

2nd International Conference on Nursing & Healthcare

November 17-19, 2014 DoubleTree by Hilton Hotel Chicago-North Shore Conference Center, USA

Efficacy of safety catheter devices in the prevention of occupational needlestick injuries: Results of a Italian study

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Background: To assess the effect of implementing Safety Catheter Devices (SCDs) on the occurrence of Needlestick Injuries (NSIs), specifically on NSIs associated with a higher risk of blood-borne pathogen exposure.

Methods: The study was conducted at the Health Protection and Prevention Department of San Martino Hospital, Genoa, in 2011 and considered the number of NSIs caused by catheters in relation to the introduction of SCDs, over the five-year period 200-2010.

Five out of eight Liguria Region public health care facilities participated: San Martino Hospital (SMH), Galliera Hospital (GH), Azienda Sanitaria locale 1 (ASL 1), Azienda Sanitaria locale 4 (ASL 4), Azienda Sanitaria locale (ASL 5). Information about introduction to SCDs was collected through regular meetings with the staff of the Health Protection and Prevention Department or the occupational health physicians of the participating companies.

Results: The poisson regression was applied to estimate the ratio (relative risk, RR) between NSIs rates (NSIR) and corresponding 95% confidence limits (95% CL). The conventional catheter gave rise to a NSIR which was approximately twelve times higher than that calculated for the new medical equipment (RR=12.50; 95% CL=5.56-25.00, $p < 0.001$). Also, regression analysis showed no substantive NSIR difference between the two training categories (good/high vs. poor/moderate: RR=0.88, 95% CL=0.48-1.62). Finally a moderate and non-significant 5% yearly reduction in NSIR (RR=0.95, 95% CL=0.87-1.05) was estimated.

Biography

Dimitri Sossai is a Safety Director, of Azienda Ospedaliera Universitaria San Martino Genoa and Lecturer of "Safety in Healthcare" official Course University of Genoa (Italy)

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