

**Rosenthal VD, Lynch P, Abu Khader I, et al. Device-Associated Infection Rates, Length of Stay, Mortality and Microorganism Profile in 28 Neonatal ICUs from 13 Countries: Findings of INICC. In: Proceedings and Abstracts of the 6th World Congress of the World Society for Pediatric Infectious Diseases 2009 November 18-22; Buenos Aires, Argentina 2009.**

**Device-Associated Infection Rates, Length of Stay, Mortality and Microorganism Profile in 28 Neonatal ICUs from 13 Countries: Findings of INICC**

Victor D. Rosenthal<sup>1</sup>, Patricia Lynch<sup>2</sup>, Ilham Abu Khader<sup>3</sup>, Nejla Ben Jaballah<sup>4</sup>, Grlden Ersoz<sup>5</sup>, Wilmer Villamil Gmez<sup>6</sup>, Lourdes Dueas<sup>7</sup>, Fernando Martn Ramrez Wong<sup>8</sup>, Regina Berba<sup>9</sup>, Mandakini Pawar<sup>10</sup>, Irma Zamudio Lugo<sup>11</sup>, Raquel Bauer-Cechinel<sup>12</sup>, Amina Barkat<sup>13</sup>, Salisu Abubakar<sup>14</sup>.

1- International Nosocomial Infection Control Consortium, Buenos Aires, Argentina; 2- Epidemiology Associates, Redmond, WA, USA; 3-Jordan University Hospital, Amman, Jordan; 4-Hpital d'Enfants, Tunis, Tunisia; 5-Mersin University, Faculty of Medicine, Mersin, Turkey; 6-Clnica Santa Mara, Sucre, Colombia; 7-Hospital Nacional de Nios Benjamin Bloom, San Salvador, El Salvador; 8-Hospital Mara Auxiliadora, Lima, Peru; 9-Philippine General Hospital, Manila, Philippines; 10-Pushpanjali Crosslay Hospital, Ghaziabad, India. 11-Hospital de Pediatra CMN Siglo XXI, IMSS, Mexico, Mexico; 12-Complexo Hospitalar Santa Casa de Porto Alegre, Porto Alegre, Brazil; 13-Children Hpital of Rabat, Rabat, Morocco; 14-Aminu Kano Teaching Hospital, Kano, Nigeria.

**Objective**

To determine device-associated infection (DAI) rates, microorganism profile, extra length of stay (LOS) and mortality in 28 neonatal intensive care units (NICUs) of the International Nosocomial Infection Control Consortium (INICC) in Argentina, Brazil, Colombia, El Salvador, India, Jordan, Mexico, Morocco, Nigeria, Peru, Philippines, Tunisia, and Turkey.

**Methods**

Centers for Diseases Control (CDC)-National Healthcare Safety Network (NHSN)'s definitions were applied to identify DAIs.

Data collection was conducted at the participating ICUs, using outcome surveillance methods of the International Nosocomial Infection Control Consortium (INICC), and matched patients to calculate extra LOS and mortality. Statistical analysis was performed using Chi-square test.

**Results**

From Oct/2003 to Apr/2009; 14,514 patients; 57,053 central line (CL) days and 36,569 mechanical ventilator (MV) days were collected.

Central line associated bloodstream infection (CLAB) rate was 11.9 per 1000 CL days and ventilator associated pneumonia (VAP) rate was 9.74 per 1000 MV days.

33.3% of all DAIs were caused by *Pseudomonas* sp (42.1% Imipenem resistant (R); 21.1% by *Klebsiella* sp (85.2% Ceftazidime R); 13.3% by *Coagulase-negative-staphylococci* (84.4% methicilin R); 7.8% by *S aureus* (40.0% were MRSA); and others.

LOS without DAI was 10.4 days; with CLAB 25.4; and with VAP was 27.7.

8.1% of patients without DAI died; 32.9% with CLAB (RR, 4.06; P< 0.01); and 26.3% with VAP (RR, 3.25; P< 0.01).

**Conclusions**

CLAB rate was 4 times, and VAP was 5 times above CDC-NHSN rates, and had significantly higher LOS and mortality.

DAIs in the ICUs of these developing countries pose far greater threats to patient safety than in developed countries ICUs. Active infection control programs that carry out infection surveillance and implement guidelines for its prevention can improve patient safety and must become a priority.