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Device-associated Nosocomial Infection Rates and Extra Length of Stay in Intensive Care Units of India

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OBJECTIVES:

To measure the incidence of device-associated nosocomial infections (NI) in intensive care units (ICU). To measure days of extra length of stay (E-LOS).

METHODS:

We performed a prospective NI surveillance study in two ICUs of two hospitals. 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.

RESULTS:

From July 2004 to October 2004 (4 months), we enrolled 594 patients, 3,397 bed days (BD), 3,063 central vascular catheter (CVC) days, 734 mechanical ventilator (MV) days, and 1,916 urinary catheter (UC) days. The overall NI rate was 12.29% (73/594) and 21.49 (73/3997) per 1000 BD. The most common site of NI was CVC-associated bloodstream infection (BSI) 46.6% (34/73), and MV-associated pneumonia 38.4% (28/73), followed by UC-associated urinary tract infection (UTI) 15.1% (11/73). BSI rate was 11.10 (34/3,063) per 1000 CVC days. The ALOS with BSI was 9.6; the ALOS without NI was 5.1, with 4.5 days of E-LOS. Pneumonia rate was 38.15 (28/734) per 1000 MV days.

The ALOS with Pneumonia was 9.9 representing 4.8 days of E-LOS. UTI rate was 5.74 (11/1916) per 1000 UC days. The ALOS with UTI was 9.4, representing 4.3 days of E-LOS. CONCLUSION:

Our infection control program must continue to be aimed at invasive device-associated nosocomial infections. A patient with BSI increases its ALOS in 4.5 days, 4.3 days in UTIs, and 4.8 days in pneumonia.