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P2610 Using antibiotic point prevalence survey data to estimate healthcare-associated infection prevalence in children: analysis of 27 countries

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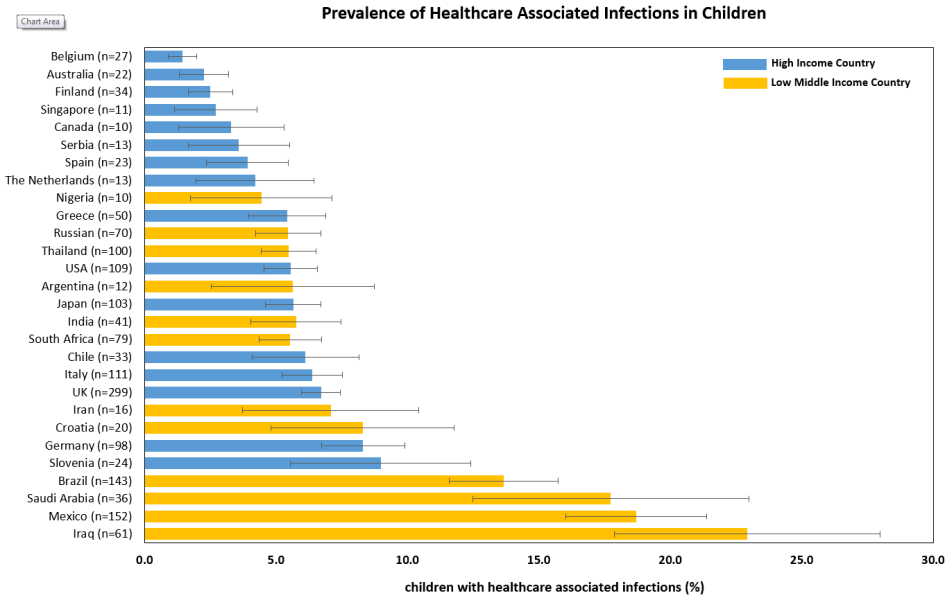
Background: A recent European Centre for Disease Prevention and Control (ECDC) healthcare associated infection (HAI) point prevalence survey (PPS) of 1149 hospitals in European countries found a prevalence of HAIs of 4.2% (95% CIs: 3.7-4.8), but no global HAI PPS has been conducted in the LMIC setting. The aim of this study was to determine the feasibility of deriving HAI estimates from antibiotic PPS's.

Materials/methods: Data were obtained from two global networks: the Global Antimicrobial Resistance, Prescribing and Efficacy in Neonates and Children (GARPEC) study and the Global Point Prevalence Survey on Antimicrobial Consumption and Resistance (Global-PPS). Data were collected between 2015 and 2017. For the purposes of this study we only included data from the 27 countries where there were data on at least 10 children being treated for the indication of HAI.

Results: A total of 33,391 children were included from the GARPEC and Global-PPS surveys. Of these, 1,720 (5.2%) children with a HAI indication from 27 countries were included. 892 (52%) were males. The overall prevalence of HAI was 6.3% (95% CIs: 5.9-6.5); 8.7% (95% CIs: 8.1-9.3) in low-middle income countries (LMICs) and 5.1% (95% CIs: 4.8-5.5) in high income countries (HICs). There was a wide variation in HAI prevalence across the countries (Figure 1); the range in LMICs was 2.2% (95% CIs: 1.8-2.7) to 22.9% (95% CIs: 17.9-28.0) and in HIC 1.4% (95% CIs: 0.9-2.0) to 9.0% (95% CIs: 5.6-12.4). The most common HAI diagnoses were proven or probable bacterial hospital acquired pneumonia/lower respiratory tract infection (LRTI) (n=418, 24%), sepsis (n=379, 22%), febrile neutropenia/fever (n=248, 14%), urinary tract infections (n=109, 6%), skin/soft tissue infections (n=105, 6%), gastrointestinal tract infections (n=101, 6%), and probable or proven catheter-related bloodstream infection (n=99, 6%).

Conclusions: Estimates of HAI prevalence can be obtained from antibiotic PPS data. This method is considerably less resource intensive than current HAI PPS.



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