INTRODUCTION

Hospital-acquired infections are worldwide problems. They represent infections acquired during or associated with delivery of care in contrast to infections present or incubating at the time of the care delivery episode. Hospital-acquired infections are among the leading causes of death and they cause significant morbidity among patients who receive health care ***(Wenzel, 1995)***.

The Intensive Care Unit (ICU) is one of the busiest units in the hospital and uses some of the most sophisticated equipment and advanced medical practices. However, the ICU may also experience higher infection rates due to the severity of illness of the ICU patients and to the frequent use of invasive devices. Invasive devices (e.g., intravascular catheters) bypass the patients' natural defenses against infection and place them at risk of infection from their own endogenous microorganisms. There is also a risk of becoming contaminated with another patient's microbes or with those in the environment if staff does not maintain basic hand hygiene between patients. This may occur, for example, during direct contact if secretions from one patient are transferred on HCW hands to another patient or indirectly if a HCW handles soiled equipment and contacts a patient before carrying out hand hygiene. If patients become colonized with infectious agents from another source, they may develop an infection at a later time as the microbes gain access during device manipulation ***(Sohn, 2001)***.

Infection is the invasion and multiplication of pathogenic microorganisms in body tissue that results in cellular injury and example is strep throat. These microorganisms are called infectious agents that capable of being transmitted to a client by direct or indirect contact,

through a vehicle or airborne route are called communicable agents ***(White 2005).***

Nosocomial infection is one of the most frequent medical complications affecting patient in ICUs, make only five percent of hospital beds and care for less than to ten percent of hospitalized patients, infection acquired in these units account for more than twenty percent of nosocomial infections ***(Pittet , 2001).***

The incidence of nosocomial infections varies from country to country. NI rates varies also with the type of hospital and type of ICU . In Egypt, El shamy found that the incidence of NI in open heart surgery ICU is 30%. The number of infections that are acquired in hospitals is very difficult to measure. The presence of infection is often not accurately recorded in medical or nursing records and very few hospitals have system in place to collect and analyze information about infection ***(ELshenawi , 2003).***

The causes of nosocomial infection are multiple and varied: Altered host defense due to underlying disease ,in adequate nutrition debility, introducing and insertion of diagnostic and therapeutic devices , concomitant therapy with immunosuppressive agents , use of broad spectrum antibiotics ,and lack of barrier nursing ***(Kellef , 2000).***

There are many methods used to control nosocomial infections . More than 50% of patients who are admitted to the ICU are colonized by an organism that is responsible fore subsequent infection. Patients who have been previously admitted to hospital may be colonized by resistant microbes that could be contagious. Early diagnosis of potentially

contagious disease is very important , so physicians should be alert to this possibility ***(Youniss , 2002).***

The most important and most basic technique in preventing and controlling transmission of infection is hand hygiene. It is a general term that applies hand wash which refers to washing hands with plain soap and water ***(Perry & potter, 2006).***

Protective barriers like gloves, gowns, masks and eye shields provide a physical impediment to the transmission of infectious agents. The principles role of these barriers is to protect hospital staff from infectious agents that can be transmitted by blood and body fluids such as (HIV) and hepatitis B and C viruses ***(Marino and Sutin , 2007).***

Environmental cleaning services are generally provided a dedicated sanitation staff; however, in some institutions or in certain situations, the nurse might be called upon to perform some types of cleaning activity. In keeping with the principles of medical asepsis, cleaning schedules should progress from the least soiled to the most soiled to prevent the inadvertent transfer of dirt and organisms from the dirty onto clean areas. Cleaning activities should also minimize turbulence to prevent the aerosolization of organisms. Each healthcare institution has unique cleaning requirements and schedules; healthcare workers should become familiar with their responsibilities to maintain a clean environment ***(National Center of Continuing Education 2006).***

Infection control Nurse plays an important role in assessment of the hospital infection rate with the help of surveillance. She collaborates with medical and nursing staff to investigate the spread of infection. She carries out surveillance of nosocomial infections and provides relevant information. She identifies problems related to infection and reports to infection control committee and management. In order to do so, she needs

to know about surveillance and its methods. She has to develop appropriate methods of surveillance for her institute so that errors can be minimized and accurate data collection and calculation of infection rates can be done ***(Shweta , 2002).***

The significance of study: From previous experiences, the researcher objectively observed that infection control measures in the Intensive Care Unit is not properly applied, despite the fact that caution is especially critical in this area, there fore the aim of this study is to assess the infection control measures applied by health team members in the Intensive Care Unit, Benha university Hospital.