response. This response describes the relationship between various emotional states and physiological functions and disease. Dangerous situations supposedly evoke this response that may include an elevation in heart rate and blood pressure (Hurrell, 1987). Cannon also pioneered the idea of physiological homeostasis. He theorized that high levels of stress produced strain in the homeostatic mechanism. Hurrell (1987) builds on this concept stating job stress is a result of some working condition that disrupts a worker's psychological or behavioral homeostasis. If the disruption is prolonged, it is thought to lead to a variety of illnesses.

Another model of stress theory is Lazarus and Folkmans' (1984) transactional model of stress that describes stress in the following way. A person will experience psychological stress when he or she perceives a particular situation exceeds his or her resources or adaptive capacities and feels his or her well-being is endangered. In experiencing stress, the mediating factor is the psychological appraisal of the situation by an individual. Those events appraised as stressful are events seen as uncontrollable, unpredictable, or ambiguous (Taylor, 1990).

John Romano (1992) describes a popular theory of stress developed by Selye. Romano sees Selye as focused on responses to stressors and effects of the stressor on the body rather than on the stressors themselves. Selye believed that people develop a pattern of physiological reactions to stress and exhibit these patterns of response across a variety of stressful situations. Selye classified stress as Eustress (good stress) and Distress (bad stress), and he theorized that the body responded to demands on a person whether the demand was positive or negative.

Research shows that stress has physiological effects on the body. Chan and Ward (1993) report that everyone experiences stress, therefore, all cardiac patients are exposed to stress. The amount of stress a person experiences is a result of how he or she interacts and reacts to events in the environment which in this research will be the work environment.

### **Job Stress**

Outpatient cardiac rehabilitation programs decrease stress related to employment (Squires et al., 1990). Some researchers believe stress is subjective. Donovan (1987) supports that not all workers perceive working conditions the same, therefore, they will not see the same conditions as stressful. He theorizes that it is workers' perceptions of stressful situations linked with negative health and not the objective working conditions. Squires et al.(1990) offer a differing viewpoint in which they criticize stress management programs. They conclude that stress management programs place an emphasis on individual responsibility for coping and adapting, deflecting from a source of stress, which is the environment.

## **Return to Work**

### **Function of Cardiac Rehabilitation**

Return to work is cited throughout the literature as an indicator of successful rehabilitation following a cardiac event (Thoreson & Ackerman, 1981). It is also symbolic of return to normal functioning in our society. Thoreson and Ackerman found that long delays in returning to work or returning to "light" work led to unemployment or cardiac invalidism.

Cardiac rehabilitation programs can provide important functions to patient in returning to work (Thoreson & Ackerman, 1981). These functions include better communication about patients' recovery with patients' employers to decrease both the employers' and patients' anxieties about returning to work. Also in 1981, Thoreson and Ackerman reported that more attention should be given to how hard the heart is required to work and energy expenditures in different work environments that could involve information from the employer.

Thoreson and Ackerman (1981, p. 232) state, "Too often there is unnecessary delay and confusion in the cardiac rehabilitation program because of insufficient knowledge by the team as to the exact physical demands of the patient's job and a lack of communication between the patient, hospital, family doctor, and employer." This interferes with a patient returning to work. Thoreson and Ackerman (1981) cite a study in which 24 patients participated. The authors of the study found that emotional problems during the recovery period interfered with return to work. The results showed that 11 out of 24 patients had not returned to work. Of the 11



patients, nine had not returned because of psychological reasons, and two had not returned for medical reasons.

In a study that reviewed the literature related to work resumption and cardiac events, the rate of work resumption for individuals involved in cardiac rehabilitation programs varies from 40% to 90% (Zoetewij et al., 1991). Another study conducted in Ghent, Belgium, by the researchers Boudrez, De Backer, and Comhaire (1993) found a 100% rate of return to work for men who participated in a multidisciplinary cardiac rehabilitation program, which included vocational and social counseling besides exercise training. This compares to an 82% rate of return to work for those men who did not participate in a cardiac rehabilitation program, and 80% rate of return to work for those men who participated in an exercise only cardiac rehabilitation program.

Hamilton, (1990) in a review of the literature, found that women were less likely to return to work than men despite type of work and after longer convalescence. At four to six months, 35% of the men had returned to work compared to 25% of the women. Hamilton also cited another source which reported that in a study of women who experienced a myocardial infarction, only one half of the women had returned to work within one year. Included in the review was a study that related that women were less likely to return to work if they had a spouse. Also, return to work was related to income for men, but not for women.

Return to work is not only important for economic reasons, but also because it usually improves a patient's psychological status as well (Boudrez, De Backer, &

Comhaire, 1994). Unemployment following a myocardial infarction can lead to depression, feelings of inadequacy, occasionally divorce, and economic hardship (Kottke, 1992). Therefore, it is important to help the patient's return to work rather than to unnecessarily disable the cardiac patient. Outpatient cardiac rehabilitation programs have been shown to decrease the number of disability cases and increase patients' occupational activity level which translates into economic benefits for both patients and employers (Squires et al., 1990).

### **Socio-economic Status and Type of Employment**

In reviewing a British study by Abbott and Berry (1991), which considered demographic and psychosocial factors in men returning to work, they found that younger men and men of higher socio-economic status were more likely to return to work within two months of a first acute myocardial infarction. Men who had not returned to work within one year of their first myocardial infarction tended to be of lower socio-economic status and to have experienced greater levels of depression immediately after their myocardial infarction.

Type of employment determines the rate of return to work as well (Abbott & Berry, 1991). White-collar employees have a higher return to work rate than blue-collar employees. Although it may seem that physical demands of the job determine the rate of return to work, Thoreson and Ackerman (1981) propose that differing reactions to the myocardial infarction and changes that occur in the physical self between white-collar employees and blue-collar employees may affect return to work as well.

### **Pre-illness employment and Physician attitude**

According to Kottke (1992), a cardiac patient's pre-illness employment status and physician's attitude affects the patient's return to work more than the severity of the disease. Hamilton, in her 1990 study, supports that disease severity does not affect return to work. A Swedish study showed that for men and women undergoing coronary artery bypass grafting(CABG), the length of the sick leave prior to CABG as well as age, previous myocardial infarction, level of education, retirement benefits, and pension are predictive factors in return to work (Hedback, Perk, & Engvall, 1992). Individuals who have shorter sick leaves prior to coronary artery bypass grafting are more likely to return to work compared to individuals who have longer pre-CABG sick leaves. Hedback, Perk, and Engvall conclude that preoperative factors prior to CABG are predictive of return to work and these factors cannot be influenced by cardiac rehabilitation programs. The authors also reported that there was not a significant difference in the rate of return to work between individuals who participated in cardiac rehabilitation programs and individuals who did not participate in cardiac rehabilitation programs following CABG.

McGee, Graham, Crowe, and Horgan (1993) describe a study performed in Ireland which reports that physician's advice can influence return to work. In that particular study, of individuals undergoing CABG who did not return to work, 61% related that they did not return to work because of their physician's advice.

**Physical Limitations**

Physical limitations may be a factor in returning to work. A person may not be able to handle the physical demands of a job after a cardiac event. In a Swedish study of myocardial patients, the authors found a 20%-30% loss of production for persons in heavy manual jobs (Levin, Perk, & Hedback, 1991). Cardiac patients can be tested to determine if they can meet the physical demands of their jobs; and the literature recommends that patients be tested in cardiac rehabilitation programs. Testing cardiac patients for return to work includes strength and endurance testing (Squires et al., 1990). Most cardiac patients are physically able to return to work four to six weeks following an acute myocardial infarction.

**Depression and Anxiety**

Cardiac rehabilitation can decrease anxiety and depression which influences return to work (Levin, Perk, & Hedback, 1991). It is estimated that 40% to 65% of patients who have experienced a myocardial infarction will experience various forms of depression (U.S. Department of Health and Human Services, 1993). Depression is also prevalent in patients undergoing coronary artery surgery. According to the U.S. Department of Health and Human Services, the prevalence of major depression in patients who have experienced a myocardial infarction is approximately 18% to 25%, and 18% to 20% for those who have coronary artery disease identified through angiography. Thoreson and Ackerman (1981) relate that most patients typically experience a normal reactive depression that lasts about three months.

Depression is a reaction to the personal and irreversible damage imposed by the heart attack (Thoreson & Ackerman, 1981). Studies show that depression is seldomly diagnosed in these patients. Cardiac patients who did not experience psychiatric disorders as defined by DSM IV prior to their myocardial infarction had a shorter duration of symptoms. It is also suggested in the literature that minor depressions may be viewed as transitory adjustment reactions to the illness. Patients who experience moderate to severe depression following a myocardial infarction will more likely encounter more social problems including slower return to work and reports of more stress.

The severity of myocardial infarction tends to be associated with the level of depression or anxiety a cardiac patient will experience (Kottke, 1992). Historically, more severe myocardial infarctions were associated with depression, and mild myocardial infarctions were associated with anxiety. Thoreson and Ackerman (1981) cite a study supporting level of depression is correlated to the severity of disease. Patients with one-vessel disease experienced less depression than patients with three-vessel disease. Regardless, all cardiac patients are at risk for depression and anxiety (Kottke, 1992). Depression and anxiety can be disabling to the cardiac patient. However, early intervention and reassurance that they will be able to return to active function will decrease problems (Thoreson & Ackerman, 1981).

### **Social Support**

Receiving support from an individual's social system is called social support. A social system is defined as those persons who an individual interacts with such as

family members, co-workers, friends, neighbors, and church associates (Sirles & Selleck, 1989)

Recent research has shown that support from family and friends has a positive effect on the adjustment to and recovery from cardiovascular disease (Riegel, 1993). Social support has positive effects on psychological adjustment following a myocardial infarction by reducing psychological stress (Boudrez et al., 1994). Support acts as a buffer between the patient and the stressful situation (Dhooper, 1990). Riegel (1993) cites studies that have described poorer long-term adjustment for those cardiac patients who were unmarried or had marital strain at the onset of the study.

Family involvement in cardiac rehabilitation is important because the family can aid in decreasing the risk factors for heart disease such as stress, smoking, and unhealthy eating habits for the patient, and decrease the risk factors for the whole family (Kottke, 1992). Therefore, a role of social support may be to encourage the patient to engage in behaviors that are healthy to influence recovery (Aboud & Milton, 1988).

### **Cardiac Invalidism**

People who are unable to return to a satisfying and productive life, although they have physically recovered from a cardiac event, are often referred to as cardiac invalids (Riegel, 1992). Behaviors exhibited by a cardiac invalid include constantly seeking attention from the family and the physician, accepting the role of a sick

person, and displaying a sense of helplessness and exaggerated fragility because of his or her heart disease. Early research used return to work as an indicator of cardiac invalidism. However, researchers now acknowledge confounding factors such as job satisfaction, finances, and company policies affect return to work along with cardiac invalidism.

Three factors are implicated in influencing cardiac invalidism. They are neuroticism, overprotective social support, and severity of illness (Riegel, 1993). In a study of 111 patients who had first myocardial infarctions, the author found that neuroticism and social support were predictors of cardiac invalidism. Severity of illness did not predict return to work (Riegel, 1993). Hedback, Perk, and Engvall (1992) report a 50% chance of permanent cardiac invalidism for individuals who had a sick leave exceeding six months prior to Coronary Artery Bypass Grafting.

### **Social Work Role in Outpatient Cardiac Rehabilitation**

McKendry and Logan (1979) discuss the role of a social worker in cardiac rehabilitation programs in New Zealand. The social worker can assist in finance issues, employment issues, and identifying psychosocial issues. To be effective, a social worker in a cardiac rehabilitation program should be knowledgeable in the medical and pathological aspects of the cardiac illness. The social worker role differs from other medical staff because counseling is provided by the social worker. The authors clearly state that the understanding provided to the cardiac patient by the other medical staff cannot be substituted for skilled social work.

During the convalescent period the role of the social worker may include facilitating communication with the cardiac patient's employer regarding the patient's capabilities on the job, discussion of areas of concern regarding return to work, and assist in development of workplace accommodations (McKendry & Logan, 1979, Murdick, 1991). Therefore, the social worker may also help the cardiac patient in the retention of work.

For those individuals who are unable to return to work, they may need assistance obtaining material support (Sirles & Selleck, 1989). The social worker can assist cardiac patients in applying for disability income. If an individual is undecided about returning to work, the social worker may help the individual weigh the alternatives (Murdick, 1990). Also, individuals who do not have informal supports may be referred to self-help groups to create a support network (Dhooper, 1990).



## CHAPTER III METHODOLOGY

### Research Questions

The study addresses the research questions:

1. What are the barriers to cardiac patients returning to their jobs?
2. How can outpatient cardiac rehabilitation programs help cardiac patients to return to their jobs?

### Definitions of Key Terms

The following are definitions of key terms for this research.

*Job stress* is mental distress experienced because of a person's place of work and results in negative health.

*Cardiac event* is disease or pathological state of the heart that encompasses heart attacks, bypass surgery, angioplasty, angina, congestive heart failure, pacemakers, and heart valves.

*Cardiac Patient* is defined for the purposes of this study as a person who has cardiovascular disease as defined in this study.

*Cardiac rehabilitation* is an interdisciplinary program that helps patients, in an outpatient setting, restore and maintain optimal physiological, psychological, social, vocational, and recreational status as it relates to cardiovascular disease.

*Return to work* as referred to in this study is resumption of employment within one week of physician approval.

*Social support networks* are the relationships within which individuals receive emotional and practical support (Abood and Milton 1988).

*Depression* is defined by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition as a person having the symptoms of either depressed mood or loss of interest or pleasure for at least a two-week period along with five other symptoms out of the following list: weight loss or weight gain, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or loss of energy, feelings of worthlessness or excessive feelings of guilt, and diminished ability to think or concentrate.

*Cardiac Invalid* refers to a person who is unable to return to a satisfying and productive life although he or she has physically recovered from a cardiac event (Riegel, 1992). A cardiac invalid often maintains behavior associated with a sick role, exaggerates fragility and helplessness related to the heart disease, and demands constant attention from his or her family and his or her physician.

*Physical Limitations* is referred to when a person has decreased ability to lift repetitively as a result of a cardiac event.

### **Research Design**

The research is exploratory, and the researcher gathered qualitative and quantitative data to be used for the development of program planning guidelines for outpatient cardiac rehabilitation programs. The researcher completed a needs assessment with former outpatient cardiac rehabilitation patients and healthcare professionals with experience in cardiac rehabilitation. It is a cross-sectional design.

### **Study Population**

The study population included outpatient cardiac rehabilitation patients who participated in the program at Hutchinson Community Hospital, who were employed at the time of the cardiac event, under the age of 65, and utilized the outpatient program during July 1, 1993 through December 31, 1994. Persons under the age of 65 were chosen because those persons would be more likely to be in the workforce. Forty-five former patients met the criteria to be included in this study and 45 patients were sent questionnaires. The sample, consisting of individuals who participated in cardiac rehabilitation, was obtained by a reliance on available subjects, non-probability sampling method.

Healthcare professionals who have worked in the field of cardiac disease and cardiac rehabilitation for one year or more, and are currently working in an outpatient cardiac rehabilitation program in a hospital or clinic setting were also included in the study. The sample was obtained by a purposive, non-probability sampling method and snowball sampling. The researcher interviewed healthcare professionals from the Minneapolis Heart Institute, Ridgeview Medical Center, Rice Memorial Hospital, Methodist Hospital, Chippewa County Montevideo Hospital and Hutchinson Community Hospital.

### **Pre-Testing Questionnaire**

To pre-test the questionnaire, the outpatient cardiac rehabilitation nurse at Hutchinson Community Hospital was asked to distribute the questionnaire along with a cover letter and self-addressed, stamped envelope to cardiac patients currently in

the outpatient cardiac rehabilitation program who met the criteria of being under 65 and employed at the time of the cardiac event. The purpose of the pre-test was to determine clarity of the questionnaire. Three current participants in the outpatient cardiac rehabilitation program met the criteria to be sent questionnaires to pre-test the questionnaire. One questionnaire was returned. Minor revisions were made to the questionnaire.

### **Data Collection**

After revisions to the questionnaire, the outpatient cardiac rehabilitation nurse at Hutchinson Community Hospital sent the self-administered questionnaires to cardiac rehabilitation patients who met the stated criteria. The subjects were informed in the cover letter that they gave consent to participate in the study by completing and returning the questionnaire. The subjects were also instructed not to put their names on the questionnaire to ensure anonymity. The questionnaires were self-administered and the participants were instructed to return the questionnaire in the self-addressed, stamped envelope provided by a certain date.

The researcher also interviewed professionals by telephone who have worked in the field of cardiac disease and cardiac rehabilitation for at least two years using an interview schedule (appendix C). A needs assessment was conducted with professionals from the Minneapolis Heart Institute, Ridgeview Medical Center, Rice Memorial Hospital, Methodist Hospital, Chippewa County Montevideo Hospital, and the Hutchinson Community Hospital. The American Heart Association was used to solicit statistics on cardiac disease.

### **Protection of Study Participants**

This study was approved by the Institutional Review Board at Augsburg College and by the Division Director of the Community Support Programs at Hutchinson Community Hospital.

Each individual asked to participate in the study received a cover letter (appendix A) which explained the risks and informed him or her that if he or she returned the questionnaire (appendix C) or chose to answer the questions, he or she gave consent to participate in the research. The cover statement also informed the participants of their right to refuse to answer questions or to stop any time. Individuals were informed in the cover letter that his/her participation in the study was voluntary and his or her choice to participate would not affect his or her relationship with Augsburg College or Hutchinson Community Hospital. Participants were assured confidentiality in the cover letter.

### **Measures**

The researcher used open ended and closed ended questions on the questionnaire for outpatient cardiac rehabilitation patients. Also, two likert scale questions were included in the questionnaire. The questionnaire covered such areas as demographic information, judgements by the respondents about the information presented or lack of information presented, and assistance in returning to work received by the outpatient cardiac rehabilitation program at the Hutchinson Community Hospital.

The telephone interview with healthcare providers consisted of open-ended questions which included: services provided by their organization, disciplines involved in providing services, sociodemographic questions, their judgements about patients perceived barriers to returning to work and employers perceived barriers to cardiac patients returning to work.

## **CHAPTER V FINDINGS**

Forty-five questionnaires were sent to patients who participated in the outpatient cardiac rehabilitation program at Hutchinson Community Hospital between July 1, 1993 and December 31, 1994. Eighteen questionnaires were returned (40% response rate) but only seventeen questionnaires were useable because answers on one questionnaire were inconsistent. All of the respondents were employed (self-employed or paid) at the time of their cardiac event.

### **Sociodemographic Information of Cardiac Patients**

Eleven (65%) respondents were male and six (35%) respondents were female (n=17). The mean age of the respondents is 53 years old, the range is 43 to 62 years old. Two (12%) respondents were single and 15 (88%) respondents were married. The age groups of the respondents at the time of the cardiac event that led to their most recent participation in the outpatient cardiac rehabilitation program at Hutchinson Community Hospital is listed in Table 1. The mean age of respondents at the time of their most recent cardiac event was 52 years old. The range was 42 to 61 years old. The median number of weeks patients participated in the outpatient cardiac rehabilitation program was 6 weeks. The range was 3 to 12 weeks.

Of the 17 respondents, 15 (88%) worked over 40 hours per week at their job. One (6%) person worked 31-40 hours per week and one (6%) worked 20-30 hours per week.

Table 1

Age at Time of Most Recent Cardiac Event

n=17

Age	Number of Respondents
40-45	4
46-50	2
51-55	5
56-60	4
61-65	2

Five (29%) respondents experienced a previous cardiac event (n=17). The mean age of respondents' previous cardiac event was 52 and the range was 47 to 58 years old.



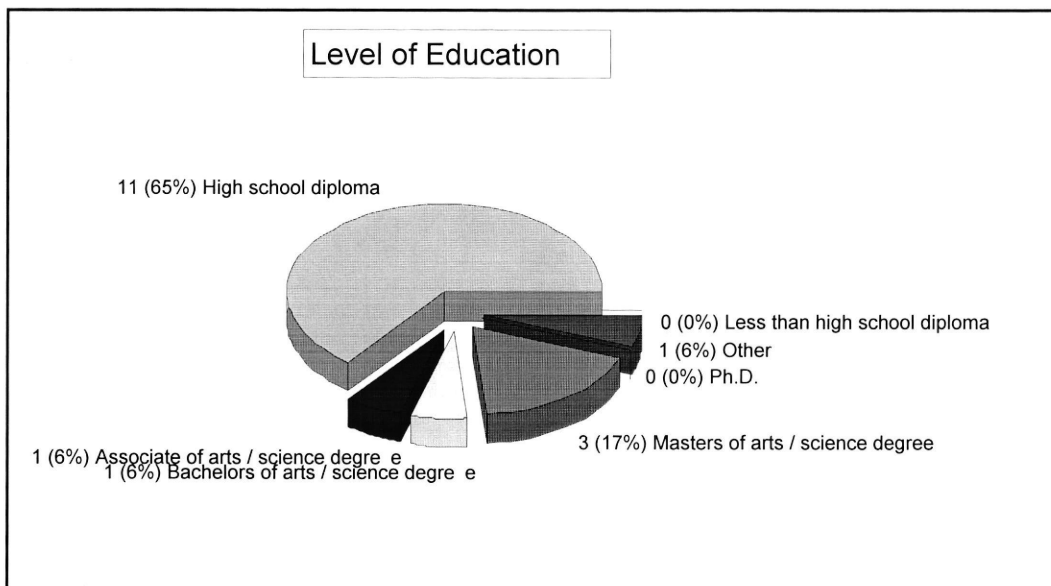
Table 2 is a description of the education levels of the respondents (n=17).

All of the respondents had at least a high school diploma.

Table 2

Level of Education of Cardiac Patients

n=17



The most frequently occurring cardiac event that led to participation in outpatient cardiac rehabilitation was heart attack followed by bypass surgery and angioplasty. Table 3 shows the distribution of cardiac events. Some of the respondents may have listed more than one cardiac event.

Table 3

Cardiac Event Which Led to Participation in Outpatient Cardiac Rehabilitation

n=17

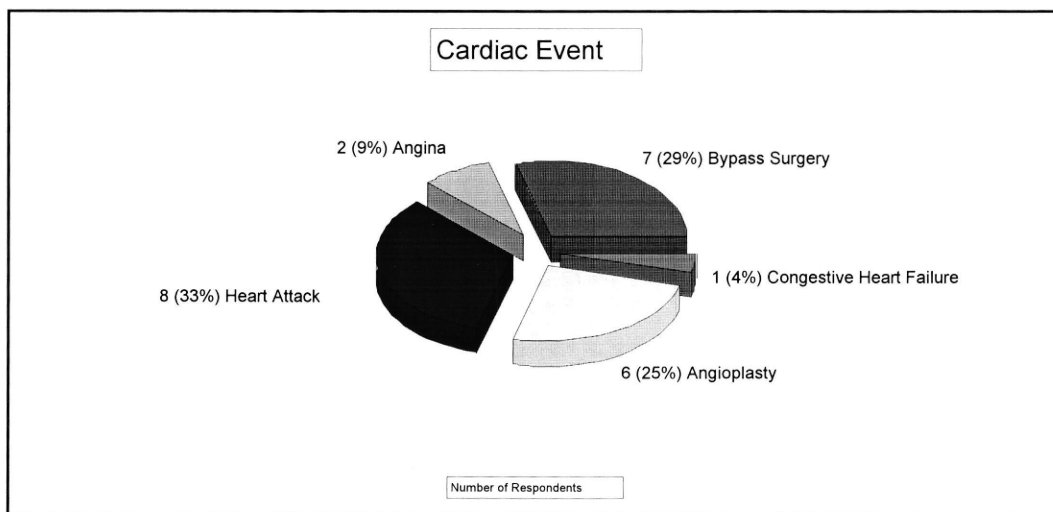


Table 4

Categorization of Job/Position Titles

n=17

Occupational Category	Number of Respondents
Professional, Technical, and Managerial Occupations	6
Machine Trades	3
Clerical and Sales Occupations	2
Agricultural, Fishery, Forestry, and Related Occupations	2
Service Occupations	1
Benchwork Occupations	1
Structural Occupations	1
Miscellaneous	1

The respondents were asked what their job/position titles were at the time of the most recent cardiac event (n=17). The respondents' job/position titles were categorized in Table 4 according to the Dictionary of Occupational Titles. Six (35%) respondents had occupations that were categorized as Professional, Technical, and Managerial Occupations, which was the most common category.

**Return to Work Rate**

Sixteen (94%) of seventeen respondents returned to work after their cardiac event (includes heart attack, bypass surgery, unstable angina, etc.).

Sixteen (94%) participants responded that their physician approved their return to work (n=17). One participant did not respond if his or her physician approved return to work. The respondents who returned to work were questioned if they returned to work within one week of their physician's approval. Fourteen (82%) reported that they did return to work within one week of their physicians' approval and three (18%) reported that they did not return to work within one week of their physicians' approval (n=17). The length of time between the cardiac event and return to work for five (31%) respondents was less than one month (n=16). Eleven (69%) respondents returned to work between one and three months (n=16).

The two participants also responded to how the outpatient cardiac rehabilitation program at Hutchinson Community Hospital could have assisted them with return to work with their particular experience. They both believed that the program could not have helped them in their particular experience. There was only one participant who did not return to work. This person did not prioritize the reasons why he or she did not return to work.

Tables 5 and 6 show how cardiac patients viewed their job stress prior to their cardiac event and at the time of entering outpatient cardiac rehabilitation. There were no significant changes in how cardiac patients viewed their job stress because of the cardiac event.

Table 5

Job Stress Experienced by Cardiac Patients Prior to Cardiac Event

n=17

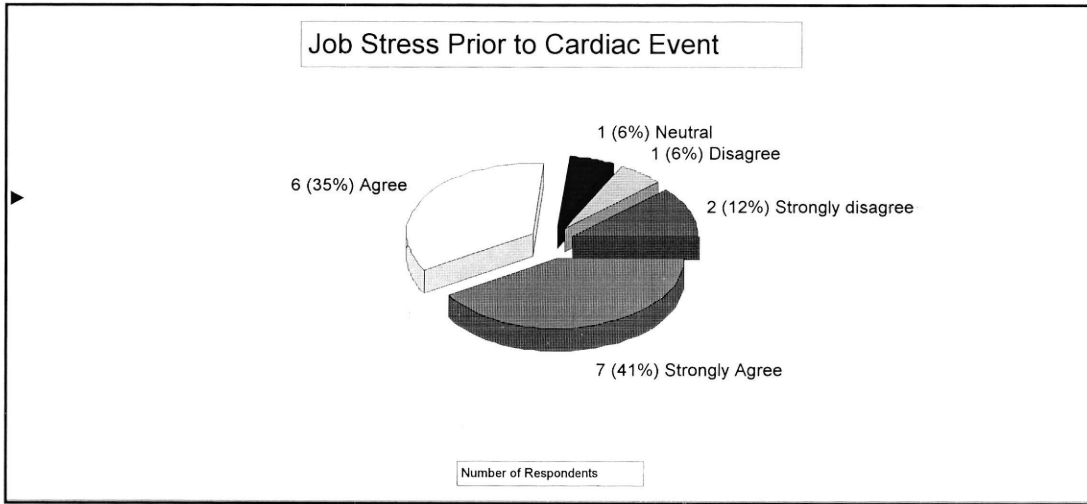
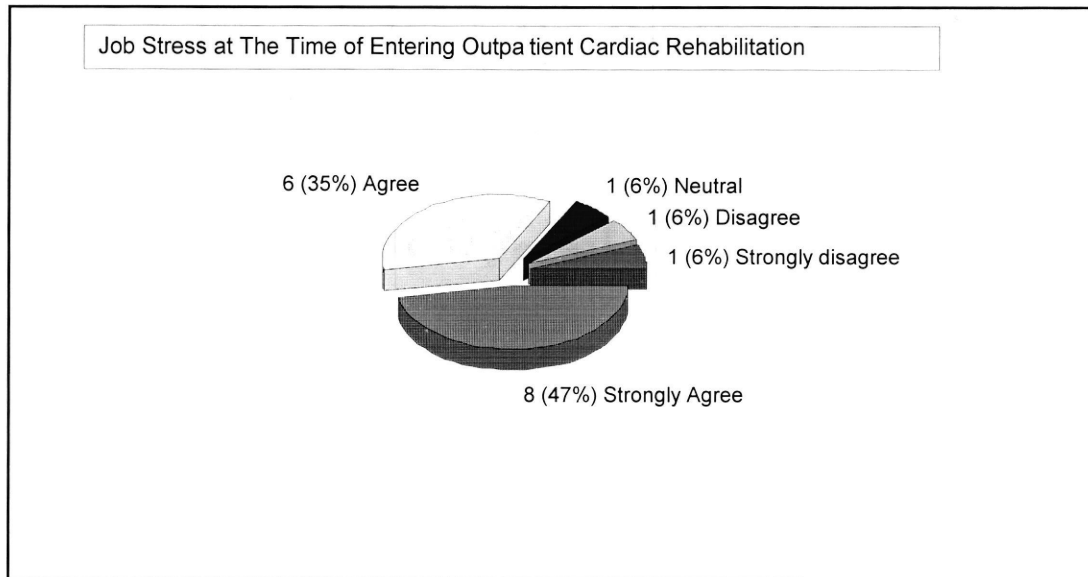


Table 6

Job Stress of Cardiac Patients at the Time of Entering Outpatient Cardiac Rehabilitation

n=17



**Patient and Employer Knowledge of Cardiac Event and Return to Work**

Sixteen (94%) respondents believed they were provided with sufficient knowledge about their cardiac condition in the outpatient cardiac rehabilitation program at Hutchinson Community Hospital as it related to their return to work (N=17). Five participants provided explanations for their responses to this question. Overall, participants believed that the outpatient cardiac rehabilitation staff was sensitive to their physical condition and return to normal life functioning. Comments included 1) One respondent felt the information included what he needed to know to return to normal life. 2) Another

respondent felt that the staff gave him a thorough review of his heart and any damage to it, and how to build up his strength. 3) One respondent believed that staff seemed to realize what farming includes. 4) Another respondent commented that she was well-informed.

Twelve (86%) participants responded that they felt their employer had sufficient knowledge about their cardiac condition and two (14%) participants felt that their employer did not have sufficient knowledge (n=14). Nine respondents who had responded that their employers did have sufficient knowledge gave explanations for their responses. The explanations for responses in which the respondents believed their employer had sufficient knowledge were self-employed (n=2), respondent explained condition to employer (n=3), employers accommodated restrictions (n=2), nurse at work reviewed condition with respondents (n=1), respondents had no restrictions (n=1). The one explanation given for the employer not having sufficient knowledge was that the supervisor was not aware of the respondent's medical history.

The participants were asked what the most helpful part of the outpatient cardiac rehabilitation program at Hutchinson Community Hospital in their return to work was. Fourteen participants responded and some may have given more than one response. The responses are listed in Table 7.

Table 7

Most Helpful Part of the Program

n=14

Program component	Number of respondents
Information	4
Exercise training	4
Physical therapy	2
Support and encouragement	2
Gaining strength and energy	2
Group discussion	1
None to my job	1

Six (35%) respondents commented about what was the least helpful part of the outpatient cardiac rehabilitation program at Hutchinson Community Hospital in their return to work. The following is a list of their responses: 1) "Diet education." 2) "None - thought they were all good." 3) "Trying to group everyone as to same degree of cardiac injury". 4) "Listening to morbid stories of others' experiences. Scared me." 5) "Some of the physical dimensions of the program i.e. 'What Happens During a Heart Attack.' For me it was repetitive" 6) "Don't know."



## Helpful and Least Helpful Components of the Outpatient Cardiac Rehabilitation Program

Respondents (n=6) were asked what would have been helpful to them in planning their return to work that was not included in the outpatient cardiac rehabilitation program at Hutchinson Community Hospital. The responses, which varied, are noted in Table 8.

Table 8

### What Would Have Been Helpful in Planning Return to Work

n=6

Response	Number of respondents
Dealing with stress	2
Not knowing about the next attack, when, how to know, etc.	1
Recommendation for return to work part-time.	1
Would have liked more time off of work.	1
Would have liked more information on the good health diet part of living a healthy lifestyle.	1

The following are the findings from telephone interviews with healthcare professionals working in outpatient cardiac rehabilitation programs. A total of eight healthcare professionals were interviewed.

### **Information about Interviewees**

Table 9 lists the number of years each healthcare professional has worked with cardiac rehabilitation patients in their facility. The mean length of years the healthcare professionals have worked with cardiac patients is five years.

Table 9

#### Number of Years Healthcare Professionals Have Worked with Cardiac Patients

n=8

Hospital	Number of years
Hospital 1	4.5 years
Hospital 2 Registered nurse Social worker	8 years 1 year
Hospital 3	5 years
Hospital 4 Registered nurse Social worker	1.5 years 1.5 years
Hospital 5	16 years
Hospital 6	3 years

Six of the eight healthcare professionals gave the percentage of their time spent with cardiac patients. As shown in Table 10, five of the six professionals spent over 50% of their time with cardiac patients.

Table 10

Percentage of Healthcare Professionals' Time Spent with Cardiac Patients

n=6

Hospital	Percentage of time
Hospital 1	100%
Hospital 2 Registered nurse Social worker	70% -----
Hospital 3	65%
Hospital 4 Registered nurse Social worker	----- less than 20%
Hospital 5	100%
Hospital 6	75%

Each interviewee was asked what her profession was. Five (62%) of the interviewees are registered nurses, two (25%) are social workers, and one (13%) is an exercise physiologist. The interviewees were also asked what their position is at their facility. Three (35%) of the interviewees are cardiac rehabilitation coordinators, one (13%) is a cardiac rehabilitation nurse, one (13%) is a nurse manager, one (13%) is an assistant nurse manager, one (13%) is a social services director, and one (13%) is a family counselor.

### **Services Available to Cardiac Patients**

Each interviewee was asked what services that her hospital/clinic provides to rehabilitate cardiac patients on an outpatient basis. All of the programs offered phase two outpatient cardiac rehabilitation in which the patients are monitored by electrocardiogram during exercise training, and education is provided. Three of the six programs offer phase three rehabilitation in addition to phase two. Phase three cardiac rehabilitation contains essentially the same programs components with the exception that patients are not monitored by electrocardiogram. All the programs offer exercise training and education as the main components. Three of the six programs offer a support group to outpatient cardiac patients. One program offered yoga and meditation, and one program offered relaxation training.

Hospital 1 offers phase three cardiac rehabilitation in addition to phase two. Hospital 1 also offers individual exercise programs, cardiac support group once a week, yoga and meditation once every other week, and one to one meetings with patients to create long term goals with them.

The services provided at Hospital 2 are phase two and phase three cardiac rehabilitation, exercise training, and education. Hospital 3 offers phase two and phase three cardiac rehabilitation, education which includes healthy eating, stress management, risk factor management, exercise training, and relaxation training. Hospital 4 provides phase two cardiac rehabilitation, education, and exercise training. The services provided by Hospital 5 include phase two cardiac

rehabilitation, dietary information, educational classes, and support group once a month. Services available at Hospital 6 are phase two cardiac rehabilitation, diet instruction, exercise training, pharmacy information, education, physical and occupational therapy.

### **Disciplines Involved in Outpatient Cardiac Rehabilitation**

In Hospital 1, the disciplines involved are exercise physiologists and a medical director. Registered nurses, a social worker, a chaplain, a pharmacist, occupational and physical therapists, and a physician advisory board are the disciplines involved in Hospital 2. The disciplines included in Hospital 3 are registered nurses, a licensed practical nurse, and a registered dietitian. Hospital 4 includes the following disciplines: registered nurses, a registered dietitian, physical therapists, social services, a medical director, and a nurse manager. In Hospital 5, the disciplines involved are registered nurses, a psychologist, a physician, a chaplain, physical therapists, and other professionals as needed. Hospital 6 disciplines are a registered nurse, a dietitian, a pharmacist, physical therapists, respiratory therapy, and referrals to counselors.

Five of the six programs had registered nurses providing services. Four of the six programs listed physical therapist and dietitian involvement. Five of the six programs noted physician participation in the program.

### **Role of Social Worker**

If there is a social worker in the program, the interviewee was asked to describe what the role of the social worker is. Most of the programs only had a social worker available on a referral basis to connect patients with resources or to provide short term counseling. Only one program had a social worker available on a regular basis.

The interviewee at Hospital 1 noted that a social worker is not involved on a regular basis in this program. If there is a need for social work involvement, referrals are made to social workers at their hospital. Issues that may prompt a referral to a social worker include patients who are not eating well, patients who are reporting low energy, and patients who need to be assessed for depression or need to be connected to resources.

At Hospital 2 both a registered nurse and a social worker were interviewed. The registered nurse responded that in this program, a social worker meets with all patients within two weeks of admission to the outpatient cardiac rehabilitation program to interview them and set goals. If the social worker is needed to assist a patient in meeting his or her goals, then the social worker meets with the cardiac patient on an ongoing basis. When the social worker does not need to be involved with patients on an ongoing basis, the patient can attend classes taught by the social worker. The social worker teaches classes on stress and coping, and sexuality and intimacy.

Another role of the social worker is to work with occupational therapy to assist patients who are unable to return to their prior positions at work. The social worker and occupational therapist evaluate the patient, and work with the patient and his or her employer to get the patient back to work in another capacity. If the patient is unable to return to work, the social worker assists the patient apply for disability income.

The social worker with Hospital 2 responded in the following way. The social worker meets with all patients within two weeks of admission. The social worker does a psychosocial assessment and encourages family members to be present during the assessment. This assessment is done in the social service office. If a patient is experiencing depression, the social worker either refers the patient for long term counseling if indicated or consults with a physician regarding medication and meets with the patient for short term counseling. Also, the social worker refers patients with financial problems to resources. In this program, the social worker gets to know the families well and sees them on a daily basis. In addition, the social worker teaches two classes on stress and coping, and intimacy, communication, and sexuality.

At Hospital 3 there is no social worker involvement in this outpatient cardiac rehabilitation program. A registered nurse and a social worker were also interviewed at Hospital 4. The registered nurse responded that a social worker provides one educational session on psychosocial needs during the 12

week period of cardiac rehabilitation. Also, a social worker is available to meet with patients on a one to one basis as requested.

At Hospital 4 a social worker provides an educational session to discuss losses. A social worker is also available to assist with transportation and financial issues. Social work involvement is on an as needed basis.

The social worker at Hospital 5 is available when needed. Referrals to social workers are made for emotional, social, and environmental issues. If a patient is experiencing severe emotional problems, the physician and social worker try to encourage a patient to get counseling.

At the time of this interview, Hospital 6 outpatient cardiac rehabilitation program was considering social work involvement on a referral basis. Otherwise, there had been no prior social work involvement.

### **Criteria for Cardiac Patients to Receive Outpatient Rehabilitation Services**

The interviewees were questioned about the criteria for cardiac patients to receive services provided by their organization on an outpatient basis. Table 11 outlines the criteria for services.



Table 11

Criteria for Services

n=6

Hospital	Criteria for services
Hospital 1	Physician referral, insurance coverage
Hospital 2	Patients have private financial resources or insurance coverage
Hospital 3	Medicare guidelines, phase 3 program is available for those who do not meet Medicare guidelines.
Hospital 4	Medicare guidelines and/or physicians' orders.
Hospital 5	Medical need based on physician evaluation regardless of Medicare criteria, patient request, or physician request for patient to participate for prevention purposes.
Hospital 6	Recent diagnosis of cardiac disease.

According to Medicare guidelines, Medicare will cover outpatient cardiac rehabilitation for the diagnoses of bypass surgery, angina, or heart attack. Some third party payers will pay for other diagnoses such as valve replacements, congestive heart failure, cardiomyopathy, heart transplant, and phase three program for prevention.

**Process for Patients to Enter Outpatient Cardiac Rehabilitation**

Each interviewee was asked what their process is for cardiac patients to enter rehabilitation services. Overall, a physician's order is required for patients to participate in all of the outpatient cardiac rehabilitation programs. Two of

the six programs try to see patients while they are in the hospital to introduce them to the outpatient cardiac rehabilitation program.

At Hospital 1 the outpatient cardiac rehabilitation staff visits cardiac patients when they are in the hospital or follows up with a phone call to patients not seen before their discharge from the hospital. Staff determines when the patient's next doctor's appointment is, and then either the patient gets the doctor's approval or the staff gets the doctor's approval for outpatient cardiac rehabilitation. The patient's insurance coverage is also verified. Some patients have stress tests prior to starting outpatient cardiac rehabilitation.

The interviewee at Hospital 2 states that a physician order is obtained through the patient or the outpatient cardiac rehabilitation staff. Then the patient is scheduled to begin rehabilitation.

At Hospital 3, physicians make referrals within the hospital and then the outpatient cardiac rehabilitation staff sees the patient while in the hospital. Staff makes phone calls to patients who were referred from a different hospital.

A physician's order is needed at Hospital 4. This program also accepts referrals from other institutions. Staff verifies insurance and financial information. Then the patient is scheduled for an interview and the staff tries to meet the patient's needs for a scheduled cardiac rehabilitation time.

A physician order is also required at Hospital 5. The outpatient cardiac rehabilitation staff processes the insurance information and then the patients make a decision whether they want to participate.

At Hospital 6 a physician's order is needed. Then a staff member has a one to one meeting with the patient and spouse to review the patient's health history and physical assessment.

The mean length of time a cardiac patient utilizes outpatient cardiac rehabilitation services for the six outpatient cardiac rehabilitation programs is 7.5 weeks. The range for the length of time in outpatient cardiac rehabilitation is 4 to 10 weeks.

### **Sociodemographic Information about Cardiac Rehabilitation Patients**

In the judgement of the healthcare professionals interviewed, the average age of cardiac patients receiving services ranged between 60 to 70 years old in 1993. The healthcare professionals in five out of six programs believed that approximately two-thirds of their patients were male in 1993. One healthcare professional believed that approximately 40% of the patients in the outpatient cardiac rehabilitation program were male. In four of the five programs, the healthcare professionals judged that approximately one-third of the patients who participated in their programs were female in 1993. Approximately 60% of the patients in one program were female.

None of the programs had a statistic available on how many patients were under the age of 65 years old . One healthcare professional offered that approximately 25% of their patients were under the age of 65. Another healthcare professional believed that approximately one-half of their patients were under the age of 65.

### Interviewees' Judgements about Cardiac Patients' Return to Work

Table 12 shows the average length of time between the cardiac patient's cardiac event (bypass, heart attack, angioplasty, etc.) and return to work in the judgement of the healthcare professionals.

Table 12

#### Average Length of Time Between Cardiac Event and Return to Work

n=6

Average number of weeks	Number of responses
1-3 weeks	1
4-7 weeks	3
8-12 weeks	2

Three of the six healthcare professionals interviewed noted that return to work depends on the type of job held by the patient. Also, one healthcare professional reported that patients in the outpatient cardiac rehabilitation program typically started back to work on a part-time basis.

The healthcare professionals offered their perspectives based on their experience what patients perceive to be barriers to returning to work. The themes of the healthcare professionals responses to what barriers are include: low energy, scheduling a part-time schedule, lifting restrictions or physical demands, long hours, and fear of not meeting the demands of the job.

The interviewee at Hospital 1 thought job stress (some patients attribute their cardiac event to their job stress) and apprehension about returning to work are barriers. Physical labor is usually not a barrier. The interviewee at Hospital 2 responded that low energy and lifting restrictions are sometimes barriers.

Depression may delay the return to work according to the social worker at Hospital 2. Lack of energy and fear of overdoing it is also a possible barrier. Some employers are resistant to changing work time to accommodate the patient making it more difficult for the patient to return to work.

The interviewee at Hospital 3 thought barriers include the patient may feel scared whether they will be able to work full-time. Also, initial bombardment of well-wishers at work may feel overwhelming to the patient. In addition, the patient may not be able to return to previous job and has to find an alternative job.

The registered nurse Hospital 4 offered that arranging with the employer to return to work part-time is sometimes a barrier. The social worker responded that the health condition and restrictions along with denial of psychosocial issues may affect patients but may not necessarily prevent their return to work.

The interviewee at Hospital 5 offered that job requirements and labor unions, who do not allow return to work on a part-time basis, may be a barrier to return to work. "Lazy syndrome", which describes those patients who try to receive disability even though they are physically able to return to work, is

sometimes a barrier to return to work. Depression and anxiety can also be a barrier. Patients may be afraid to go back to work and some have panic attacks. Other patients may be afraid something will happen which causes them to become "cardiac cripples".

Lastly, the interviewee at Hospital 6 stated that long hours and physical demands of work may be a barrier. She believed that depression was rarely a barrier to return to work.

The following responses are the judgements of the interviewees about what employers perceive as barriers to cardiac patients returning to work. Common occurring responses from the interviewees were employers are concerned about the patient being able to keep up with the work load, lifting restrictions, and scheduling a part-time work schedule.

According to the registered nurse at Hospital 1, some employers are concerned about patients being able to hold up under the job pressure and responsibilities physically and emotionally. The registered nurse at Hospital 2 reports that employers usually endorse a patient's return to work with a physician's approval. Patients typically decide when they want to return to work. Some patients are not able to return to work because of heavy lifting. The social worker at Hospital 2 stated that employers fear that the patient won't be able to keep up with the other employees and the other employees will have to take over the patient's responsibilities. Most employers are considerate and try to work with patients returning to work.

The interviewee from Hospital 3 said that some employers are concerned that a patient may have another cardiac event at work and are concerned about liability if that should occur. Some employers are very willing to work with patients and are flexible in their scheduling.

The registered nurse from Hospital 4 responded employers seemed "okay" with patients' return to work. The social worker from Hospital 4 believed physical limitations and medical follow-up may be perceived by employers as barriers. The employer may find it difficult to give the patient time to go through outpatient cardiac rehabilitation and arrange for the employee to work part-time.

The interviewee at Hospital 5 stated scheduling a part-time work schedule can be a barrier because some employers are inflexible with scheduling. Also, the physical demands may require a different work load. Therefore, the employer has to find a different work load for the patient. At Hospital 6, the registered nurse responded that because of physical demands, an employer may worry that the patient can't do the job.

All eight of the respondents believed their outpatient services facilitate cardiac patients returning to work. Each respondent was asked how their services facilitated cardiac patients returning to work. Two of the healthcare professionals responding believed individualizing the rehabilitation program to patients' jobs helped patients return to work. Also, two of the healthcare professionals responded that camaraderie in the program was helpful to patients.

Other aspects of outpatient cardiac rehabilitation programs that are believed by healthcare professionals interviewed to be helpful to patients are discussion of employers' expectations, represent patients with their emotional and physical concerns, physician involvement in communicating with employers (n=1); the overall program (n=2); the outpatient cardiac rehabilitation program provides optimism, courage, and helps patients feel they are in the process of healing (n=2); cardiac rehabilitation builds reassurance and mental strength (n=1); cardiac rehabilitation helps motivate patients, helps them feel secure and builds self-esteem (n=1). One respondent reports she believes her program assisted patients by graduating them early from the program to return to work.



## **Limitations**

The questionnaire with cardiac patients was sent to individuals residing in a rural area who participated in an outpatient cardiac rehabilitation program in a rural hospital. Therefore, that part of the study will reflect experiences of individuals residing in a rural area. Also, the study was conducted at only one hospital. Thus, the answers may not reflect those of other persons in the area attending an outpatient cardiac rehabilitation program at a different hospital. The people of Hutchinson and the surrounding communities are homogeneous as the majority of the population is White. Therefore, these findings may not apply to persons of diversity. There were more male participants than female participants which may have biased the findings. Also, most of the participants were married. The findings may reflect married participants responses and not accurately represent experiences of persons who are single.

The study was conducted with persons under the age of 65. Not everyone who is over 65 is retired. Therefore, some persons over the age of 65 were excluded from the study because of their age.

The response rate was 40%. Therefore, responses on the questionnaires returned may not reflect the responses of those individuals who chose not to participate in the study. Also, response rates to certain questions were low.

Healthcare professionals interviewed were chosen by the researcher and all worked within a 70 mile radius of Hutchinson. Experiences of healthcare professionals in different areas may differ.

## CHAPTER VII DISCUSSION

According to the findings of this research, 16 (94%) of 17 respondents returned to work following their cardiac event. These findings suggest that outpatient cardiac rehabilitation programs play a role in patients returning to work as indicated in the literature review. Two patients experienced a delay in return to work and one patient did not return to work. In addition, another respondent noted on the questionnaire that she returned to work after her cardiac event but quit one month later because of job stress. One research question asked about the barriers cardiac patients face in returning to their jobs. These findings suggest that barriers such as job stress, depression, lack of social support, and so on make it difficult for patients to return to work but do not necessarily prevent patients from returning to work. Return to work may not represent emotional recovery.

The literature reported that married women were more likely to not return to work. The literature is supported by the findings that showed out of the six women who were all married, one woman did not return to work, one woman experienced a delay in returning to work, and another woman quit her job one month after returning to work. Whereas out of the nine married and two single male respondents, only one married male had a delay in return to work. Of the 17 respondents, 88% (n=15) are married. This may support the concept of the positive effects of social support since most of the respondents returned to work.

Five respondents returned to work in less than one month of their cardiac event and 11 respondents returned to work in one to three months of their cardiac event. The two respondents who did not return to work within one week of their physicians' approval believed that the outpatient cardiac rehabilitation program at Hutchinson Community Hospital could not have assisted them with their particular experiences. The one person who did not return to work did not comment whether she felt the outpatient cardiac rehabilitation program at Hutchinson Community Hospital could have assisted her. Perhaps the patients did not see the role of this program as assisting them with their particular experiences and psychosocial issues.

In general, patients believed they received sufficient information regarding their return to work and believed their employers had sufficient knowledge about their cardiac condition and return to work. This supports that cardiac rehabilitation programs are providing education which is a purpose of cardiac rehabilitation programs as noted in the literature review.

There was no significant change in how patients viewed their job stress after their cardiac event and upon entering outpatient cardiac rehabilitation. However, according to one healthcare professional, some cardiac patients attribute their cardiac event to job stress. Also, 15 out of 17 respondents reported that they worked over 40 hours a week at their jobs which may support patients attributing their cardiac event to job stress. Long hours may be also be a barrier to patients returning to work.

Another research question was how can outpatient cardiac rehabilitation programs help cardiac patients return to their jobs. The respondents perceived the most helpful components of the program as information and exercise training followed by physical therapy, support, encouragement, gaining strength and energy. This responses parallel those given by the healthcare professionals interviewed who indicated that education and exercise were the main components of all the outpatient cardiac rehabilitation programs. Camaraderie was also noted by the healthcare professionals as helpful to patients.

In response to what would have been helpful in return to work, two respondents would have liked more information about dealing with job stress. One respondent commented that he was concerned about the next attack, when, how to know, etc. Another respondent expressed he would have liked more time for recovery before return to work and another respondent would have liked a recommendation for return to work on part-time basis. An interpretation of this data is that these respondents may not have felt emotionally prepared to return to work even though they were physically able to return to work. All of the responses given to what would have been helpful may represent psychosocial issues. If these responses are classified as psychosocial issues, then one could say that 29% (n=5) of the respondents would have liked assistance with psychosocial issues. The literature review showed that cardiac patients experience psychosocial issues and these issues should be addressed in

outpatient cardiac rehabilitation programs through a multidisciplinary team approach.

All the outpatient cardiac rehabilitation programs used a multidisciplinary team approach to provide services which is a goal of the biopsychosocial model of healthcare. The literature also supports the use of a multidisciplinary team approach. The disciplines involved and the level of involvement in these programs varied from program to program. All but one of the outpatient cardiac rehabilitation programs were coordinated by a registered nurse.

Social work involvement varied between programs. Only one program had a social worker involved on a regular basis who met with all patients to do a psychosocial assessment. Three out of the six programs made referrals to social workers on an as needed basis. One program did not have access to social work services and the other program was in the process of considering social work involvement on a referral basis. Also, three out of six programs used social workers to teach classes to cardiac patients on a scheduled basis.

The role of the social worker who is a regular team member of the outpatient cardiac rehabilitation program is to conduct psychosocial assessments with all patients entering the program. If the patient requires close following, the social worker will continue to meet with that patient on an ongoing basis. Otherwise, patients are encouraged to attend classes taught by the social worker. Also, the social worker along with an occupational therapist, acts as a mediator between patients and their employers when needed. In other programs, referrals

to social workers may be prompted by financial issues, transportation issues, short-term counseling, or the need for referral to long-term counseling. The literature refers to the role of the social worker as providing counseling to patients and referring patients to resources.

The healthcare professionals' responses to patients' perceptions of barriers to return to work varied. Therefore, one may conclude that what one healthcare professional sees as an issue may not be viewed as an issue by another healthcare professional. This may support then, the importance of social work involvement to provide consistency in examining psychosocial issues. The main themes of employers' perceptions of barriers to patients returning to work were scheduling, fear that patient would not be able to keep up with other employees, and physical limitations requiring a different work load. This supports the need for outpatient cardiac rehabilitation staff to communicate with patients' employers.

All of the professionals interviewed believed that their programs helped patients return to work because of the education, exercise training, emotional support, and in some cases job simulation they provided to patients.

## CHAPTER VIII IMPLICATIONS

### Program Planning Guidelines

Based on the findings of the study, this researcher is offering the following program planning guidelines for assisting cardiac patients return to work. The goal is help patients return to work. Objectives to meet the goal include:

1. Social work should be a component of outpatient cardiac rehabilitation programs. Social workers' skills to provide counseling differ from other professionals' support to patients. Ideally, social workers should do a psychosocial assessment with all patients who enter the outpatient cardiac rehabilitation program and follow those who require social work services.

However, because of the healthcare trends in which healthcare providers are receiving decreased reimbursement for services provided, it may not be feasible for a social worker to meet with all patients entering the program. It is to the benefit of the cardiac patient that psychosocial issues be identified and a referral made to a social worker as needed. A close working relationship between social workers and coordinators of outpatient cardiac rehabilitation programs will increase the probability that psychosocial issues will be identified in patients.

2. Social workers in outpatient cardiac rehabilitation programs can provide services such as assistance with transportation, financial, and social issues, short-term counseling, and referral for long-term counseling. Another role for social workers is to provide educational classes on topics such as stress and

coping, intimacy, and communication. Also, a social worker can provide support to patients.

3. Communication with patients' employers is important. A social worker could coordinate communication with patients' employers which may include assisting the patient to obtain letters regarding return to work from his or her physician. A patient may also need support or mediation in discussing return to work with employers. Also, a social worker could coordinate providing the employer with information as needed.

4. An important aspect of outpatient cardiac rehabilitation is to simulate job situations. This includes an exercise regime that is similar to the tasks the patient would perform at his or her job. It gives the patient confidence and reassurance in relation to his or her job performance. Therefore, individualizing the program for each patient is essential.

5. The availability of the program to patients should be assessed. Since many of the outpatient cardiac rehabilitation patients are in the workforce, extended hours should be considered to accommodate the needs of these patients.

6. Initially, return to work on a part-time basis is helpful to some patients. This enables them to gradually return to normal life functioning and is less overwhelming. For those unable to return to work full-time, getting back to work at least part-time decreases isolation.



**Evaluation**

To evaluate the implementation of these objectives, the researcher suggests that the questionnaire used for this study be administered again after implementation to compare responses and assess changes and impact of services. Also, an evaluation of each educational session may provide an avenue for patients to ask for specific information while they are still in the program.

## CHAPTER IX CONCLUSIONS

The purpose of this study was to determine the barriers to cardiac patients returning to work and how outpatient cardiac rehabilitation programs can assist cardiac patients to return to work. The researcher found that most cardiac patients to return to work following a cardiac event. However, there are barriers that may delay a patient's return to work or make it more difficult for the patient to return.

Further research is indicated to assess whether return to work is an indicator of a patient's emotional recovery from a cardiac event. This would include assessing if patients feel emotionally prepared to return to work when they are physically ready to return to work, or are patients returning to work because their physicians tell them they are ready physically. Also, exploring the relationship between working long hours at work and cardiac events may be helpful to cardiac patients and cardiac rehabilitation programs in returning back to work.

A longitudinal study would be helpful to discover what the psychosocial issues are for cardiac patients and if cardiac patients address their psychosocial issues at the time of their participation in outpatient cardiac rehabilitation. If cardiac patients deny their psychosocial issues, it would be helpful to identify if it affects their life functioning in other areas besides work and/or if the patients experience work related problems at a later date. Another area for further study

is women's issues and how cardiac events affect women and their multiple roles.

The researcher found in the literature and findings from this research that some of the barriers that delay a patient's return to work may be psychosocial barriers, which supports the need for social work services in outpatient cardiac rehabilitation programs. Based on the research, the researcher developed program planning guidelines which highlighted key concepts in assisting cardiac patients return to work.

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Dear Outpatient Cardiac Rehabilitation Patient:

My name is Anne Powers and I am a student in the Master of Social Work Program at Augsburg College in Minneapolis. I am contacting you to request your participation in a research study that I will be conducting as part of my graduate program. I hope to learn about what the barriers are to individuals under the age of 65 in returning to work after a cardiac event. You were selected as a possible participant in this study because you participated in the outpatient cardiac rehabilitation program at the Hutchinson Community Hospital and because of your personal experience in barriers that may exist in returning to work following a cardiac event. The information gathered will be used for my graduate thesis and will be shared with the Hutchinson Community Hospital in summarized form only to assist in creating program planning guidelines for outpatient cardiac rehabilitation programs. You are one of approximately 100 persons chosen to participate in this study.

If you decide to participate in this research project, please complete the enclosed questionnaire. The questionnaire will take approximately thirty minutes to complete. Your responses to the questionnaire will remain private. Your anonymity is being protected as personnel from the Hutchinson Community Hospital are mailing out this letter. Hutchinson Community Hospital personnel and I will not know the names of any one participating in this study. Therefore, please do not put your name on the questionnaire or the envelope. The questionnaires will be kept in a locked file to which only I will have access.

Your decision whether or not to participate in this study will not affect any current or future relationships you may have with Augsburg College and Hutchinson Community Hospital. If you decide to participate, you may withdraw at any time without affecting these relationships. Completing the questionnaire may create some discomfort as a result of recalling the cardiac event and the experiences surrounding the event. Therefore, during completion of the questionnaire you are free to stop at any time or to skip over any questions you do not wish to answer. There are no direct benefits to you from participation in this study.

You are under no obligation to participate in this study. Your completing and returning the questionnaire will be taken as evidence of your willingness to participate and your consent to have the information used for purposes of the study. If you are agreeable to participating, please complete the enclosed questionnaire and return in the postage-paid envelope provided by February 25, 1995. If you have any questions, you may contact me at 612-587-2656 or my thesis advisor, Sharon Patten, Ph.D. at 612-330-1723.

Sincerely,

Anne Powers  
Graduate Student

Dear Outpatient Cardiac Rehabilitation Patient:

My name is Anne Powers and I am a student in the Master of Social Work Program at Augsburg College in Minneapolis. I am requesting your participation in a research study that I will be conducting as part of my graduate program. I hope to learn about what the barriers are to individuals under the age of 65 in returning to work after a cardiac event. Information gathered will be used to create program planning guidelines for outpatient cardiac rehabilitation programs.

If you decide to participate in this research project, please complete the enclosed questionnaire. As you are completing the questionnaire, please indicate any questions that may not be clear or indicate comments anywhere on the questionnaire. The purpose for the completion of this questionnaire is to obtain your suggestions to improve the clarity of the questionnaire. Your responses to the questionnaire will be kept confidential. Your anonymity is being protected as personnel from the Hutchinson Community Hospital are administering this questionnaire. Hutchinson Community Hospital personnel and I will not know the names of anyone participating in this study. Therefore, please do not put your name on the questionnaire or the envelope. The questionnaires will be kept in a locked file to which only I will have access.

Your decision whether or not to participate in this study will not affect any current or future relationship you may have with Augsburg College and Hutchinson Community Hospital. If you decide to participate, you may withdraw at any time without affecting these relationships.

You are under no obligation to participate in this study. Your completing and returning the questionnaire will be taken as evidence of your willingness to participate and your consent to have the information used for purposes of the study. If you are agreeable to participating, please complete the questionnaire and return it in the envelope provided. If you have any questions, you may contact me at 612-587-2656 or my thesis advisor, Sharon Patten, Ph.D. at 612-330-1723.

Sincerely,

Anne Powers  
Graduate Student



Dear Healthcare Professional:

My name is Anne Powers and I am a student in the Master of Social Work Program at Augsburg College in Minneapolis. I am contacting you to request your participation in a research study that I will be conducting as part of my graduate program. I hope to learn about what the barriers are to individuals under the age of 65 in returning to work after a cardiac event.

You were selected as a possible participant in this study because of your current experience is working with cardiac patients in outpatient rehabilitation. I will be interviewing approximately five professionals who are currently working with cardiac patients. This study will be utilized in planning program guidelines for outpatient cardiac rehabilitation programs. Part of this study is being conducted in conjunction with the Hutchinson Community Hospital.

If you decide to participate in this research project, I will make an appointment for a telephone interview. Within a week of the mailing of this letter, I will be contacting you to request your participation in this study. The interview will take approximately thirty minutes to complete. Your responses to the interview will remain confidential. No individual will be identified by name in the research report or any other publication. Written notes taken during the interview will be kept in a locked file to which only I will have access.

Your decision whether or not to participate in this study will not affect any current or future relationships you may have with Augsburg College and Hutchinson Community Hospital. If you decide to participate, you may withdraw at any time without affecting these relationships. During the interview, you are free to stop at any time or to skip over any questions you do not wish to answer.

You are under no obligation to participate in this study. If you wish to defer a decision to participate, I can contact you again at your convenience to obtain your decision. If you have any questions, you may contact me at 612-587-2656 (home), 612-234-4815 (work) or my thesis advisor, Sharon Patten, Ph.D. at 612-330-1723.

Sincerely,

Anne Powers  
Graduate Student

Standardized Open-ended Interview Form

Review research study with interviewee, i.e., the major focus of the study barriers to individuals who have experienced a cardiac event in patients returning to work. Findings will be used to develop program planning guidelines in outpatient cardiac rehabilitation programs.

This set of questions inquires about services available from your organization to cardiac patients.

1. What services do you provide to rehabilitate cardiac patients on an outpatient basis?
2. What are the disciplines of the professionals involved in providing those services?
- 2a. If there is a social worker in your program, what is the role of the social worker?
3. What are the criteria for cardiac patients to receive services provided by your organization?
4. What is the process for cardiac patients to enter rehabilitation services?
5. What is the average length of time a cardiac patient utilizes your services?

This set of questions relates to sociodemographic information of cardiac patients served by your organization.

1. What is the average age of cardiac patients receiving services on an outpatient basis?
2. How many males enter outpatient services per year?
3. How many females enter outpatient services per year?
4. How many patients under 65 years of age participate in outpatient services per year?

This next set of questions asks your judgements about cardiac patients' return to work after the cardiac event and job stress.

1. What is the average length of time between the cardiac patient's cardiac event (bypass, heart attack, angioplasty, etc.) and return to work?
2. From your experience, what do patients perceive to be barriers to returning to work.
3. In your judgement, what do employers perceive as barriers to cardiac patients returning to work?
- 4a. Do you think your outpatient services facilitate cardiac patients returning to work?
- 4b. If so, how?
- 4c. If not, do you think there is a need in your program to assist cardiac patients in returning to work?

These questions relate specifically to your work.

1. How long have you worked with cardiac rehabilitation patients in this facility?  
\_\_\_\_\_years
2. Currently, what percentage of your time is spent working with this population?
3. What is your profession?
4. What is your position in this facility?

**QUESTIONNAIRE**

For each of the following questions, please indicate the answer which best answers the question. This questionnaire will take you approximately 20 to 30 minutes to complete.

**1. What is your gender?**

\_\_\_\_\_ female      \_\_\_\_\_ male

**2. What is your age?**

\_\_\_\_\_ years

**3. What is your marital status?**

\_\_\_\_\_ single      \_\_\_\_\_ married

**4. What was your age at the time of the cardiac event (bypass surgery, heart attack, angina, etc.) that led to your most recent participation in the outpatient cardiac rehabilitation program at Hutchinson Community Hospital?**

\_\_\_\_\_ years old

**5. What was the cardiac event which led to your most recent participation in the outpatient cardiac rehabilitation program at Hutchinson Community Hospital? (check all that apply)**

- \_\_\_\_\_ bypass surgery
- \_\_\_\_\_ angina
- \_\_\_\_\_ heart attack
- \_\_\_\_\_ angioplasty
- \_\_\_\_\_ congestive heart failure
- \_\_\_\_\_ pacemaker placement
- \_\_\_\_\_ heart valve surgery
- \_\_\_\_\_ other (please specify) \_\_\_\_\_

**6. Did you have a previous cardiac event?**

\_\_\_\_\_yes \_\_\_\_\_no

**If yes, at what age?**

\_\_\_\_\_years old

**7. Were you employed (paid employment and/or self-employment) at the time of your cardiac event?**

\_\_\_\_\_yes \_\_\_\_\_no ( If your answer is no, you have completed the questionnaire)

**8. Prior to your cardiac event, how many hours did you work at your job per week?**

\_\_\_\_\_less than 20 hours per week

\_\_\_\_\_20 to 30 hours per week

\_\_\_\_\_31 to 40 hours per week

\_\_\_\_\_over 40 hours per week

**9. A. Did you return to work after your cardiac event (includes heart attack, bypass surgery, unstable angina, etc.)?**

\_\_\_\_\_yes \_\_\_\_\_no (If your answer is no, skip to question 12.)

**B. If you returned to work, what was the length of time between your cardiac event and your return to work?**

\_\_\_\_\_less than 2 months

\_\_\_\_\_2 months to up to 4 months

\_\_\_\_\_over 4 months and up to 6 months

\_\_\_\_\_over 6 months and up to 1 year

\_\_\_\_\_over 1 year

10. A. Did you return to work within one week of your physician's approval to return to work?

\_\_\_\_\_yes      \_\_\_\_\_no

B. If you did not return to work within one week of your physician's approval but eventually returned to work, what was the primary reason for not returning to work immediately? (Please place the number 1 by your main reason, place a 2 by a secondary reason if any, and so on)

\_\_\_\_\_physical limitations  
\_\_\_\_\_anxiety  
\_\_\_\_\_depression  
\_\_\_\_\_family did not support return to work  
\_\_\_\_\_employer did not support return to work  
\_\_\_\_\_change in occupation  
\_\_\_\_\_job stress  
\_\_\_\_\_other \_\_\_\_\_

C. Could you share more about the answer you chose and how could the outpatient cardiac rehabilitation program at Hutchinson Community Hospital assisted you with your particular experience?

11. A. Did you return to work at the same number of hours per week as prior to your cardiac event?

\_\_\_\_\_yes      \_\_\_\_\_no

B. If no, please indicate number of hours worked upon return to work in the space provided.

\_\_\_\_\_hours per week

12. A. When you returned to work, was there a change in your responsibilities such as a promotion, demotion, or transfer?

\_\_\_\_\_yes      \_\_\_\_\_no

B. If yes, was the change as a result of your cardiac event?

\_\_\_\_\_yes (please explain)      \_\_\_\_\_no

13. A. If you did not return to work at all following your cardiac event, please indicate why you did not return to work by placing the number 1 by the main reason, number 2 by a secondary reason if any, and so on.

early retirement  
 physical limitations  
 advised by physician not to return to work  
 anxiety  
 depression  
 family did not support return to work  
 dismissed from job  
 job stress  
 other (please specify) \_\_\_\_\_

- B. Could you share more about the answer you chose and how the Hutchinson Community Hospital could have assisted you with your particular experience?

For the following two questions, please circle the answers which indicate how strongly you agree or disagree.

14. Prior to my cardiac event, I saw my job as stressful.

strongly disagree    disagree    neutral    agree    strongly agree  
1                      2                      3                      4                      5

15. At the time of entering outpatient cardiac rehabilitation, I saw my job as stressful.

strongly disagree    disagree    neutral    agree    strongly agree  
1                      2                      3                      4                      5

16. Did you feel you were provided with sufficient knowledge about your cardiac condition in the outpatient cardiac rehabilitation program at Hutchinson Community Hospital as it related to your return to work?

yes     no

17. Did you feel your employer had sufficient knowledge about your cardiac condition such as any limitations due to your condition as it related to your return to work?

yes     no

**18. How many weeks did you participate in the outpatient cardiac rehabilitation program at Hutchinson Community Hospital?**

\_\_\_\_\_ weeks

**19. What was the most helpful part of the outpatient cardiac rehabilitation program at Hutchinson Community Hospital in your return to work?**

**20. What would have been helpful to you in planning your return to work that was not included in the outpatient cardiac rehabilitation program at Hutchinson Community Hospital?**

*Thank you for your assistance in completing this questionnaire!  
Please return the completed questionnaire by  
February 25, 1995  
in the self-addressed stamped envelope provided.*