



## Conference Proceedings

### **Impact of Outcome and Process Surveillance on Central Line Associated Bloodstream Infection Rates in 14 ICUs in 10 cities from Turkey: Findings of the International Nosocomial Infection Control Consortium (INICC).**

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**Objective:** To determine the effect of outcome and process surveillance (intervention) on the rate of Central Line-associated Bloodstream (CLAB) infection in 14 intensive care units (ICU) from 10 cities from Turkey.

**Methods:** An open label, prospective cohort, active CLAB surveillance, sequential study was conducted on adult, pediatric, and newborn patients admitted to tertiary-care ICUs. Rates of CLAB were recorded through applying the definitions provided by CDC-NHSN system. The protocol, forms, and outcome and process surveillance methodology implemented were developed by the INICC. The data collection was performed in the participating ICUs. Data uploading and data analysis were conducted at the INICC headquarters on proprietary software. The hand hygiene compliance and CLAB rates during baseline were compared to the rate during an intervention period.

**Results:** The baseline period included the first three months of each medical center in the study; the intervention period lasted a mean of 20 months (range 3-48 months).

During the baseline period, 644 ICU patients were enrolled, and 4,397 during the intervention period. Patient's characteristics were similar over the two periods (Patient gender, P: 0.2390; Diabetes, P: 0.406; Coronary Insufficiency, P: 0.2831; Cardiac Surgery, P = 0.2149; Cancer, P: 0.5263; Thoracic Surgery, P: 0.1839; Trauma, P: 0.2102; and Stroke, P: 0.0539).

Hand-hygiene compliance improved from baseline to intervention period (27.2% vs 43.9% [RR, 1.61; 95% CI, 1.49-1.75; P<0.01]).

The rate of CLAB per 1,000 CL days during the intervention period was significantly lower than during the baseline period, 23.1 (81/3,508) vs 15.5 (510/32,800) CLAB per 1000 CL days (RR, 0.67; 95% CI, 0.53-0.85; P<0.01).

**Conclusion:** Outcome and process surveillance resulted in a significant reduction of the CLAB rate.