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Abstract (poster session)
The Antibiotic Resistance and Prescribing in European Children (ARPEC) project: the European neonatal and paediatric antimicrobial web-based point prevalence survey in 56 hospitals within Europe and globally in 2011

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Objectives: The European neonatal and paediatric antimicrobial Point Prevalence Survey (PPS) is part of the ARPEC project (http://www.arpecproject.eu/). The aim of the study is to develop a standardized method for surveillance of antimicrobial use in hospitals within Europe and globally. The variation in antibacterial drug use will be used to identify targets for quality improvement and hospital Antimicrobial Stewardship Programmes. Methods: Data collection was completed during 2 weeks between September 19th and 30th 2011. The pilot survey included all admitted children receiving an antimicrobial treatment on the day of survey. Mandatory data were age, gender, (birth)weight, underlying diagnosis, antimicrobial agent, dose and indication for treatment. Data were entered online using a web-based system for data-entry and reporting based on the WebPPS program developed by the University of Antwerp for the ESAC (European Surveillance of Antimicrobial Consumption) project. Results: There were 5122 inpatients reported for the 56 participating hospitals originating from Europe, USA, the Middle East and Africa (22 countries). Overall, 37% of paediatric patients (N=1436) and 35% of neonates (NICU, N=299) were receiving at least one antibiotic. Mainly cephalosporins (30%), penicillins (22%), aminoglycoside antibacterials (17%) and other antibacterials (13%) were used. Third-generation cephalosporin use was highest in the Islamic Republic of Iran and Georgia (total proportional use > 36%) followed by Latvia (32%) and Romania (30%) and the lowest use was reported for hospitals in Lithuania, Spain, Belgium and UK (<7%). The most common sites of infection for which antibacterials were prescribed were lower respiratory tract infections (15%), prophylaxis for medical problems (13%) and prophylaxis for surgical disease (12%) for paediatric patients, and sepsis (32%) and prophylaxis for newborn risk factors (12%) for neonates. Two quality indicators were identified: surgical prophylaxis for >24 hours (80%) and therapy with third-generation cephalosporins for community acquired lower respiratory tract infections (pneumonia) (28.3%). Conclusion: The ARPEC-WebPPS method was successfully piloted in 56 hospitals worldwide. It offers a standardized tool to identify targets for quality improvement. The first global web-based ARPEC-PPS with quantifiable outcome measures will be organized in 2012. Interest in the project is high!