

**Effectiveness of Outcome and Process Surveillance for Reducing Catheter-Associated Urinary Tract Infections and Overall Nosocomial Infection Rates in a Hospital in India. Findings of the International Nosocomial Infection Control Consortium (INICC). Proceedings and Abstracts of the 17th Annual Scientific Meeting of The Society for Healthcare Epidemiology of America. Baltimore, U.S.A., April 14-17**

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**OBJECTIVE:** To determine the effect of outcome and process surveillance (intervention) on the rate of catheter-associated urinary tract infection (CAUTI) and overall health care associated infection (HAI) rates in four intensive care units (ICUs) of Kolkata, India. </p>

**METHODS:**An open label, prospective cohort, active HAI surveillance, sequential study was conducted on adult patients admitted to four 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 HAI were recorded through applying the definitions provided by CDC-NNIS system. The rate of CAUTI and overall HAI rates during baseline was compared to the rate during an intervention period. </p>

**RESULTS:** From 04/2006 to 10/2006, 1122 adult ICU patients were enrolled (557 in the baseline period and 565 in the intervention period). Patient's characteristics were similar over the two periods (Patient gender, RR= 0.99, 95% CI = 0.85 - 1.15, P = 0.9133; Age, P= 0.6512; ASIS score, P = 0.2358; Cardiac Surgery, RR = 0.28, 95% CI = 0.06 - 1.36, P = 0.0913; Cancer, RR = 0.49, 95% CI = 0.0953; Renal Impairment, RR = 0.66, 95% CI = 0.40 - 1.08, P = 0.0949; Hepatic Failure, RR = 0.66, 95% CI = 0.11 - 3.93, P = 0.6432.; and Immune-compromise, RR = 0.99, 95% CI = 0.20 - 4.88, P = 0.9860. Compliance with hand-washing (71.5% vs. 78.0% [RR = 1.09, 95% CI = 1.01 1.18, P-value = 0.0309]) improved during the intervention period. Compliance with urinary catheter (UC) site care improved during the intervention period (UC on thigh without strangulating, 91.5% vs. 99.6% [RR = 1.09, 95% CI = 1.01 1.17, P-value = 0.0229]; Collecting bag hanging not allowing urine reflux, 91.9% vs. 99.4% [RR = 1.08, 95% CI = 1.01 1.16, P-value = 0.0355]). The incidence of CAUTI rate during the intervention period was significantly lower than during the baseline period (7.4 vs 2.2 CAUTI per 1000 UC days, RR = 0.30, 95% CI = 0.08 - 1.07, P = 0.0481).The percentage of patients with CAUTI during the intervention period was significantly lower than during the baseline period (2.0% vs 0.5%; RR = 0.27, 95% CI = 0.08 - 0.96, P = 0.00304).The overall HAI rate per 1,000 bed days during the intervention period was significantly lower than during the baseline period (12.0 vs 5.3 HAI per 1000 bed days, RR = 0.45, 95% CI = 0.22 - 0.90, P = 0.0200). The percent of patients with HAI was also significantly lower during the intervention period (4.8% vs 1.9%, RR = 0.40, 95% CI = 0.20 - 0.81, P = 0.0200). </p>

**CONCLUSION:** Outcome and process surveillance resulted in a significant reduction of the CAUTI rate, which was reduced 70%, and of the overall HAI rate, which was reduced 55%.