

Trend of healthcare-associated infections in a teaching hospital in Tunisia, 2014-2019

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Background:

National surveys on the prevalence of HAIs on a given day have regularly taken place in health facilities. During this period, actions to improve HAI prevention were implemented, including strengthened isolation measures; hand hygiene promotion using the World Health Organization multimodal strategy; and promotion of appropriate antimicrobial use. We aimed to examine trends in HAI in Sahloul Hospital over six years.

Methods:

Annual prevalence surveys of healthcare-associated infections (HAIs) between 2014 and 2019 were conducted in the university hospital in Tunisia. It is a cross-sectional study of one-day prevalence with a single pathway. All departments were included in the survey, except emergency and hemodialysis services due to their very short length of stay. Data collection was carried out using NosoTun plug (national HAI prevalence survey).

Results:

Over six years, prevalence of HAI ranged from 11.4% in 2014 to 9.5% in 2019. The prevalence of HAIs did not show a significant change across the six surveys. However, there were significant ($P=0.008$) reductions in the prevalence of total HAIs in intensive care units, which had the highest frequencies of HAIs over those six years. In 2014, bacteriological analysis was performed in 55.8% of HAI cases. In 66.6% of cases ($n=16$), isolated bacteria were gram negative bacilli, the most frequent were *Pseudomonas aeruginosa*. In 2019, 27 germs were identified, the most frequent were Gram Negative Bacilli (74%), mostly *Escherichia coli*.

Conclusions:

This HAI prevention strategy was influential in decreasing infections among hospitalized patients in intensive care units. Challenges for the future are to minimize infection with gram-negative bacilli while limiting the emergence of antibiotic resistant organisms.

Key messages:

- Using prevalence surveys, we were able to have an insight into the most common isolates identified throughout the last six years.
- Repeated prevalence surveys are an effective tool for monitoring HAI frequency and contributing to the establishment of effective infection control.