



Trends and income related differences in out-of-pocket costs for prescription and over-the-counter medicines in Finland from 1985 to 2006

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ABSTRACT

Objective: To explore trends and income related differences in out-of-pocket (OOP) costs for prescription and over-the-counter medicines in Finland in 1985–2006.

Methods: Cross-sectional data collected in Household Budget Surveys conducted in 1985, 1990, 1995, 2001 and 2006 were used to calculate trends in household OOP payments in absolute and relative terms. Covariance analyses were used to evaluate age-adjusted OOP costs across income groups.

Results: Mean OOP costs per household increased 2.7 fold over inflation from 1985 to 2006. The growth was steepest (60%) in 1990–1995 and slowest (10%) in 1995–2001. The mean costs, in 2006 currency value, increased from €138 to €373 and the average share of household total consumption spent on medicines increased from 0.8% to 1.6%. After adjusting by age, the lowest income quintile had the lowest mean OOP costs for all types of medicines at every time point, although the overall differences were small. In 1985/2006, the age-adjusted estimated marginal means for household medicinal costs were €121/€332 for the lowest income quintile and €138/€449 for the highest quintile, and for the share of household consumption 1.1%/2.2% for the lowest and 0.5%/1.1% for the highest quintile.

Conclusions: All patients faced increasing OOP payments for medicines throughout the study period, but the relative growth was largest for the lowest income groups. Our results suggest that savings achieved by increasing the patients' share of costs coincided with steep growth in OOP costs and wider differences between income groups. Cost containment measures targeted at prices, on the other hand, coincided with stabilised OOP costs and decreasing dispersion between the income quintiles. More research is needed to evaluate whether differences in OOP costs reflect differences in patterns of use.

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1. Introduction

One objective of regulating pharmaceutical markets is to contain costs, especially public expenditure, without compromising equity in access to safe and cost-effective therapies. However, many of the policies adopted shift

costs from the public payer to the patient [1–3]. To protect vulnerable groups from the high burden of costs, many OECD countries have exempted population groups (e.g. older people, the unemployed or children) from prescription user charges [4,5].

In Finland, user charges for medicines apply similarly to all patients regardless of their socioeconomic position (Health Insurance Act 1224/2004). The public share of ambulatory medicinal costs in Finland is covered by the National Health Insurance (NHI), financed by statutory contributions from the insured (and employers until 2010) and with funding from the public sector [6]. The model for the reimbursement of medicines has been a mix of coinsurance and fixed copayments with an annual out-of-pocket (OOP) ceiling since 1987 [7,8]. The reimbursements for medicines are differentiated by disease severity (100% reimbursement for vital, 70–90% for chronic and 40–50% for other medicines). The development of the reimbursement scheme in Finland from 1985 to 2006 is outlined in Table 1. Pharmaceutical expenditure trends in Finland are described in Supplementary material (Fig. 3).

Supplementary material related to this article found, in the online version, at <http://dx.doi.org/10.1016/j.healthpol.2012.12.004>.

Although the evidence is scarce, Finnish user charges and retail prices have been regarded as high, compared with other European countries [4,9,10]. In 2006, within the OECD, the public share of pharmaceutical expenditure was lower than in Finland only in Canada, the US, Italy, Belgium and Australia [11]. According to a report comparing pharmaceutical systems in Europe, Finland had the highest annual copayment ceiling for medicines (€617 per person). The respective ceiling was €194 in Sweden, €472.37 in Denmark, €134.25 in the UK and €205 in Norway [5]. Despite high user charges, private insurance is not a large funder of healthcare in Finland. In 2006, 2.3% of healthcare was funded by private insurance [11].

The only comprehensive database with information regarding medicine use in Finland is the pharmacy claims database, the Finnish National Prescription Register, which only contains records of ambulatory dispensing where the NHI has made a contribution to the cost. Consequently, there is only limited information available on OOP costs for medicines outside the reimbursement system. Medicines regarded as not cost-effective, nearly all over-the-counter (OTC) medicines, as well as medicines used to treat mild and/or temporary conditions are excluded from subsidy and therefore not captured by the prescription register. Patients' annual OOP ceiling is also calculated from the prescription register and only applies to reimbursed medicines.

Cost related non-adherence, even with life-sustaining medicines, has been reported in several studies in other countries after increases in patient charges, especially for people on low incomes [1,2,12,13]. Previous research has shown that increased cost-sharing can lead to an increased rate of adverse events, e.g. hospitalisation, nursing home admission and mortality [14,15]. It is, however, difficult to draw conclusions based on international evidence due to differences in reimbursement systems, their coverage and levels of cost sharing. Many of the changes in the Finnish

reimbursement system have increased the patients' share of total costs, but the trends in OOP costs have not been comprehensively monitored.

The results of this study contribute to the complex question of people's access to medicines and should therefore be of interest to policymakers and researchers. The objective of this study was to use Household Budget Surveys (HBS) conducted in Finland from 1985 to 2006 to explore the trends in OOP costs for prescription and non-prescription medicines by income group.

2. Materials and methods

2.1. Household budget surveys

HBSs have been conducted in all EU member states since the 1960s. The aim of the surveys is primarily to calculate weights for the Consumer Price Index. The statistical office of the EU (Eurostat) issues recommendations for methodological harmonisation of the surveys, although national variation in methods is tolerated [16]. The HBS focuses on household expenditure on goods and services by population group. The HBSs have been widely used as a source of data for public health and policy research [17].

In the present study, we used cross-sectional data collected in HBSs conducted in Finland in 1985, 1990, 1995, 2001 and 2006. The design, sampling, data collection and data handling (weighting, aggregation and calibration) were conducted previously by Statistics Finland and reported elsewhere [18]. Relevant issues and definitions regarding the current study are described briefly below.

2.2. Sampling

Stratified (by area of residence) random sampling was used with community dwelling Finnish residents aged 15 years or older as the sampling unit. A household was constructed around each person included in the sample based on registries and interviews. The response rates varied between 52% (2006) and 70% (1990). The results were calibrated to account for the non-responders [18].

2.3. Data collection

The medicine cost data were compiled by the households filling in diaries and/or keeping receipts from all their purchases for 2 weeks. The medicine expenses were aggregated on an annual basis. Income and household related data were collected from administrative registries and face-to-face interviews [18].

2.4. Variables and definitions

Expenditure data classification was based on the Eurostat Classification of Individual Consumption by Purpose (COICOP-HBS) nomenclature. However, the classification of medicine expenditure in the Finnish HBSs was more detailed than in the original COICOP-HBS.

In this study, we used two expenditure variables, OOP costs for prescription medicines (study code A0611101, COICOP-HBS code 06.1.1.) and OTC medicines (study code

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