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Paper Poster Session

Uses of prescription point prevalence surveys

The global point-prevalence survey of antimicrobial consumption and resistance (Global-PPS): worldwide variation of prophylactic prescribing

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Background: The Global-PPS (www.global-pps.com) monitored antimicrobial prescribing and resistance in hospitals worldwide. We analyzed a sub-group of patients who received an antimicrobial for surgical or medical prophylaxis in order to identify targets for quality improvement.

Methods: A point prevalence survey of antimicrobial prescribing was carried out in February-September 2015 in 335 hospitals in 53 countries of six continental regions, using a standardized and validated method. Data on patients admitted to adult and pediatric wards receiving a prophylactic regimen on the day of survey were used.

Results: Of 46,889 antimicrobials administered to adults and children worldwide, 25.3% (n=11,852) were administered for prophylaxis among which 87.8% to adults and 12.2% to children. Out of all prophylactic use, 60.9% of antimicrobials were administered for surgical prophylaxis (SP, n=7216) of which 97.8% were systemic antibiotics. Top 3 antibiotics for SP were cefazolin (26.2%; range: 1.0% in Africa to 65.1% in Oceania); ceftriaxone (14.1%; range: 1.2% in Oceania to 22.9% in Africa) and metronidazole (10.6%; 6.6% in North-America to 31.8% in Africa) most often administered in combination with various different kind of antimicrobials, mainly ceftriaxone. SP was predominantly administered for more than one day (67.1%; range: 39.8% in Oceania to 93.0% in Africa). Overall, guidelines were lacking in 25.9% of all SP prescriptions (range: 7.2% in Oceania to 28.5% in Asia) and guideline compliance (referring to choice of the drug) was 66.8% (range: 46.9% in South-America to 81.1% in Africa). Out of all antimicrobial prescriptions for medical prophylaxis (MP; n=4636); 72.4% were antibiotics and 19.7% were antifungals for systemic use. Most often administered antimicrobials for MP were sulfamethoxazole and trimethoprim (24.0%; range: 17.3% in Europe to 38.0% in Oceania), mainly for MP in general without targeting a specific site (MP-Gen) or respiratory MP, fluconazole (11.1%; range: 2.4% in Oceania to 17.4% in North-America), mainly for MP-Gen, ceftriaxone (5.9%; range: 0% in Oceania to 8.8% in Europe and Africa) for various reasons, ciprofloxacin (4.6%; range: 0.6% in Oceania to 6.8% in Europe) mainly for urinary MP. Africa most often prescribed metronidazole (17.6%) and Oceania nystatin (16.9%). The reason for MP was documented for 60.0% of prescriptions (range: 46.2% in Asia to 80.5% in South-America), a stop/review date was

not given in 70.5% of prescriptions (range: 65.2% in Europe to 89.2% in Oceania), guidelines were lacking in 23.3% of prescriptions (range: 10.4% in South-America to 37.3% in Africa) and guideline compliance reached 87.2% (range: 67.9% in Africa to 94.9% in Oceania).

Conclusions: Various prophylactic prescription practices were observed worldwide. We identified three quality indicators: 1) surgical prophylaxis with broad spectrum antibiotics, 2) prolonged surgical prophylaxis and 3) overall failure to prescribe according to local guidelines.