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Editorial comment

Trends in analgesic drug use evaluated by national prescription data bases: Differences between immigrants and native citizens of Norway

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The Nordic countries have a long tradition of registry-based epidemiological research. Many population-based health registries were established in the 1960s, with use of unique personal identifiers facilitating linkage between registries. The Nordic countries now have established a national database to track prescription drugs dispensed to individuals in ambulatory care.

Furu et al. [1] have presented an overview of the prescription databases established in the Nordic countries and elaborated on their unique potential for record linkage and cross-national comparison of drug utilization.

From January 1st 2004 all pharmacies in Norway have been obliged to submit data on all dispensed prescriptions electronically to the Norwegian Institute of Public Health. The Norwegian Prescription Database contains information on all prescription drugs, reimbursed or not, that are dispensed at pharmacies to individual patients outside institutions. Each record contains a unique anonymous person-identifier that makes it possible to follow all prescriptions to each individual patient chronologically. Data on the prescribing physicians are also collected and each physician is identified by a unique, but anonymous identification code. These anonymous data on patients and physicians can be linked to other data registries, such as data from national health surveys, databases on disability insurance, and others. Interesting information have been extracted from the Norwegian Prescription Data base, e.g. the pattern of codeine prescriptions, of which almost half a million prescriptions are dispensed annually to a population of about 4.5 millions [2], and prescriptions of opioids to children and adolescents in Norway [3].

The large influx of immigrants to Western Europe challenges the health care systems in many countries, also the well-fare systems of the Nordic countries. Disparities in provisions of health care are reported in several countries [4,5]. This is particularly important for children and adolescents living in immigrant families. Immigrant's utilization of health care has been reported to be higher, however, more often lower than expected [4,6].

An important health service is pain management, and according to data from the Netherlands, United Kingdom, and Italy analgesics are among the ten most commonly used therapeutic drug classes in children and adolescents [7]. In a study published in this issue of the *Scandinavian Journal of Pain*, Log et al. [8] compared the use of analgesics by young people with parents from countries with a Muslim majority with those with parents born in Norway.

When studying drug consumption based on person's own reports there are several limitations. Answers depend on the person's recall and attitude to the use of analgesics. According to a recent study the validity of self-reported use of prescribed drugs varied according to drug group [9]. Self-reported use of analgesics had the lowest sensitivity (48.5%) and one of the lowest specificities (80.0%), compared with other drugs [9].

When comparing the use of the prescription analgesics between the groups, Log et al. [8] used a method that is much more reliable than surveys based on self report. Because data from the Norwegian Prescription Data Base are collected from pharmacies, only prescriptions that are actually dispensed are registered. Research on drug consumption based on data on dispensing of drugs cannot document true data on drugs consumed. However, data on drugs that have been dispensed and paid for may be at least associated with actual drug consumption. In Norway analgesic drugs are reimbursed by the health insurance system only when prescribed for pain related to cancer and in some cases of long lasting non-cancer pain, in which case an application for the individual patient by a specialist is required. Prescription analgesics for children and adolescents mainly are for non-cancer pain, and therefore mostly paid for by the patients or their parents.

Contrary to the study hypothesis of the pharmacoepidemiological study published in this issue of the *Scandinavian Journal of Pain* [8], the study does not reveal differences in dispensed analgesics to young people with parents from countries with a Muslim majority compared with those whose parents were born in Norway [8]. The authors found no differences in the tendency of becoming a long term user of prescribed analgesics, nor did the amount of prescribed analgesics differ between these groups.

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