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**Effectiveness of Outcome and Process Surveillance for Reducing Ventilator-Associated Pneumonia in a Colombian Hospital. Findings of the INICC.**

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**OBJECTIVE:**

To determine the effect of outcome and process surveillance (intervention) on the rate of ventilator-associated pneumonia (VAP) in two intensive care units (ICU) of Bogotá, Colombia.

**METHODS:**

An open label, prospective cohort, active healthcare associated infection surveillance, sequential study was conducted on adult patients admitted to two tertiary-care ICUs. The protocol, forms, and methodology implemented were developed by the INICC. The data collection was performed in the participating ICU. Data uploading and data analysis were conducted at the INICC headquarters on proprietary software. Rates of VAP were recorded through applying the definitions provided by the Centers for Disease Control and Prevention (CDC) National Nosocomial Infection Surveillance (NNIS) system. The rate of VAP during baseline was compared to the rate during an intervention period.

**RESULTS:**

From June 2004 to April 2006, 2,696 adult ICU patients were enrolled (2,094 during the first phase and 602 during the second phase). Patient's demographic characteristics and underlying diseases were similar over the two periods (Patient gender, RR= 0.99, 95% CI = 0.88 - 1.12, P = 0.8995; Age, P = 0.6516; COPD, RR = 1.13, 95% CI = 0.91 - 1.39, P = 0.2717; Renal Impairment, RR= 1.03, 95% CI = 0.77 - 1.37, P = 0.8617; Hepatic failure, RR = 1.16, 95% CI = 0.42 - 3.19, P = 0.7742; Abdominal Surgery, RR = 1.04, 95% CI = 0.79 - 1.37, P = 0.7963; Thoracic Surgery, RR = 0.39, 95% CI = 0.14 - 1.09, P = 0.0611; Trauma, RR = 1.06, 95% CI = 0.68 - 1.66, P = 0.7970; presence of Previous Infections, RR = 1.10, 95% CI = 0.79 - 1.53, 95% CI = 0.5878; and Immunocompromise, RR = 1.02, 95% CI = 0.58 - 1.82, P = 0.9381)

The incidence of VAP rate during the second phase (June 2005 to April 2006) was significantly lower than during the first phase (June 2004 to December 2004), 11.7 (63 VAP and 5,390 mechanical ventilator days) versus 4.2 [10 VAP and 2,381 mechanical ventilator days] VAP per 1000 MV days, RR = 0.36, 95% CI = 0.18 - 0.70, P = 0.0016).

**CONCLUSION:**

Outcome and process surveillance resulted in a significant reduction of the VAP rate, which was reduced 64%.