

Men's Reluctance to Seek Care for Acute Coronary Syndromes

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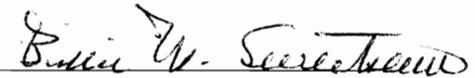
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Men's Reluctance to Seek Care for Acute Coronary Syndromes

Abstract

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Cardiovascular disease accounts for nearly half of the deaths in developed countries. For many who die from cardiovascular disease, the onset is sudden, with rapid progression to a lethal dysrhythmia, only treatable by rapid access to defibrillation. For others, the signs and symptoms are unrecognized or ignored. Despite the resources dedicated to awareness and treatment of heart disease by large organizations, such as the American Heart Association, many who are experiencing the signs and symptoms of acute coronary syndromes (ACS) do not seek immediate treatment. This literature review will investigate the reasons why men, specifically, delay seeking treatment for ACS. Four themes emerged, which partially explain some of the challenges that men face when experiencing symptoms of ACS. These themes are non-health-seeking behavior, knowledge deficit/self-diagnosis, presence of external modifiers, and choice of action. This study will include these four themes in a modified version of the Health Belief Model in an effort to predict health seeking behavior of men. Finally, implications for practice and suggestions for further research, based on the results of the review, will be provided.

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Men's Reluctance to Seek Care for Acute Coronary Syndromes

Cardiovascular disease accounts for nearly 50% of deaths in developed countries, totalling more than seven million deaths annually, world wide (DeVon, Hogan, Ochs, & Shapiro, 2010, p. 106). In approximately 20% of these cases, symptom onset is sudden, offering no warning signs, with death occurring within one hour (Brown et al., 2000, p. 173). Greater than 50% of patients who die of an acute myocardial infarction do not make it to a hospital. The precipitating event, in most cases, is a lethal ventricular dysrhythmia, for which the only effective treatment is early defibrillation. Treatment for an episode of myocardial ischemia is highly time-dependent (“time is muscle”), with necrosis occurring within as early as 30 minutes of cessation of coronary artery blood flow (American Heart Association, 2008).

Health quality and life expectancy of men continues to lag behind women, despite the disproportionate weight historically given to men in the medical research literature (Emslie & Hunt, 2009). In all age groups men exceed women in risks of death, including a 1.8 times greater incidence of heart disease (Garfield et al., 2008). Additionally, 16% of men die while still of working age, compared to 6% of women (Men’s Health Forum, n.d.). In 2007, over 600,000 Americans died from coronary disease, and it remains the number one killer of Americans (CDC, 2011). The American Heart Association has invested heavily in efforts to improve these outcomes (American Heart Association, 2008).

Despite these sobering statistics, many people suffering the warning signs of an acute coronary syndrome (ACS) are reluctant to request assistance. This issue appears to be a global phenomenon (White & Johnson, 2000). Instead of activating emergency medical services (EMS), many choose to drive themselves to treatment, bypassing the “chain of survival” and its proven benefits (American Heart Association, 2008). This reluctance to seek care is more

pronounced in men, and is largely rooted in the paradigm of male socialization (Noone & Stephens, 2008). Masculinity values the qualities of self-reliance and invincibility—the very values that resist seeking assistance during times of vulnerability. This review will evaluate the reasons that men in the United States are reluctant to seek care when experiencing the symptoms of ACS. By identifying these barriers to seeking care, health care providers can play a role in the reduction of morbidity and mortality from this disease through the education of at-risk populations.

Statement of Purpose

This literature review will examine the reasons why American men suffering the symptoms of an ACS choose to delay their treatment. Nursing practice will benefit from this understanding through education of at-risk populations.

Literature Search Strategies

A search was undertaken utilizing the WorldCat, PsycARTICLES, Academic Search Complete, Social Sciences Index, MEDLINE, and CINAHL. Key words used were men, masculinity, chest pain, reluctant, health care, denial and acute coronary syndrome. The search was limited to articles published in English, with publish dates inclusive from 1964 to 2011. Initial search identified 50 articles. After review, 34 were selected for inclusion.

Theoretical or Conceptual Framework

The Health Belief Model helps explain health behavior. Predicting or explaining the public's use of health services has been a focus of attention by many health agencies, including the United States Public Health Service. In the 1950's, the U.S. Public Health Service was interested in explaining why people sought X-ray evaluation of tuberculosis when they were not exhibiting symptoms of the disease. A model was devised in an attempt to predict this

preventative, health-seeking form of behavior, and it was named the Health Belief Model (Table 1). This model proposes that individuals move through a series of stages when making health decisions, with each stage influencing the others, and ultimately, the outcome. One early author and proponent of this model, Irwin M. Rosenstock, stated “the goal of understanding and predicting behavior should appropriately precede the goal of attempting to persuade people to modify their health practices” (Rosenstock, 1966, p. 94). The model has roots in the sciences of psychological and sociological theories, leveraging the efforts of Lewin. Lewin, a psychological theorist, believed that human behavior is a product of the environment, or forces, within which the behavior occurred (Hall & Lindzey, 1957). The foci of the variables are not based on the objective realm of the health care provider, but rather, the subjective milieu of the patient (Rosenstock, 1966, p. 99). Although the model was devised to explain preventative health-seeking actions, it has also been utilized to explain illness behaviors (Becker et al., 1977, p. 29). Illness behavior may be defined as “any activity undertaken by a person who feels ill, for the purpose of defining the state of his health and for discovering suitable remedy” (Rosenstock, 1966, p. 95). The original model suggests that health services use is effected by predisposing factors (social, health belief and demographic), factors which enable or impede use (personal, family and community) and perceived need for care. Rosenstock suggests that the model may be distilled to two basic themes: The perceived susceptibility to a condition and readiness to act. Low perceived susceptibility may require an increased stimulus for cue to action, and vice versa. Rosenstock also surmises that readiness to act is explained more accurately by emotional, versus cognitive, elements (Rosenstock, 1966, p. 100). As an example, a man experiencing chest pain at work may not seek care for fear of being labeled by his co-workers as “weak”, although he recognizes that his health may be threatened.

Proponents suggest that the Health Belief Model has the means for predicting, and understanding, discretionary care-seeking in addition to medical regimen adherence. This is accomplished through the individual's own evaluation of their health and function, experiences of illness and pain, and their perceptions of the magnitude of their problems. Ultimately, this evaluation will lead to the decision by the individual to seek (or not seek) health care.

Opponents have argued that the model does not adequately conceptualize and define the social and psychological effects of health-seeking, especially those relating to education, ethnicity or cognitive impairment. Andersen (1995) counters that the inherent generalizability of the model suits it perfectly for the task, with the model possessing adequate flexibility to accommodate shifts in these variables through time.

PREDISPOSING CHARACTERISTICS: →	ENABLING RESOURCES: →	NEED: →	USE OF HEALTH SERVICES
<u>Demographic</u>	<u>Personal</u>	<u>Perceived</u>	
<u>Social Structure</u>	<u>Family</u>	<u>Evaluated</u>	
<u>Health Beliefs</u>	<u>Community</u>		

Model Modification Based on Emergence of Themes

Several themes emerged from the review of literature which suggested classification of causes for delay in treatment. These themes are non-help-seeking behavior, knowledge deficit/self-diagnosis, presence of external modifiers and choice of action. This author proposes that these themes are compatible with the Health Belief Model, and by modifying the original model, may be used as a template to predict, and explain, the actions of men facing the symptoms of ACS.

The first theme, non-health-seeking behavior, will be included under the labels of Predisposing Characteristics/Health Beliefs and Enabling Resources/Personal. The second theme, knowledge deficit/self-diagnosis, will be included under the labels Predisposing Characteristics/Health Beliefs and Need/Perceived. The third theme, presence of external modifiers will encompass all the subcategories of Enabling Resources. The fourth theme, choice of action, will be used to describe enabling resources. These themes are discussed in more detail in the following sections. The proposed Modified Health Belief Model is illustrated in Figure 2.

Table 2: The Health Belief Model (Modified)			
PREDISPOSING CHARACTERISTICS: →	ENABLING RESOURCES: →	NEED: →	USE OF HEALTH SERVICES
<u>Demographic</u>	<u>Personal</u> (Non-Health-Seeking Behavior) (Presence of External Modifiers) (Choice of Action)	<u>Perceived</u> (Knowledge Deficit/Self-Diagnosis)	
<u>Social Structure</u>	<u>Family</u> (Presence of External Modifiers) (Choice of Action)	<u>Evaluated</u>	
<u>Health Beliefs</u> (Non-Health-Seeking Behavior) (Knowledge Deficit/Self-Diagnosis)	<u>Community</u> (Presence of External Modifiers) (Choice of Action)		

Review of Literature

Non-help-seeking Behavior

A major component of men's reluctance to seek help when experiencing the symptoms of an acute coronary syndrome relates to the male socialization paradigm (Garfield, Isacco, & Rogers, 2008). In many cultures, including the U.S., men work diligently to reinforce stereotypical behaviors that collectively lead to unhealthy lifestyles and choices (Courtenay, 2000, p. 4). The masculine image is portrayed as independent, socially isolated, fearless, stoic, invincible, courageous, enduring, and reluctant to seek help (Courtenay, 2000; Emslie & Hunt, 2009; Galdas, Johnson, Percy, & Ratner, 2010). The literature reviewed provides substantial qualitative evidence through rich descriptions of the detrimental effects of male genderfication, such as risk-taking behavior, alcohol and tobacco abuse, and poor diet (Mokdad, Marks, Stroup, & Gerberding, 2004). In fact, it is viewed as masculine to demonstrate "lack of concern of the self", such as eating high-fat foods, high-salt diets and avoiding check-ups and medical screenings (Mahalik & Burns, 2011). Men also demonstrate adherence to this masculine model when they deny the need for sleep, refuse to take sick time from work, and insist that their driving is not impaired after drinking alcohol (Courtenay, 2000, p. 11). Courtenay provides this "gendered profile" of the stereotypical American male:

He would see himself as stronger, both physically and emotionally, than most women.

He would think of himself as independent, not needing to be nurtured by others.

He would be unlikely to ask others for help. He would see himself as invulnerable to the risks commonly associated with unhealthy behavior. He would lack the vocabulary to describe physical sensations and would have difficulty identifying and expressing most of his emotions. He would not be

interested in learning about health, nutrition, or cooking, and he would be unconcerned about his weight, diet, or hygiene. Finally, he would adamantly reject doing anything that he or anyone else would consider feminine (Courtenay, 2000, p. 10).

The detrimental effects of these choices are substantiated by U.S. Centers for Disease Control and Prevention statistics that list tobacco, poor diet, physical inactivity and alcohol consumption as the leading preventable causes of death in the United States (Mokdad et al., 2004, p. 1238). The classic “type A” personality—ambitious, urgent, even hostile—is in alignment with the stereotypical male prototype, and represents an increased tendency towards coronary disease (Emslie & Hunt, 2009, p. 158).

Finally, anabolic steroid use—a disproportionately male activity—is also on the rise. The choice to use anabolic steroids may fuel the needs for muscular strength and masculinity. Anabolic steroid use has been associated with many health risks, including an increased risk for hypertension and myocardial infarction (Garfield et al., 2008). These behaviors and attitudes directly influence men’s health—both physical and mental. The same men who adhere to these masculine models also report increased incidences of maladaptive coping, substance abuse, depression and anxiety (Garfield et al., 2008, p. 475).

Men utilize the healthcare system less than women. One-third of men have no regular healthcare provider, and almost one-fourth have not seen a provider in the last year. Preventive healthcare services follow a similar trend: Even after controlling for pregnancy-related visits, men seek preventive services at a rate of one-half that of women. In addition, men tend to spend less time with providers, ask fewer questions and are less adherent to provider recommendations than women (Garfield et al., 2008). These trends have been demonstrated for decades, and,

largely account for the seven-year greater life expectancy of women in the United States (Rosenstock, 1966; Courtenay, 2000, p. 11).

This reluctance to seek help may be related to a powerful psychological need for men to appear as “not-feminine”. Women, according to some men, are characterized by “frequent and trivial users of health care” (Noone & Stephens, 2008). Similarly, health care use and positive health beliefs are construed as feminine by many men (Courtenay, 2000). This pressure to conform to masculine models impairs help-seeking. Men who self-report as “masculine” are less likely to consult health care providers when depressed or having unfamiliar symptoms (Addis & Mahalik, 2003; Galdas, Johnson, Percy, & Ratner, 2010). This reluctance for men to disclose feelings and admit vulnerability is evident in their utilization rates of mental health services: Women seek these services more than twice as often as men (Garfield et al., 2008). When required to elicit the services of providers, men often self-treat and delay presentation, struggling with feelings of failure, determined to engage with the health care system “on their own terms” (Galdas et al., 2010). The timelessness and consistency of this phenomenon of denial in men is illustrated in a qualitative study published in 1964 that stated “for most patients it was only increasing incapacitation” that finally prompted them to seek help (Olin & Hackett, 1964).

Socio-cultural and economic differences impact men’s decisions regarding care-seeking. In general, health care seeking is more common in persons with higher income, higher education, and white race. And although generalizations, these trends are a product of multiple, complicated factors, including insurance status, language barriers, access to care and attitudes about health (Rosenstock, 1966). The authors of a report published by the California Family Health Council recognize the sociological impact of care-seeking. They chose to use a modified version of the Health Belief Model as proposed by Andersen to represent male preventative

services care-seeking. Modifying variables included race/ethnicity, union status, norms about health and masculinity, perceived loss of control, attitudes about health and how men experience symptoms of illness, worries and pain. The cultural effect of male access to health care is pronounced in California due to the relatively high Hispanic population. Hispanic men there are particularly less likely to seek care due to access issues (health insurance and access to care) and the cultural beliefs that alter attitudes and experiences regarding illness. When these Hispanic men were non-English-speaking, their utilization rates were one-half that of English-speaking Hispanics at the same clinic system (California Family Health Council, 2009, p. 15). These findings reinforce the complex psychosocial and economic factors that influence how, when and where men seek health care.

Knowledge Deficit/Self-Diagnosis

Patient perceptions (or lack thereof) of the symptoms of acute coronary syndromes (ACS) are well represented in the literature. Patients must recognize the symptoms of ACS before they will seek care. Unfortunately, only 35-40% of patients suffering an ACS interpreted their symptoms as cardiac in origin (Fukuoka et al., 2007; Moser, McKinley, Dracup, & Chung, 2005, White & Johnson, 2000). Delayed response may be more likely when men are experiencing symptoms for the first time. They may be surprised by the news that they are at risk of heart disease, and therefore unable to make the link between the disease and their signs and symptoms (White & Johnson, 2000). Although anecdotal reports suggest that individuals with a history of prior MI would experience a more rapid and accurate self-diagnosis at the onset of symptoms, studies do not validate this assumption as statistically significant. In addition, some qualitative studies have reported that symptoms of subsequent myocardial infarctions do not match those of the previous event, leading to confusion and delays in care seeking (Fox-Wasylyshyn, El-Masri,

& Artinian, 2010, p. 39). In one study surveying 3500 patients who all had a history of acute MI or cardiac procedure, knowledge levels of ACS symptoms and treatments remained low (46% of participants scored less than 70% on a test of ACS knowledge) despite these interactions.

Knowledge was increased when patients were younger, more educated, female, and had received care from a cardiologist, versus general practitioner or internist. Despite these poor results, men demonstrated, unrealistically, greater confidence than women in their abilities to recognize signs and symptoms of ACS (Dracup et al., 2008, p. 1049).

Perceived vulnerability affects the assessment of symptoms. Although heart disease is still perceived as a predominately “male” disease, men who suffer heart attacks often did not feel that they personally were at risk. When patients do not see themselves at risk for a coronary event, they tend to find alternative explanations for their symptoms (Dracup et al., 2008, p. 1049). Many men rely on the stereotype of the “coronary candidate”, whom they describe as an overweight, smoking older male with an unhealthy fatty diet and red face, and do not view themselves this way (Emslie & Hunt, 2009). This attitude of “it couldn’t be happening to me” has a long history, as evidenced by a study performed by Olin & Hackett in 1964 regarding the denial of chest pain during acute MI. They found that this perceived invulnerability is so strong that it may persist even after hospital admission and treatment. The authors eloquently refer to the “emotional crisis” created by the “mortal significance” of chest pain and the “menacing association it evokes” (Olin & Hackett, 1964, p. 980).

Severity of symptoms and recognition is another recurring theme. There is a tendency for patients (and the general public) to imagine a “typical” heart attack as sudden, crushing chest pain that is followed by collapse. In one study, men who had a pain rating of 9-10 (out of a scale of 0-10) were more likely to interpret their symptoms as having a cardiac origin. This finding is

in alignment with surveys in the U.S. that reveal a public perception that to be a “heart attack” it must have a pain rating of at least nine out of ten. Large-scale surveys have revealed that 85-95% of Americans equate the symptom of chest pain with acute MI. Unfortunately, many persons experiencing an acute MI do not have chest pain as a primary symptom, which contributes to erroneous self-diagnosis. In a 2005 survey, 92% of respondents recognized chest pain as a symptom of an ACS, but only 27% of this same population had an awareness of additional symptoms or knew to call 911 when someone was having these symptoms (Centers for Disease Control and Prevention, 2011). Due to the fact that many patients do not have this classic presentation, mild symptoms, such as indigestion, nausea, jaw pain or weakness are often explained away (Emslie, 2005; Emslie & Hunt, 2009; Fukuoka et al., 2007). Patients with a prior history of myocardial infarction (MI) more readily associated symptoms as having cardiac origin (Fox-Wasylyshyn, El-Masri, & Artinian, 2010; Fukuoka et al., 2007).

The preceding discussion relates to risk stratification, in that patients (and clinicians) who are suspecting coronary disease may treat these signs and symptoms at a lower threshold. In a recent observational study published in the *Journal of the American Medical Association*, hospital mortality from acute MI in relation to coronary risk factors for 542,000 patients over 12 years was reviewed. In-hospital mortality was inversely proportional to the number of risk factors, in that those with the lowest number of risk factors (0 or 1) had the highest mortality. Causation, although likely multi-factorial, could be explained by lower clinician (or patient) threshold for suspicion of coronary disease, lack of collateral coronary circulation in those with fewer risk factors, the likelihood that those with more risk factors will be taking medications proven to reduce mortality (aspirin, angiotensin II receptor blockers, beta blockers, statins), or that those with more risk factors may be more likely to receive routine health care (Canto et al.,

2011). These findings underscore the value of patients' understanding of the signs and symptoms of coronary disease, even when overt risk factors are few, or non-existent.

Presence of External Modifiers

The majority of those suffering an ACS are in the presence of others (usually a spouse or other family members) at the time of symptom onset (Moser et al., 2005; Galdas & Cheater, 2010). Although social relationships may act as enabler or impediment to seeking care, there is a paucity of data regarding the specifics of this decision process (Andersen, 1995). Men who are married, or in a relationship are more likely to monitor their health and seek health care (Galdas et al., 2010, p. 19). Men who are fathers may be motivated to seek care on behalf of their children (Garfield et al., 2008, p. 481). The few studies that addressed this influence on the process to seek help reported that when patients did consult others, the "most common response" was to encourage treatment (Moser et al., 2005; Galdas et al., 2010).

Some men report relief when the decision to seek help was assumed by another person. It has been suggested that this action may reduce the guilt that the man is feeling regarding seeking assistance (Emslie & Hunt, 2009, p. 176). In a 2009 report by the California Family Health Council, 13% of men who sought clinic services had presented as a result of the encouragement of a spouse or significant other. Of these men surveyed, one-fourth reported that their partner or spouse were also clinic patients (California Family Health Council, 2009, p. 15). It has been theorized that this external influence may provide validation for care-seeking in a society that stigmatizes, or even punishes, men who express emotions or pursue help (Garfield et al., 2008, p. 475). One author suggested that this external influence may play a vital role in correcting the "flaw created by denial" (Olin & Hackett, 1964).

A possible modifying variable refers to the perceived seriousness of the condition and the potential to impact the individual's physical functioning and life circumstances. Men tend to be concerned about how the disease will affect their social and economic roles as worker and family provider (Rosenstock, 1966, p. 100). The male physical body is thought by some as possessing "paramount importance", and any threat to this ideal may lead to extreme or dysfunctional reactions (Saltonstall, 1993, p. 10). Men may cope with the adversity and stress of a coronary event through the act of work, at precisely the time that they should be allowing for rehabilitation. For many men, it is unacceptable to allow their productivity to suffer (Emslie & Hunt, 2009). For some, the cardiac event demands re-evaluation of their work pace. The conflict between attending to health and attending to work is particularly problematic for those who are farmers and self-employed. Farmers, in particular, if they take time out for rehabilitation, are doing so at their place of employment (Emslie & Hunt, 2009). One male patient, a 50-year-old prison worker, delayed treatment due to concerns of how the threat of illness could impact his physically-demanding occupation. For fear of being perceived as a "wimp", he did not discuss his symptoms with his co-workers or wife until the symptoms became intolerable (White & Johnson, 2000, p. 539).

Included in this category, and associated with the next category, choice of action, is availability of health care services. This encompasses the practical aspects of access to care, such as income, availability of a primary provider, insurance, waiting and travel times, and EMS capabilities. In Andersen's review of the Behavioral Model in relation to access to care, he expresses concern for the inadequate attention given to "organizational factors", and how these may impact an individual's decisions when seeking care (Andersen, 1995, p. 3). Access can be affected by the costs of health care and the necessary paperwork for insurance services

qualification, when available. Even when qualified for services, waiting times for available appointments can be substantial. Access can also be greatly affected by available transportation. Many clients rely on others for transportation to appointments. Public transportation can be confusing, especially if the client does not speak English, and is often not available for those who live in rural communities (California Family Health Council, 2009, p. 26).

Choice of Action

The final theme relates to the decision process involved in care-seeking. This area, related to symptom recognition, was well represented. Men often struggle with when to seek help, expressing fears of being judged for seeking care prematurely or without sufficient cause (Garfield et al., 2008, p. 481). Minimizing symptoms is a common reaction, especially when the symptoms potentially may interfere with plans or obligations. It appears that the context (such as time, place and others' present) strongly influences behaviors and decisions to seek help (Galdas et al., 2010, p. 21).

It may be viewed as a sign of masculinity to "endure" symptoms to some threshold of personal or social acceptability (O'Brien, Hunt, & Hart, 2005, p. 514). Generally, men who experienced significant symptoms sought treatment quickly (Emslie & Hunt, 2009). Care seeking was more rapid when the pain was constant, versus intermittent (DeVon, Hogan, Ochs, & Shapiro, 2010, p. 106). Men are more likely to seek help when the help-seeking is perceived as a method to restore or preserve a function of masculinity, such as sexual or work performance (O'Brien, Hunt, & Hart, 2005). Care-seeking was most delayed when symptoms were intermittent and when involving the elderly (DeVon et al., 2010, p. 111). It was common to normalize (or rationalize) the discomfort and then attempt some method of self-treatment, including lay advice, prior to seeking professional assistance. It is also common to refer to

general practitioners, rather than calling EMS (White & Johnson, 2000). One study, in which 177 patients were interviewed following hospital admission for symptoms of ACS, found that beliefs in emotions and stress caused their symptoms, greatly outweighing beliefs in clinical risk/behavioral or hereditary factors. These behaviors were independent of gender, age, education or previous MI, and substantially increased delays in seeking care (Perkins-Porras, Whitehead, Strike, & Steptoe, 2008, p. 498). In many instances, this delay would be from hours to days. It was only after the urging of relatives or friends, or increasing incapacitation, that these patients presented for care (Olin & Hackett, 1964; Fukuoka et al., 2007; Moser et al., 2005). Garfield et al. (2008) described “problem reactions” that contribute to dysfunctional choices when care seeking. These include a reluctance to self-refer to healthcare providers, an avoidance of discussing feelings, a tendency to not disclose problems and premature termination of healthcare relationships (Garfield et al., 2008, p. 476). One male patient disclosed several factors that led to his decision to delay seeking treatment: He was the primary caregiver for his disabled wife, had been asked to participate in a bowling tournament on the day the discomfort began, and felt guilty for over-exerting himself the previous day (White & Johnson, 2000, p. 537). Although it is tempting to summarize the reactions as simply “rationalization” and “denial”, it is important to recognize the processes that guide care-seeking. These tend towards complicated social and emotionally-based decisions, rather than being purely symptom-related (Alonzo & Reynolds, 1998). White and Johnson (2000) summarize the challenges faced by men when making decisions regarding illness behavior:

It seems that man is not prepared to deal with his body when it makes the transition from being healthy to being ill. He is expected to be fit, productive and able to carry out the roles expected of him. There is a feeling of invincibility that is deep

seated and, when this is threatened, men have to rationalize their position and negotiate, both within themselves and with their wives and families, about what to do (p. 540).

Efforts to reduce delay to treatment have historically focused on the mass media, and have been largely unsuccessful. It has been suggested that education should be aimed at those at highest risk, including those with pre-existing coronary and peripheral vascular disease and those with a strong family history for these conditions (Moser et al., 2005, p. 52).

Although rarely addressed in the literature, a concerning finding relates to the utilization rate of EMS. In one study involving 194 patients in the midwestern U.S., with confirmed acute MI, less than 10% called the EMS as their first response (Moser et al., 2005). Differences in EMS utilization rates may be accounted for by the density of population and proximity of services (Ratner et al., 2006). None of these studies delved into the reasons for avoiding the use of the EMS. It has been hypothesized that barriers to EMS use may include financial concerns, unsatisfactory past experiences and embarrassment (Moser et al., 2005, p. 52). In a randomized, controlled survey, nearly 1000 patients from 20 communities in the U.S. who sought ED care for chest pain were interviewed regarding their use of EMS. Several categories emerged that influenced EMS use, including demographic, situational and belief factors. EMS use increased in those who were older, white, and lived alone. Use also increased when the patient had an ambulance pre-payment plan. These findings suggest that access (or lack of access) to transportation may influence the decision to call EMS. Regarding situational factors, patients who took antacids or aspirin were less likely, while those who took nitroglycerin were more likely, to call EMS. The authors suggest that patients who use nitroglycerin for self-management may have a greater familiarity with the symptoms of myocardial ischemia, and therefore,

recognize the potential seriousness of the presentation. As with other studies, patient certainty of the symptoms of cardiac in origin led to greater EMS use. One concerning finding relates to the decreased use of EMS following telephone consultation with a physician. It is not clear from the findings if patient anxiety was reduced following the telephone consultation, or of the provider was behaving as a “gatekeeper” for managed care. Regardless, 83% of the patients who spoke with a physician, and did not use EMS, were subsequently admitted to the hospital (Brown et al., 2000).

Regarding the risks of transportation via private vehicle versus EMS while experiencing cardiac symptoms, there are minimal data on this subject. One retrospective study, from King County, Washington, examined the mode of transportation utilized by more than 13,000 patients who were admitted to a coronary care unit over a 30-month period. They found that the majority (59%) were transported via EMS, versus 41% who used private transportation. Of the patients transported via EMS, 5.6% experienced cardiac arrest before arrival at the hospital. Of those who were transported via private vehicle, only 18 of more than 5,000 patients (0.35%) arrested before arrival at the hospital. Of those 18 patients, 6 survived to hospital discharge. This study only used the outcome variable of cardiac arrest. Therefore, morbidity data were not available. Their data suggest that those who called 911 were older, had a history of MI, and had longer stays in the hospital with higher inpatient mortality rates than those who drove themselves. From this data, one can infer that a process of self-selection may be occurring when deciding whether or not to call 911 (Becker, Larsen, & Eisenberg, 1996). In another study, again from King County, Washington, 5,207 patients hospitalized over a 15-month period were interviewed following their hospital stay regarding their decision to call, or not call, 911. In this study, 45% of the patients were transported via EMS. Of those who did not call, the reasons reported were

inadequate symptom severity, the patient did not think of calling 911, and that private vehicle transport would be faster due to proximity to the hospital (Meischke, Ho, Eisenberg, Schaeffer, & Larsen, 1994). It is important to emphasize that the above applicable studies regarding EMS use have all taken place in King County, Washington. Therefore, these data will tend to represent a largely urban population. Studies that investigate populations with other demographic characteristics (rural, economic, cultural, etc.) may reveal different results.

Efforts to increase EMS utilization during episodes of chest pain have been studied. A study performed in Seattle, Washington targeted seniors through the use of firefighter-delivered targeted education. In this study, EMS use increased significantly (16%) in the intervention group compared to the control group (Meischke, Diehr, Rowe, Cagle, & Eisenberg, 2006).

Implications for Practice

Health care providers will be better suited to provide services to men when this care is given within the context of the male paradigm. Recognizing that men often struggle with a lifetime of role modeling and genderification when faced with issues surrounding health care may lead to a greater understanding of their choices. Men also may struggle with the skills or vocabulary to discuss health-related issues.

Men may have practical challenges regarding access to care, which must be addressed. These challenges include affordability and availability of services, long work hours, shift work, working away from home, driving occupations and reduced access to nutritious meals. Understanding these challenges, on the part of the health care provider, may serve as a basis for patient education and behavior modification. Access may be improved by providing a map, with a list of services and hours of availability. Some men, especially those in transitional housing, or those that are homeless, may struggle with the processes of phone systems and making

appointments. Partnering with outreach or social services may improve success in these initial stages of establishing care. Language barriers may be addressed by employing multi-lingual staff and having access to medical translation services. Informational brochures and legal documents should be available in the predominant languages of the region. Documents should be written at suitable educational levels, recognizing that men have varying abilities to read and write. Men with low literacy may require more intensive interaction, such as focus groups with community members, using pictures to communicate exams, procedures, anatomy and tests.

Providers should acknowledge and reinforce appropriate healthcare seeking behavior. Similarly, exploring with the patient regarding their expectations or negative experiences may improve future choices regarding their health. By involving men as active participants in their care planning, some level of empowerment may be achieved, leading to improved adherence. Men may feel greater involvement when provided useful information about their bodies and how they relate to their symptoms. They also tend to place greater value in interventions that involve actions and are solution-oriented.

Education should begin in adolescence, as many risk behaviors (such as smoking, alcohol use, nutrition and activity habits) are initiated during this time. Using the Health Belief Model, education regarding benefits of “heart healthy” behaviors, barriers to these behaviors, and information regarding individual risk for heart disease, may increase adherence to suggestions and prescriptions (Mahalik & Burns, 2011). Educating patients on a disease that may be symptom-free can be challenging. Through the use of a risk stratification tool, such as the Framingham or Reynolds risk score, the variables of genetics, lifestyle and biomarkers may be quantified to provide a more compelling argument for the need for the patient to change behavior (DeFilippis et al., 2011). Risk factors, such as inactivity, obesity, hypertension,

smoking, high cholesterol and diabetes are particularly challenging to the clinician and patient. These factors, all of them modifiable, may require continual revisiting with each visit.

Men may need education on how their feelings are integral to what is happening inside their bodies, and how these feelings may provide important information that could alter their decision-making. Men at high risk for ACS, due to coronary or peripheral vascular disease, or family history, should receive intensive, targeted education. This education should include possible symptom presentation, effects of social and emotional components, and a plan for phoning for assistance (McKinley et al., 2009, p. 1049). It is also vital to discuss the possible wide array of symptoms that may indicate myocardial ischemia, such as intermittent symptoms, shortness of breath, sweating, dizziness, weakness, fatigue, nausea, vomiting, belching, heartburn, arm, jaw and/or back pain.

Adding family members and significant others' in this discussion is encouraged. Historically, spouses and family members have strongly influenced men's decisions to seek care, as evidenced by the fact that men whose partners attend the same clinic are more likely to seek care. Men may demonstrate greater motivation for healthful behaviors when they see how their actions affect their partners and children.

Another approach may include outreach programs involving men from their own communities. Through these interactions the men may view their problems as "normal", or common, reducing the stigma of health-related problems. The appropriate use of health care services may be improved by empowering these influential groups (partners and community) with knowledge regarding signs and symptoms of complications of disease and serious illness. Building on this information, the provider can then discuss warning signs and when to seek

treatment. Patients may be encouraged by providers who role-model healthy lifestyles, therefore affirming the benefits of healthful behavior.

The appropriate use of EMS should be encouraged, especially when the signs and symptoms are suggestive of a serious condition. It is important to emphasize that decision-making during times of crises are often emotionally-laden and may not lead to rational actions. Focusing this discussion towards those patients (and families) who have used emotion-focused coping in the past is prudent, as these behaviors lead to greater delays in treatment. Involving trained healthcare providers (such as EMS) early in the process may provide an objective perspective at a time when stress, emotions and symptoms are all contributing to ineffective coping. It may be necessary to discuss the capabilities of the EMS providers in their region, and why their presence can help reduce morbidity and mortality, especially with regards to access to defibrillation.

It is also highly encouraged that all family members are proficient in the techniques of cardiopulmonary resuscitation (CPR). High-quality CPR has proven benefits for morbidity and mortality, especially when taught to families of high-risk patients and when administered immediately after witnessed arrest (American Heart Association, 2010).

Conclusions

Despite the lethality of acute coronary syndromes, this literature review reveals challenges regarding the public's understanding of the presenting symptoms, ability to accurately detect the condition, and willingness to seek assistance. Outcomes are improved when patients and their families have experience or education regarding presentation. Despite the proven benefits of phoning emergency services, this option is infrequently utilized. Further studies are needed to identify the reasons for the public's reluctance to request EMS assistance.

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