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ePoster Viewing

Pharmacoepidemiology, improved prescribing and antibiotic stewardship

The Global Point Prevalence Survey of antimicrobial consumption and resistance (Global-PPS) in 100 Belgian hospitals

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Background: Point Prevalence Surveys (PPS) are well established surveillance methods for monitoring antimicrobial prescribing in hospitals. The Global-PPS expanded this method to monitor antimicrobial prescribing and resistance rates in Belgian hospitals. bioMérieux provided unrestricted funding support for the survey.

Methods: Data were collected in Belgian hospitals in February-June 2015 using a standardized and validated method. Detailed data was collected for all inpatients receiving an antimicrobial on the day of survey. Denominator included all admitted inpatients, collected at the ward level. A web-based application is used for data-entry, validation and reporting as designed by the University of Antwerp (www.global-pps.com).

Results: Overall degree of participation was 47.4% (n=100 hospital sites). Data included 26,346 patients admitted to 1,539 wards, of which 66.5% admitted in secondary care and 16.2% in tertiary care hospitals. Overall antimicrobial prevalence rate was 27.4% ranging from 23.6% in primary care (3.3%-51.8%) to 31.8% in tertiary care hospitals (6.0%-38.5%). Among all recorded antimicrobials (n=8,802), antibiotics, antifungals and antituberculosis drugs represented 90.2%, 4.9% and 2.1%, respectively. Out of 7,942 antibiotics, 82.0% were prescribed for treatment and 15.3% for medical or surgical prophylaxis. 7.9% of patients (range: 4.5%-16.4%) were treated for a healthcare associated infection (HAI) of which most related to non-intervention associated infections (49.3%), followed by surgical site infections (18.8%) and infections originating from long term care facilities (11.5%). Top 3 antibiotics were amoxicillin/clavulanic acid (27.5%), piperacillin/tazobactam (8.1%), (both mainly for therapeutic use), and cefazolin (6.9%; mainly for surgical prophylactic use). Meropenem represented 4.3% of all therapeutic prescriptions of which 60.3% prescribed for HAIs. Quinolones represented 14.0% (range: 4.3%-42.1%) of all antibiotic prescriptions, mainly ciprofloxacin (mainly for urinary tract infections) and moxifloxacin (mainly for lower respiratory tract infections). Out of all antibiotic prescriptions, moxifloxacin (3.7%) was 12 times more prescribed as compared to Europe (0.3%). Amoxicillin accounted for only 3.0% of all antibiotic prescriptions. Overall, the reason for an antibiotic prescription was least recorded in surgical wards (73.2%). A stop/review date was overall less often recorded, but least in intensive care units (34.6%). Local guidelines were missing in 9.2% of all antibiotic prescriptions and guideline compliance reached 79.5%. Prolonged surgical prophylaxis (<1day) ranged from 0% to 87.0% (mean=28.2%).

Conclusions: We identified several targets to improve antibiotic prescribing in Belgium: number of patients with HAI, high levels of quinolone (moxifloxacin) and co-amoxiclav prescribing, the improvement of recording the reason and the follow-up of the antibiotic prescription (stop/review date) in notes. We aim to implement policy actions which need to be obtained at national and hospital level; and to include all Belgian hospitals for the next survey in 2016. Hospitals with disappointing results will

receive support to implement interventions to improve quantitative and qualitative antibiotic prescribing.