

High prevalence of healthcare-associated infections and low testing rates found in EU hospitals

April 13 2019

The European Centre for Disease Control and Prevention (ECDC) estimates that 9 million cases of healthcare-associated infections (HAIs) occur across Europe each year—with around one in 15 patients in acute care hospitals and one in 24 residents in long-term care facilities having at least one infection on any given day, according to the most comprehensive assessment of HAIs in Europe to date, being presented at this year's European Congress of Clinical Microbiology & Infectious Diseases (ECCMID) in Amsterdam, Netherlands (13-16 April).

Importantly, the findings also reveal low microbiological testing rates that vary widely between countries, suggesting that more must be done to protect patients and residents from these preventable complications.

A microorganism was reported for just over half (53%) of the HAIs in acute care hospitals. For 11% of the microorganisms reported, antimicrobial susceptibility testing results were not available on the day of the survey. In long-term care facilities, over three quarters of infections had no documented microbiological results. In long-term care facilities overall, only 19% HAIs had a microbiological test result available in the facility to guide treatment and control. In acute care hospitals, the figure was 53%.

"Our analysis shows that healthcare-associated infections still pose a major public health threat in European countries and healthcare

institutions", says Pete Kinross from the European Centre for Disease Prevention and Control. "Culture-directed antibiotic treatment is an important aspect of the treatment and control of these kinds of infections. The variability of microbiological testing suggests poor availability of information for effective treatment, as well as alertness to potential outbreaks."

This study is based on data from two ECDC point prevalence surveys of HAIs and antimicrobial use in both acute care hospitals and long-term care facilities in European Union (EU) and European Economic Area (EEA) countries between 2016 and 2017.

In 2016, the European Centre for Disease Prevention and Control (ECDC) estimated that the burden of HAIs (eg, pneumonia, [urinary tract infection](#), Clostridium difficile [infection](#)) in European acute care hospitals exceeded the combined burden of all other infectious diseases under surveillance by ECDC such as influenza, HIV/AIDS, and tuberculosis combined. However, these estimates did not take into account infections in other [healthcare facilities](#).

In these latest ECDC surveys, trained staff used standardised questionnaires to collect data from voluntarily participating acute care hospitals and long-term care facilities (eg, general nursing homes, residential homes) on every patient/resident who was present on the day of the survey.

In total, 310,755 patients from 1,209 acute care [hospital](#) in 28 EU/EEA countries and 117,138 residents from 1,798 long-term care facilities in 24 EU/EEA countries were included in the analyses.

The findings show that on any given day in 2016-2017, 98 166 (6.5%) patients in acute care hospitals and 129 940 (3.9%) residents in long-term care facilities had at least one HAI.

However, much of the difference in national HAI rates in acute care hospitals is explained by their different rates of testing blood samples. Essentially, countries with lower test rates (e.g. Hungary, Lithuania, Romania) detect fewer HAIs compared to those with higher testing rates (e.g. Belgium, Finland, United Kingdom).

Respiratory tract infections (particularly pneumonia) were the most common, accounting for a quarter of all HAIs in hospitals and a third in long-term care facilities, followed by urinary tract infections (almost a fifth and a third, respectively).

Pete Kinross says: "Healthcare-associated infections in acute care hospitals are responsible alone for more deaths in the EU/EEA than all other [infectious diseases](#) under surveillance. It is crucial to apply recommendations and guidelines available in both acute care hospitals and long-term care facilities, since our study showed that there are as many healthcare-associated infections in long-term care facilities as there are in acute care hospitals."

More information: Alessandro Cassini et al. Burden of Six Healthcare-Associated Infections on European Population Health: Estimating Incidence-Based Disability-Adjusted Life Years through a Population Prevalence-Based Modelling Study, *PLOS Medicine* (2016). [DOI: 10.1371/journal.pmed.1002150](https://doi.org/10.1371/journal.pmed.1002150)

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Provided by European Society of Clinical Microbiology and Infectious Diseases

Citation: High prevalence of healthcare-associated infections and low testing rates found in EU hospitals (2019, April 13) retrieved 19 April 2024 from <https://medicalxpress.com/news/2019-04-high-prevalence-healthcare-associated-infections-eu.html>

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