ANTIBIOTIC PRESCRIBING IN IRISH CHILDREN: A PRELIMINARY ANALYSIS

Keogh C[1], Reulbach U[1,2], Bennett K[3], and Fahey T[1].

[1]HRB Centre for Primary Care Research, The Royal College of Surgeons in Ireland

[2] Department of Public Health and Primary Care, Trinity College Centre for Health Sciences

[3]Department of Pharmacology and Therapeutics, St James's Hospital, Trinity College Dublin

Introduction

Antibiotics are the most commonly prescribed drugs in children, representing one third of all prescriptions in this population. High rates of antibiotic prescribing are an increasing worldwide concern, in terms of increased antimicrobial resistance and associated burden to health services. However, there is still a lack of paediatric population-based pharmacoepidemiological research.

Method

Data on systemic antibiotics was obtained from the General Medical Services (GMS) claims database. This consists of routinely collected data from patients receiving free medical services and represents about one third of all children in Ireland. Data was obtained for the years 2004–2008, for an average of about 271,000 children per year aged ≤15. Prescribing rates were compared across years, age groups (0-4, 5-11 and 12-15) and gender.

Results

Prescription rates increased each year from 2004 (1,033 prescriptions/1,000 population) to 2007 (1,061/1,000 population). Rates decreased for the first time in 2008 to 933/1000 population. Despite this decrease, 2008 was associated with the highest ingredient cost over the five year period at > €2.8 million.

Prescription rates were significantly different between the three age groups. Children in the 0-4 age group received the most prescriptions (1,458/1,000 population), relative to the other age groups (5-11 years: 862/1,000 population and 12-15 years: 736/1,000 population). Similar prescribing rates were observed for males (1,013/1,000 population) and females (1,031/1,000 population). The decrease in prescription rates for 2008 was observed across all age strata and for gender.

Amoxicillin (298/1,000 population) and the combination of amoxicillin and enzyme inhibitor (296/1,000 population) were the two most frequently prescribed drugs across the five year period. Combined, these two drugs represented 58% of annual prescribing. Cefaclor (135/1,000 population) was the third most commonly prescribed drug, followed by Clarithromycin (54/1,000 population) and Phenoxymethylpenicillin (53/1,000 population).

Conclusion

Despite a decrease in prescription rates for 2008, the data observed here are significantly higher than many European countries. This suggests the possible overuse of antibiotics within the Irish GMS population and the potential benefit from an intervention for both general practitioners and parents/patients. This would contribute to overall patient care, as well as reduced cost to the State.

Word count: 347 (Max:350)