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O0227 High proportion of paediatric prophylactic antibiotics use: analysis from 56 countries' point prevalence survey data

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Background: The Antibiotic Resistance and Prescribing in European Children (ARPEC) study point prevalence survey (PPS) carried out in 2012 demonstrated that 33% of hospitalised children and neonates receiving an antibiotic did so for prophylaxis. Also, 29% of antimicrobials prescribed to hospitalised children and neonates were for prophylaxis. This study provides global estimates by World Health Organization (WHO) region for paediatric antibiotic prophylaxis use.

Materials/methods: Data were obtained from two global networks: the Global Antimicrobial Resistance, Prescribing and Efficacy in Neonates and Children (GARPEC) and the Global Point Prevalence Survey on Antimicrobial Consumption and Resistance (Global-PPS). Data were collected between 2015 and 2017. Patients who received at least one antibiotic (ATC code: J01) for surgical and/or medical prophylaxis on the day of the survey were included for analysis.

Results: A total of 17,855 patients were surveyed from 56 countries, including 297 hospitals; 13,980 (77.8%) were children and neonates. 4,866 (27.3%) children and neonates received at least one antibiotic for prophylaxis. A high proportion of prescriptions were for prophylaxis (Table 1). Overall, the most commonly prescribed antibiotics for prophylaxis in children were sulfamethoxazole/trimethoprim (25.5%), mainly for lower respiratory tract infections. In the Eastern Mediterranean region, ceftriaxone (27.9%) was commonly prescribed to children for prophylaxis and cefotaxime (15.9%) in the South Eastern Asian region. In neonates, gentamicin and ampicillin were the most commonly prescribed antibiotics for prophylaxis across 6 WHO regions.

Conclusions: Rates of antibiotic prophylaxis use were high across all WHO regions. Sulfamethoxazole/trimethoprim was the commonly used antibiotics for prophylaxis in children, and gentamicin and ampicillin for neonates, but there was wide variation in prophylactic antibiotic use between regions. There is a critical need to reduce prophylactic antibiotic prescription globally. In addition, the rationales and appropriate use of prophylactic antibiotics should be explored further in this population.

Table 1 Prophylactic antibiotic prescriptions by WHO region

Neonates	Total Prescriptions	Prophylactic use	
		Number of prescriptions	%
Eastern Mediterranean	194	95	49.0
Europe	1890	816	43.2
Africa	479	171	35.7
South-East Asia	509	163	32.0
Americas	600	163	27.0
Western Pacific	293	60	20.5
Children	Total Prescriptions	Prophylactic use	
		Number of prescriptions	%
Western Pacific	1080	412	38.1
Europe	7092	1887	26.6
South-East Asia	995	214	21.5
Americas	3000	593	19.8
Eastern Mediterranean	817	154	18.8
Africa	906	138	15.2