

The rate of hospital-acquired infections (HAIs) in Iran in 2017

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Introduction: Hospital-acquired infections (HAIs) are one of the causes of disease, mortality, and reducing in the quality of life of patients, and leading to increased length of hospital stay, hospital costs in patients and the health care system, *inappropriate* broad-spectrum antibiotics use and multiple antibiotic resistance. This study aims to investigate the HAIs rate in Iran.

Methods: In this multi-center study, for HAIs rate calculation, were used data recorded in Iranian nosocomial infections surveillance for HAI patients and hospital statistics and information system for hospital-related variables. Data were analyzed by the Stata software and ArcGIS software for displaying the geographical distribution of the HAIs by provinces.

Results: The mean age of 107669 HAIs patients were 52 ± 26.71 years. 51.55% of the patients were male. The total HAIs rate was 26.57 per 1000 patients and 7.41 per 1000 patient-days. The rate of HAIs was 3.82 and 3.59 per 1000 patient-days in males and females. The most common HAIs in patients were UTI (26.83%; 1.99 per 1000 patient-days), VAE (20.28%; 1.5 per 1000 patient-days), SSI (19.73%; 1.45 per 1000 patient-days) and BSI (13.51%; 1 per 1000 patient-days), respectively. The highest rate of HAIs per 1000 patients and patient-days was related to ICU wards. Device, catheter and ventilator-associated infections accounted for 38.72, 18.79% and 16% of HAIs.

Discussion: The results of our study show that hospital-acquired infections are common in the ICU wards and UTIs and device-related infections are much higher in Iran. Therefore implementing appropriate policies and interventions including staff training in the use of devices (catheters and ventilators) and provide updating protocol and guidelines for improving the quality of the care can help to control and reduce the HAIs.

Keywords: Hospital-Acquired Infections, Rate, Iran