

ANTIBIOTIC PRESCRIBING PATTERNS IN THE PAEDIATRIC COMMUNITY

Sabrina Yeh^{1,2}, Chris Pearce³, Jim Buttery^{1,2}

¹Department of Infection and Immunity, Monash Children's Hospital, Melbourne, Victoria, Australia.

²School of Public Health and Preventative Medicine, Monash University, Melbourne, Victoria, Australia.

³Department of General Practice, Monash University, Melbourne, Victoria, Australia.

Background and Aim:

Increasing antimicrobial resistance is a pressing public health issue globally. Addressing this requires critical reductions in prescribing, particularly in the community^{1,2}. Antibiotics are one of the most commonly prescribed medication in paediatrics. We analysed antibacterial prescribing trends in the primary care setting through a retrospective analysis of paediatric community care trends in Victoria from 2013-2017

Methods:

De-identified computerised medical records on children younger than 18 years prescribed antibiotics were retrieved from 225 anonymised general practices in south-eastern Melbourne and Victoria from 2013-2017. Records were sourced from Population Level Analysis and Reporting (POLAR) and categorised using Systematised Nomenclature of Medicine - Clinical Terms (SNOMED CT) and World Health Organisation's Anatomic and Therapeutic Classification. Sex, age, seasonality, antibiotic and presence of repeats were analysed. Rates of broad-spectrum antibiotic usage and reasons for prescribing were also evaluated.

Results:

A total of 788,711 Victorian antibiotic prescriptions were captured. Antibiotic prescribing rates (defined as prescription per 100 children) reduced by 34% over the 5-year period. The most commonly prescribed antibiotics were amoxicillin (43% of total), cephalexin, amoxicillin-clavulanate, phenoxymethylpenicillin and cefaclor.

Prescribing of broader spectrum cefaclor and amoxicillin-clavulanate decreased over the five-year period, whilst cephalexin and phenoxymethylpenicillin usage increased. Antibiotics peaked during winter months. Almost one third (29%) of antibiotic prescriptions had a repeat course included. The top diagnostic classes associated with broad spectrum antibiotics were otitis media and tonsillitis.

Conclusions:

Paediatric antimicrobial prescribing in Australian primary care is improving with reductions in both frequency and spectrum of prescribing. Opportunities exist to continue these reductions and address unnecessary provision of repeat prescriptions^{2,3}. Encouragingly, prescribing of broad spectrum antibiotics reduced at a faster rate, consistent with prescribing guidelines. This study provides the largest targeted examination of antibiotic prescribing patterns for Australian children to date.

Word count: 292

References

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