

FIRST SET-UP MEETING FOR ANTIBIOTIC RESISTANCE AND PRESCRIBING IN EUROPEAN CHILDREN (ARPEC)

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The Antibiotic Resistance and Prescribing in European Children (ARPEC) network, funded from January 2010 by the European Commission's Directorate-General for Health and Consumer Protection (DG SANCO), held its first set-up meeting at the Royal College of Paediatrics and Child Health, London, United Kingdom, on 15-16 October 2009. The collaborative group meeting was attended by 40 delegates from 17 Member States of the European Union (EU), and an invited expert from the European Surveillance of Antimicrobial Consumption (ESAC) project.

Young children are the main recipients of antibiotics in the EU with the majority of antibiotics given for minor upper respiratory tract infections [1]. There is clear evidence linking antibiotic prescribing to the development of antibiotic resistance [2]. Moreover, there are high rates of transmission of antibiotic-resistant pathogens among young children attending day-care in Europe [3]. If antibiotic prescribing in children could be reduced, selection and transmission of resistant strains in the EU should decrease. Although prudent antibiotic prescribing has been a high priority for the EU, there has been very little activity so far aimed at prescribing for children.

Although existing European surveillance schemes such as ESAC and the European Antimicrobial Resistance Surveillance System (EARSS) have some age-specific data, there is currently only very limited information on antimicrobial consumption and antibiotic resistance by children in Europe. The aims of the ARPEC project are:

- To use established methodologies from ESAC and EARSS and existing databases on community prescribing to develop a prospective surveillance system to monitor rates of antibiotic prescribing and resistance in EU children.
- To determine the variation in choice of drug, dose and indications for community and hospital antibiotic prescribing for common childhood infections between EU countries. For community paediatric prescribing the variation between countries in both overall and antibiotic class-specific rates will be determined. Even fewer data are available for comparative rates of antibiotic prescribing in children admitted to hospital.
- To produce a novel paediatric defined daily dose (DDD) methodology for comparison of hospital based antibiotic

prescribing for children, as the current DDD guidelines are based on adult dosage.

- To conduct an EU-wide point prevalence survey to compare antibiotic use in children in hospital.
- To collect information on bacteraemia rates and antimicrobial susceptibility patterns for selected common pathogens in Europe in major children's hospitals in partner countries, using established EARSS methodology.
- To set early benchmarks for prescribing and resistance rates, working with clinical experts of the European Society for Paediatric Infectious Diseases (ESPID) to implement the benchmarks and encourage the development of prudent and more unified EU-wide treatment guidelines.
- To feed back the results of all projects to each country.

Individual data at hospital, regional and country level from a variety of the participating countries were presented and discussed by the group to explore the potential uses of the data for this Europe-wide initiative. There was great support from the representatives of the EU Member States to bring this project forward and build a stronger data flow system of paediatric antibiotic resistance and prescribing.

The expansion of the network by inclusion of other interested parties such as hospitals in the EU will also augment the available data to influence prescribing practices, as well as raise further awareness for ARPEC. If you would like to participate in the ARPEC project, please get in touch with the project leader, Dr Mike Sharland, at the Paediatric Infectious Diseases Unit at St. George's University of London: Mike.Sharland@stgeorges.nhs.uk

References

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