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## Rates of surgical-site infection: an international comparison

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### ABSTRACT

#### *OBJECTIVES*

To quantify the occurrence of surgical-site infections (SSIs) in an Italian region and to estimate the proportion of potentially avoidable infections through benchmarking comparison.

#### *DESIGN*

Prospective study during 1 month based on a convenience sample of surgical patients admitted to 31 public hospitals. All of the patients undergoing an intervention included among the 44 operative procedures of the National Nosocomial Infections Surveillance (NNIS) System were enrolled. Ninety-five percent of the patients were actively observed after discharge for up to 30 days for all of the operations and for up to 1 year for operations involving implantation.

#### *RESULTS*

Among the 6,167 operative procedures studied, 290 infections were recorded (4.7 per 100 procedures), 206 (71%) of which were SSIs (3.3 per 100 procedures; 95% confidence interval, 2.9-3.9). One hundred thirty-five SSIs (65.5%) were superficial infections, 53 (25.7%) were deep infections, and 12 (5.8%) were organ-space infections; in 6 cases (2.9%), the type of SSI was not recorded. The frequency of SSIs observed in this study was significantly higher for several procedures than that expected when the NNIS System rates (standardized infection ratio [SIR] ranging from 1.77 to 6.42) or the Hungarian rates (SIR ranging from 1.28 to 3.04) were applied to the study population.

#### *CONCLUSIONS*

The high intensity of postdischarge surveillance can in part explain the differences observed. To allow for meaningful benchmarking comparison, in addition to intrinsic patient risk, data on the intensity of postdischarge surveillance should be included in published reports.