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ePoster Viewing

Pharmacoepidemiology, improved prescribing and antibiotic stewardship

The global point prevalence survey of antimicrobial consumption and resistance (Global-PPS): first results of antimicrobial prescribing in University Medical Centre Ljubljana, Slovenia

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Background: A uniform and standardized method for surveillance of antimicrobial (AM) use in hospitals was used to assess the variation in AM prescribing in a tertiary care hospital in Slovenia. BioMérieux provided unrestricted funding support for the survey.

Material/methods: The Global-PPS was conducted from March to April 2015 in the University Medical Centre (UMC) Ljubljana. The survey included all inpatients receiving an AM on the day of PPS. Data collected included age, gender, weight, antimicrobial agents, doses, reasons and indications for treatment, microbiological data, compliance to guidelines, documentation of reasons and stop/review date of prescription. Denominators included the total number of inpatients. A web-based application is used for data-entry, validation and reporting as designed by the University of Antwerp (<http://www.global-pps.com>).

Results: On the day of PPS a total of 1763 patients were hospitalized at UMC Ljubljana and a total of 60 wards were surveyed. Total AM prevalence in adult wards was 29.5%, in paediatric wards 28.9% and in neonatal wards 5.3%. AM prevalence was the highest in Haemato-Oncology Paediatric Medical Ward (100%), followed by Haemato-Oncology Adult Medical Ward (64.5%), Adult Intensive Care Unit (61.5%) and Paediatric Intensive Care Unit (45.5%), Medical and Surgical Adult and Paediatric Wards rated 20.2%–27.8%, and Neonatal Intensive Care Unit (10.3%). AM prevalence was the lowest at Neonatal Medical Ward (3.1%). Top 3 most common diagnoses to be treated with AM were pneumonia/lower respiratory tract infection, intra-abdominal sepsis and upper urinary tract infection. At the ATC4 level 5 most frequently prescribed antibiotics were: combinations of penicillins, including beta-lactamase inhibitors (18.5%), fluoroquinolones (10.6%), first-generation cephalosporins (7.9%), penicillins with extended spectrum (7.3%) and carbapenems (6.7%). Among fluoroquinolones ciprofloxacin was most frequently prescribed (74%) and it was most frequently prescribed due to urinary tract infection (39.3%). AM were in 73.5% used for treatment and in 26.5% as prophylaxis. Community acquired infections (CAI) were almost as frequent (49.7%) as healthcare associated infections (HAI) (50.3%). Among HAI pneumonia was the most frequent (28.3%). Surgical prophylaxis was more frequently (58.3%) prescribed as medical prophylaxis (41.7%). Surgical prophylaxis was in 31% of cases prescribed as single dose, in 18% for one day and in 51% for more than one day. 72.4% of AM were administered parenterally. As for quality indicators: reason in notes was documented in 86.7%, AM were in 79.6% prescribed compliant with guidelines and stop/review date was documented in 23.8% of cases.

Conclusions: G-PPS provided an insight into antimicrobial prescribing at UMC Ljubljana. According to the results improvements should be done to lower the use of fluoroquinolones, to lower the

prevalence of HAI, to document the stop/review date of prescribed AM more frequently and to decrease prolonged surgical prophylactic prescribing.