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Nosocomial Infection Global Rates and Central Vascular Catheter - Associated Bloodstream Infections Rates Reduction In a New Born Intensive Care Unit of One Mexican Public Hospital.

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Background:
To ascertain the effect of an infection control program utilizing education and performance feedback on New Born intensive care units (NICU) rates of intravascular device (IVD)-associated bloodstream infection (BSI).
Methods:
Level III New born intensive care unit of one public hospital in Mexico. All new born patients admitted to study units who had a central vascular catheter (CVC) in place for at least 24 hours. A prospective before/after trial in which rates of IVD-associated BSI were determined during a period of active surveillance without education and performance feedback (phase 1) were compared to rates of IVD-associated BSI after implementation of an infection control program utilizing education and performance feedback (phase 2). Phase one was from October 2003 to March 2004, and phase two was from April to October 2004.
Results:
216 patients, 1,795 bed days, and 639 IVD-days were accumulated in phase one.
101 patients, 735 bed days , and 290 IVD-days during phase two.
Compliance with hand-washing, and CVC site care improved from baseline during the study period.
Overall rates of nosocomial infections, and IVD-associated BSI were significantly lowered from baseline rates after implementation of education and performance feedback. Global rate: 12.96% (28/216) vs 4.95% (5/101), RR = 0.38, 95% CI = 0.15 - 0.99, P-value = 0.0393. BSI rate: 40.7 BSI per 1000 CVC days (26/639) versus 10.3 IVD-associated BSI per 1000 CVC days (3/290), RR = 0.25, 95% CI = 0.08 - 0.84, P-value = 0.0152).
Conclusion:
Implementation of an infection control program, utilizing education and performance feedback resulted in significant reductions on global rates of devices associated nosocomial infections and on rates of IVD-associated BSI.