

CHILDREN'S MEDICATION IN THE NORDIC COUNTRIES

– Survey on national administrative register data

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BACKGROUND & OBJECTIVES

The Nordic countries have comprehensive nationwide prescription registers, which serve as exceptional data sources for pharmacoepidemiological studies. Almost no multinational register-based studies have been conducted in children. Children compose 16-19% of the population in the Nordic countries.

The objective of this study was to survey the drug utilization in 0-14-year-old children in four Nordic countries: Finland, Sweden, Norway and Denmark.

METHODS

National prescription databases from the four countries were used to identify drugs used in 0-14-year-old children during the years 2008-2013. The searches were based on Anatomical Therapeutic Chemical (ATC) classification codes. Open source data was used when available. The data on separate substances and drug groups were managed by sex, age, country and calendar year.

CONCLUSIONS

The national registers in the Nordic countries have exquisite potential as data sources for high quality and cost-effective pharmacoepidemiological studies. The Nordic citizens form an outstandingly large and homogenous population for outpatient studies also in children. This study presents new and updated data on prescription manners in the paediatric population of about 4.4 million children.

The use of drugs was the most numerous at the age of one year. Antibiotics for systemic use, penicillins in particular were the most commonly used drugs in our study. Topical antibiotic use (dermal and ocular fusidic acid) was wide in Denmark.

RESULTS

When concerning all the four nationwide datasets together at the end of the study period, the most common drug groups used in children were antibacterials for systemic use (ATC group J01), ophthalmologicals (S01) and drugs for obstructive airway diseases (R03). The most common individual drugs were phenoxymethylpenicillin, amoxicillin and salbutamol. Generally the drug consumption increased remarkably at the age of one year, and decreased then by school-age. Drugs were more commonly used in boys than in girls, but this difference vanished along age. An example of this is shown in Figure 1.

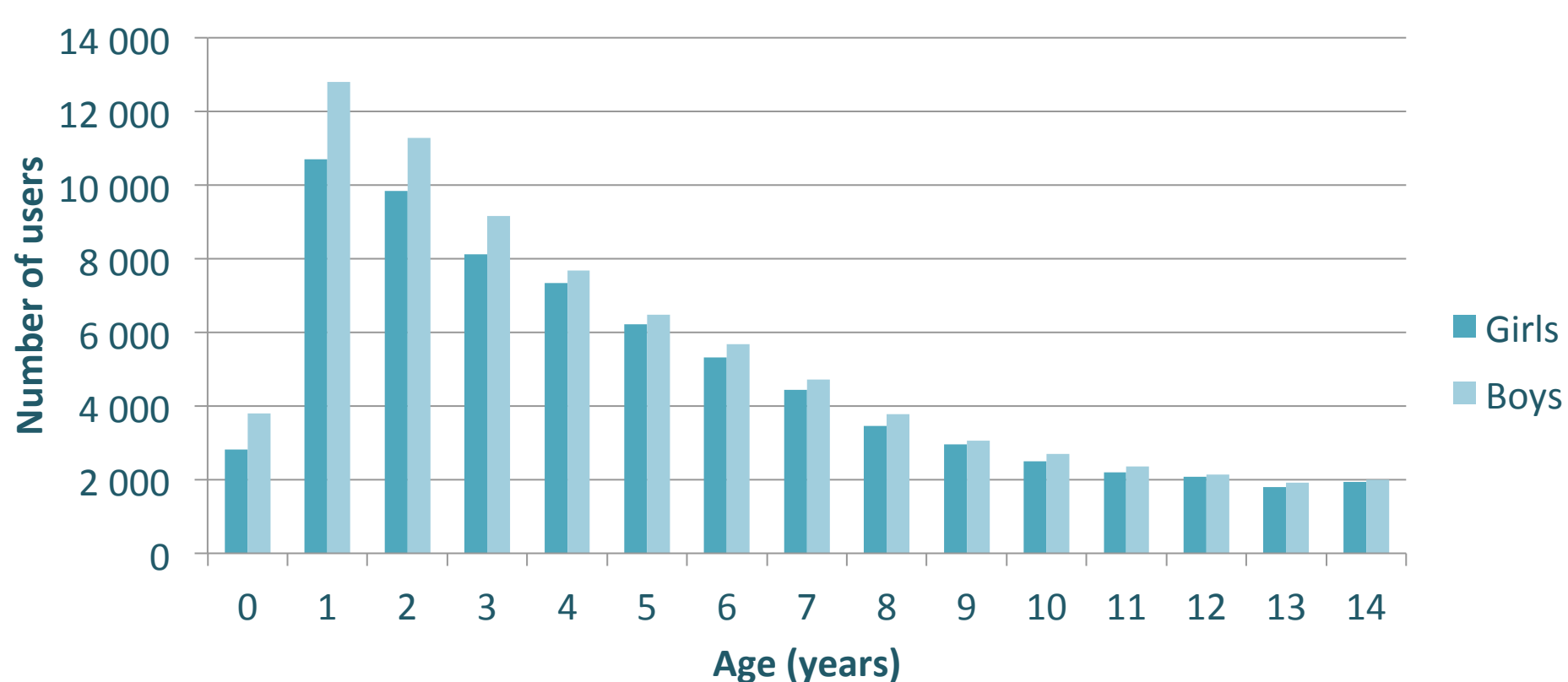


Figure 1: Amoxicillin (J01CA04) use in Finland in 2013. (Amoxicillin was the most commonly used drug in this study in Finland.)

The use of psychoanaleptics, methylphenidate in particular, increased in all countries during the study period. Also drugs used for constipation became more common. Decreased use was noticed among antiobstructive, antiinflammatory and antirheumatic drugs.

No remarkable between-country differences were observed. We saw, however, some differences in practices to prescribe drugs used for allergic symptoms (Figures 2 a-c).

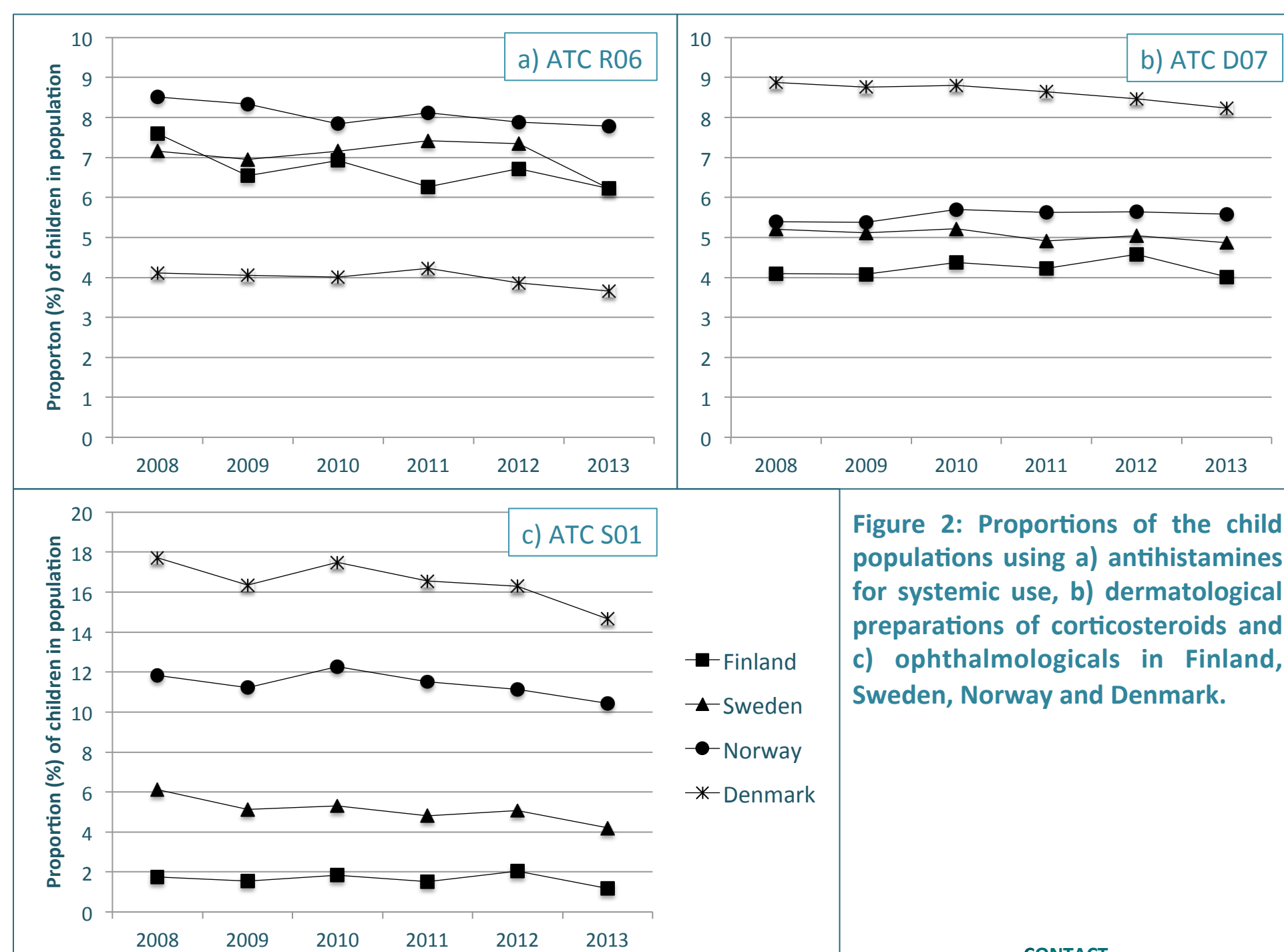


Figure 2: Proportions of the child populations using a) antihistamines for systemic use, b) dermatological preparations of corticosteroids and c) ophthalmologicals in Finland, Sweden, Norway and Denmark.

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