INTRODUCTION

Cardiovascular disease is the number one cause of death globally and is projected to remain the leading cause of death. An estimated 17.5 million people died from cardiovascular disease in 2005, representing 30% of all global death. Of these deaths, 7.6 million were due to heart attacks and 5.7 million were due to stroke. Around 80% of those deaths occurred in low-and middle-income countries. If appropriate action is not taken, by 2015, an estimated 20 million people will die from cardiovascular disease every year, mainly from heart attacks and strokes ***(World Health organization, 2007).***

In Egypt, ***The National information center for health by Ministry of health (2008)*** reported that the incidence of death as caused by cardiovascular diseases were 466381 per 100,000 population per year. Coronary heart disease, which encompasses acute myocardial infarction (AMI), angina pectoris, atherosclerotic cardiovascular disease, and all other forms of acute and chronic Ischemic heart disease is the leading cause of death in industrialized world ***(Boden, et al., 2008).***

Acute coronary syndromes (ACS), which include unstable angina and acute myocardial infarction with or without St- segment elevation are life-threatening disorders that remain a source of high morbidity and mortality despite advances in treatment ***(Boden et al., 2008).*** The economic burden of ACS is also very high, costing Americans more than $ 150 billion, according to AHA estimates. Approximately 20% of the ACS patients are rehospitalized within 1 year, and nearly 60% of the costs related to ACS result from rehospitalization ***(Menzin, et al., 2008).***

The concept of "burden of disease" combines mortality and morbidity into a single indicator denoted as the Disability Adjusted Life Years (DALYs). According to the Atlas of heart disease and stroke. The disability – adjusted life years lost, can be thought of as healthy years lost to a disease, and they indicate the total burden of disease as opposed to simply the resulting death. By comparing the data from the Netherlands with Egypt regarding DALYs, we

may conclude that the burden of CAD in Egypt is three times higher compared to the Nether Lands ***(McKay & Mensah, 2004)***. More over, coronary heart disease was responsible for one of every five deaths in Egypt ***(Rafazee & Abou El-maged, 2002).***

Acute myocardial infarction is a catastrophic manifestation of coronary artery disease that strikes more than 9000,000 Americans each year. One fourth of afflicted patients die, and many survivors develop impaired functional status, anginal symptoms, and diminished quality of life ***(Spertus, et al., 2009).*** Acute myocardial infarction is the leading cause of mortality and morbidity. According to the American Heart Association, about 250,000 people per year die within 1 hour of developing disease and before. They can access the health care system. Moreover, those individuals who recover may experience damage to the heart that limit their activities. As the population ages, this disease will continue to have tremendous human and economic impact ***(Badr, 2002).***

In Egypt, ***The National information center for health by Ministry of health (2008)*** reported that the incidence of death caused by acute myocardial infarction was 8041 per 100,000 population per year. Acute myocardial infarction is also known as a heart attack, coronary occlusion or simply a "Coronary" which is a life-threatening condition characterized by the formation of localized necrotic areas within the myocardium. AMI usually follows the sudden occlusion of a coronary artery cessation of blood and oxygen flow to the heart muscle ***(Black & Hawks, 2009).***

A Myocardial infarction occurs as a result of sustained ischemia, causing irreversible myocardial cell death (necrosis). 80 to 90% of all acute myocardial infarctions are secondary to thrombus formation. Contractile function of the heart stops in the necrotic areas. The degree of altered function depend on the area of the heart involved and the size of the infarction ***(Lewis, et al., 2007).***

About one fifth of all myocardial infarction are silent, that is, the patient is unaware that the myocardial infarction has occurred. Although the patient

feel no pain, silent myocardial infarctions still damage the heart ***(American Heart Association, 2008).*** One quarter to one third of those who survive the event will die within 12 months, and a large proportion will experience reinfarction or sudden death within 6 years of the event ***(Heart Disease and stroke Statistics, 2006).***

Myocardial infarction is a significant problem for individuals in developed countries. Variation in practice is recognized as a key barrier to promoting positive outcomes in patients with cardiac illness. Therefore , a mechanism is needed to disseminate clinical recommendations to patient at the point of care and in a format that is understandable by health care consumers ***(Dykes, Currie & Bakken, 2006).***

Critical care nurses are challenged to positive advanced nursing care for AMI patients across the continuum of critical care team to meet the physiologic and psychologic needs of such acute illness. Critical care nursing management of patients with acute myocardial infarction include monitoring of therapies, high intensity nursing interventions, hemodynamic measures and performing a wide variety of skills and procedures. The goals behind such care are related to patient stabilization, minimization of complications, and promotion of physical and psychological well being ***(Ownby, 2007).***

American Heart association and American collage of cardiology reported that, the hospital treatment of AMI frequently does not follow published guidelines, potentially contributing to high morbidity, mortality, and economic cost of this disorder. This highlight an ongoing need for introducing new strategies, applying new mechanisms for patient care as well as development of quality improvement programs that focus on delivering reliable, evidence based care ***(Gardetto, et al., 2008)***.

Implementation of clinical pathway has been identified as one way to promote evidence-based practice, reduce practice variation, and ultimately improve the quality of care and outcomes of patients with myocardial infarction ***(Dykes, Currie & Bakken, 2006). Christopher et al., (2009)*** defined acute myocardial infarction clinical pathway as a standardized protocols for

optimizing and streamlining patient care. clinical pathways have been developed in health care as multidisciplinary care plans that outline the sequence and timing of actions necessary for achieving expected patient outcomes and organizational goals regarding quality, costs, patient satisfaction and efficiency ***(El-Baz, etal., 2007).***

The nursing clinical pathway for patient with acute myocardial infarction differ from traditional care plans in the following ways (1) it represent patient care plan rather than nursing care plan (2) it focused on the quality and efficiency of care (3) the interventions are designed along specific timelines, sometimes even in hour-by-hour detail, for indicated actions and pathways not only spell out these specific actions but also enumerate expected outcomes that serve as check points for the performance of the patient and the pathway. (4) if patient outcomes do not occur, variances, too, can be noted on the document, along with an explanation of causes, and if needed, a plan can be described to return the patient to the expected course of treatment and outcome ***(Olive, 2009).***

Nurses have the unique and wonderful opportunity of being in apposition to make a difference in the lives of many people. Nurses are privileged to be able to learn and grow personally from the courage, self-will, and incredible spirit that patients display during every day of their illness. As nurses, we need to embrace our humanness and learn to truly be with our patients, take time to get to know them, and to discover what has importance and meaning for them. Nurses. Play an important role in quality initiatives and new innovations by active participation in the development and implementation of these innovations. One way to do this is with implementation of clinical pathway, which, in health care, has been shown to improve multidisciplinary collaboration, and enhance the professional integrity of the nursing profession among professional colleagues, patients, and the general public ***(Khowaja, 2003).***

Thus the aim of this study is to (1) design a nursing clinical pathway to fit with patients with acute myocardial infarction, (2) to implement the

designed nursing clinical pathway guidelines. And (3) to evaluate the impact of the designed nursing clinical pathway guidelines on the outcomes of patients with acute myocardial infarction as indicated by hospital length of stay, occurrence of complications, compliance to therapeutic regimen and patient satisfaction among a study group as compared to a control one.

Significance of the study:

From clinical observation in the intensive and coronary care units of Benha University Hospitals, it was observed that the number of patients with acute myocardial infarction has increased over the last three years and these patients require intensive collaborative care to save their lives and they are at risk for several complications as cardiac dysrhythmias, heart failure, thromboembolism, , pericarditis and cardiogenic shock. This complications in turn may have negative impact on the patient's life, physical and psychological conditions, and consequently prolong patients hospital stay, and increase hospital costs.

That is why there is an interest to conduct such type of research . It might safeguard this category of patients against these serious complications. In addition, scattered researchers where done in this area especially on the national level. Furthermore, this research could provide health professionals with an in depth understanding related to this category of patients which could be reflected positively on the quality of patients life hospital resources. It might generate an attention and motivation for further researches into this area especially it is the first clinical pathway related dissertation in the faculty of nursing, Benha University. and can be utilized in the future care plan for sub group of patients. Furthermore, it help nursing education leaders in better preparation of future practitioners and in advancement of the Science of Nursing. As well ,it improves patient satisfaction.