

Worldwide every year, many lives are lost because of the spread of infections in health facilities. For more than a century, medicine has viewed the microbial world as an enemy that should be destroyed, by practical measures known as "infection control," and they are designed to prevent the spread of microorganisms from one person to another, or from one site to another on the same person, some infection control practices are rational, and some are ritual, but all are an essential part of daily life in the ICU. It is therefore important for all health care workers, patients, their family members, friends and close contacts to adhere to the infection control guidelines strictly. It is also imperative for health care administrators to ensure implementation of the infection control program in health care facilities (WHO, 2004). It is very important to protect air-cross infection, improve air quality in surgical intensive care unit and in the design and effect of "local air condition and purification control system" (Su, et. al., 1996). Nosocomial infection is a major cause of morbidity and mortality in the critical care units, ventilator-associated pneumonia represents the most prevalent and visible hospital-acquired infection (Zilberberg and Shorr, 2011). However, it is rarely implicated in disease transmission except in the immunocompromised population (CDC, 2003). Filtration systems (air handling units) designed to provide clean air should have high efficiency particulate air filters in high-risk areas. Ultra clean air is valuable in some types of cardiac surgery, neurosurgery, implant surgery theatres and transplant units (WHO, 2004). Unidirectional laminar airflow systems should be available in appropriate areas in the hospital construction. Over 1.4 million people worldwide are suffering from infections acquired at hospitals. The risk in developing countries is 2 to 20 times higher (Pittet and Donaldson, 2006). Microbial organisms (microbes) make up about 90% of the living matter on this planet. High-risk areas such as operating rooms, critical care units and transplant units require special ventilation systems. Between 5% and 10% of patients admitted to modern hospitals in the developed world acquire one or more infections. Spreading in the air we breathe, the food we eat, and the water we drink. Also found on our skin, under our fingernails, in our nose and mouth.