

P1783 Global antimicrobial resistance, prescribing, and efficacy in neonates and children (GARPEC) project: antimicrobial prescribing for lower respiratory tract infections in children

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Background: Lower respiratory tract infection (LRTI) is the common condition for which antimicrobial are prescribed to children. Amoxicillin is the first-line treatment for LRTI in children in the WHO recommendation. Currently, there is limited evidence on global antimicrobial prescribing in children with LRTIs. This study aims to describe antimicrobial prescribing patterns in hospitalised children with LRTIs.

Materials/methods: The GARPEC project facilitates global standardized surveillance for antimicrobial use in hospitalized children and neonates. Through GARPEC, one-day cross-sectional Point Prevalence Surveys (PPSs) of antimicrobial prescribing were conducted. The PPS were conducted in 26 countries covering 6 WHO geo-regions (Africa, Europe, Americas, Western Pacific, South-East Asia, and Eastern Mediterranean). Data collected included demographics, antimicrobial agents, dose, frequency, mode of administration, and reasons for treatment. A standardised collection tool was developed and data were captured electronically on REDCap®. Children aged < 18 years receiving at least one antimicrobial (ATC code: J01) for LRTI treatment on the day of survey were included.

Results: A total of 2,708 children with LRTI were included. Overall, the most commonly prescribed antimicrobials for LRTI were amoxicillin/enzyme inhibitor combination (11.0%; 388/3,560 prescriptions), ceftriaxone (10.0%), and azithromycin (8.9%). The use of WHO recommendation first-line treatment for childhood LRTI varied across regions. The proportion of children received amoxicillin was 10.2% in Africa (Gambia, Nigeria, South Africa), 3.7 in Europe (Finland, Germany, Greece, Italy, Slovenia, Spain, UK, Poland), 2.3 in Americas (Argentina, Brazil, Chile, Mexico, US), 0.4% in Western Pacific region (Australia, China, Japan, Singapore, Taiwan), 2.1% in South-East Asia (India, Thailand), and 0% in Eastern Mediterranean (Pakistan).

Conclusions: Antimicrobial use for childhood LRTI treatment varied globally. Despite the WHO recommendation, majority of children with LRTI did not receive amoxicillin for treatment. The ongoing surveillance of antimicrobial use, and studies to evaluate these differences, are important to implement effective interventions for LRTI treatment in children. Also, the appropriateness and relevance of treatment guidelines needs to be further assessed.