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Healthcare-associated infections, antimicrobial use and indicators of infection prevention in long-term care facilities in EU/EEA member states; point prevalence surveys in 2010 and 2013

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Background: Older people are inherently at higher risk for sequelae of infection. In 2013, EU/EEA Member States had >3,600,000 long-term care facility (LTCF) beds for care of their growing elderly population. In 2008, the European Centre for Disease Prevention and Control (ECDC) initiated repeated point prevalence surveys (PPSs) in European LTCFs to estimate the burden of healthcare-associated infections (HAIs) and antimicrobial use, and to provide EU/EEA Member States and LTCFs with a standardized tool to monitor trends and to identify priorities for national and local interventions.

Material/methods: Following a pilot survey in 2009, national contacts recruited a convenience sample of LTCFs for a first survey (HALT) in May–September 2010. National/LTCF teams used a standard protocol to collect data on signs/symptoms of HAIs and antimicrobial use from residents and indicators of infection prevention and control (IPC) from LTCF staff. ECDC applied McGeer criteria-based case definitions to the recorded signs/symptoms. A second survey (HALT-2, April–May 2013) used the same overall design except that each data collector applied case definition algorithms (adapted from US CDC/SHEA definitions) to each resident with signs/symptoms of infection. During analysis, data

were restricted to general nursing homes, residential homes and mixed LTCFs, and aggregated to counter different national interpretations of the definitions of LTCF type.

Results: In HALT, 61,932 residents were recruited in 722 LTCFs in 28 EU/EEA countries. The prevalence of HAIs (residents with ≥1 HAI) was 2.4%; the prevalence of antimicrobial use (residents receiving ≥1 antimicrobial agent) was 4.3%.

In HALT-2, 77,264 residents were recruited in 1,181 LTCFs in 19 EU/EEA countries. Data were collected by more than 1,070 trained national/local staff members. The prevalence of HAIs was 3.4%. We estimated that on any given day, >116,000 residents in EU/EEA LTCFs have an HAI. The prevalence of antimicrobial use was 4.4%. Ten key elements of antimicrobial stewardship were absent in 46% of LTCFs.

In both HALT and HALT-2, >85% of detected HAIs were urinary tract, respiratory tract or skin infections. Prescriptions were commonly prophylactic (27% and 28%, in HALT and HALT-2, respectively), of which 81% and 94%, in HALT and HALT-2, respectively, were uroprophylaxis. In both surveys, one in 10 participating LTCFs did not have access to IPC advice or an IPC committee.

Conclusions: The ECDC PPS 2011–2012 estimated that, on a given day, 81,089 patients in acute care hospitals had a HAI. Our results suggest that the burden of HAIs in LTCFs is higher in LTCFs than in acute care hospitals. Improved IPC and better access to the services of IPC professionals should contribute to decreasing the prevalence of HAIs in LTCFs. ECDC is currently coordinating the HALT-3 project (2016–2017) that collects data that are directly comparable to HALT-2.