APIC Meeting
Baltimore, USA
June 19th to 23rd
2005

Device-Associated Nosocomial Infection Rates in Intensive Care Units in an Italian Hospital of Milan

Franzetti F 1, Corona A 1, Raimondi F 1, Rosenthal VD2.

1- Sacco Hospital, Milan, Italy,
2- Medical College of Buenos Aires, Argentina.

OBJECTIVES:
To measure the incidence of device-associated nosocomial infections (NI) in intensive care units (ICU). To measure days of extra length of stay (ELOS).
METHODS: We performed a prospective NI surveillance study in three ICUs of one private hospital. NIs were identified using the CDC-NNIS definitions. We calculated E-LOS subtracting nosocomial average length of stay (ALOS) of patients with and without NI. We processed the data with the software of Dr. VDR - NI research center.
RESULTS:
From November 2003 to March 2004 (five months), we enrolled 273 patients, 1151 bed days (BD), 1512 central vascular catheter (CVC) days, 673 mechanical ventilator (MV) days, and 1107 urinary catheter (UC) days. The overall NI rate was 9.9% (27/273) and 23.5 (27/1512) per 1000 BD. The most common site of NI was MV-associated pneumonia (40.7%) (11/27), and CVC-associated laboratory confirmed bloodstream infection and clinical sepsis (LCBI and CSEP) (40.7%) (11/27), followed by UC-associated urinary tract infection (UTI) (18.5%) (5/27). Pneumonia rate was 16.3 (11/673) per 1000 MV days. The ALOS with Pneumonia was 16.7; the ALOS without NI was 2.7 with 14.0 days of ELOS. BSI rate was 7.3 (11/1512) per 1000 CVC days. The ALOS with blood stream infection (BSI) was 18.8, representing 16.0 days of ELOS. UTI rate was 4.5 (5/1107) per 1000 UC days. The ALOS with UTI was 14.0, representing 11.3 days of ELOS.
CONCLUSION:
Our infection control program must continue to be aimed at invasive device-associated nosocomial infections. A patient with BSI increases ALOS by 16 days; 14 days for UTIs, and 11.3 days increase for pneumonia.