

Introduction

Nosocomial infections can be defined as those infections occurring within 48 hours of hospital admission, 3 days of discharge or 30 days of an operation. They affect 1 in 10 patients admitted to hospital (*Inweregbu, 2005*).

Nosocomial bloodstream infections (BSIs) are associated with significant mortality and morbidity. These nosocomial BSIs have also been reported to increase length of stay and hospital charges. It is stated that nosocomial BSIs increased stay period length by an average of 14 days and total hospital charges by \$25,090 (*Sohn et al., 2001*).

Reduction of these nosocomial BSIs has the potential to reduce mortality, morbidity and hospital treatment costs associated with treating VLBW infants (*Payne et al., 2004*).

Neonates in the NICUs have both intrinsic and extrinsic risk factors for infection. The **intrinsic risk factors** for infection are due to immunological "deficiencies" or inadequate development of the mechanical barriers such as the skin and gastrointestinal tract mucosa. All aspects of immune function are impaired in NICU infants, including the phagocytic, humoral, and reticuloendothelial systems. Bacterial colonizers in the normal host are potentially invasive in the neonate (*Srivastava and Shetty, 2007*).

Like other intensive care unit (ICU) populations, NICU patients have **extrinsic risk factors** for infection such as prolonged hospitalization, invasive procedures, instrumentation, and antibiotic-induced overgrowth of resistant flora. Unlike healthy full-term infants, Neonates in the NICUs acquire **abnormal flora** as nosocomial infection from the healthcare workers. These floras are frequently multidrug-

resistant as it has developed with administration of antibiotics hence it could lead to invasive diseases (*Schelonka et al., 2006*)

Late-onset neonatal sepsis (LONS)—invasive infection occurring in neonates older than 3 days—occurs in approximately 10% of all neonates and in > 25% of very low birth weight infants (VLBW) (<1500 g) who are hospitalized in neonatal intensive care units (NICUs) (*Rubin et al., 2002*).

Infection control refers to all policies, procedures and activities, which aim to prevent or minimize the risk of transmission of health care acquired infections (HAI). Effective infection control programs have been proven to reduce the rates of nosocomial infections and to be cost-effective (*WHO, 2008*).

It was detected that effective infection control programs which included surveillance, control activities, and appropriate personnel and leadership protect from the transmission of infections decreased the frequency of nosocomial infections (*WHO, 2004*).