

## Evidence on cost-sharing in health care: Applications to Hungary <sup>1</sup>

### Executive Summary

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This study has been written at the request of the Government of Hungary, and provides evidence on cost-sharing in the health sector and its application to Hungary. It presents results on the impact of cost-sharing on (i) revenues in health facilities and insurance, (ii) financial sustainability, (iii) informal payments, (iv) overall service use, and (v) equity in access. Five key-findings emerge:

- **Cost-sharing could lead to a reduction in unnecessary care provided to insured patients who do not have to pay the “full price” of care (reduce moral hazard).** However, findings from the US and Europe also show that the effectiveness of cost sharing in reducing the demand for care depends on several factors including patients’ socio-economic and health status, the type of care, and the financial incentives set to the provider through the provider payment mechanisms.
- **Cost-sharing with exemption policies are a prerequisite to provide equity in access to care.** Exemption mechanisms need to be transparent and easy to apply to reduce administrative costs and ensure they reach their objective.
- **Cost-sharing could help reduce informal payments and keep patient payments in the system.**
- **Cost-sharing could support cost containment strategies** if implemented combined with supply-side measures and financial incentives set through the provider payment system. However, in the absence of any evidence on the marginal effect of cost-sharing over supply-side measures, the impact of cost-sharing on cost containment should not be overestimated.
- **The experience from OECD countries suggests that successful cost-sharing policies:**
  - (i) Are transparent to all, simple and easy to understand;
  - (ii) Result in cost-savings to the insurance or state general revenue funds;
  - (iii) Ensure that patients share in the cost of health care;
  - (iv) Are administratively cost-effective, feasible and practical;
  - (v) Provide positive reinforcement for patients’ cost sharing behavior and encourage patients’ "cost-sensitivity" and "thoughtful" utilization of care

Based on these findings the study recommends that Hungary continues to monitor and evaluate the impact of cost-sharing on access to identify possible negative effects on equity in service use. Household survey analysis could be conducted on equity in utilization adjusted by the need for care, and focusing on GPs, specialist and hospital care. In addition, analysis on equity in health financing could monitor the effectiveness of exemption mechanisms and detect any inequity in health financing. Telephone surveys with insured patients or patient exit surveys could be conducted of inpatients after discharge, and outpatients at the completion of treatment, with the

<sup>1</sup> This paper was written by Pia Schneider, ECSHD, The World Bank, and peer-reviewed by Jack Langenbrunner (EASHD) and George Schieber (EASHD). It draws heavily from the background paper written by Tunde Szabo.

goal of eliciting feedback on informal and formal payments, service satisfaction, and other factors.

The Hungarian Government has recently introduced substantial supply-side measures to reduce overcapacity, including closure of hospitals and beds. Although cost-sharing could influence prices and utilization of care, the experience from several countries shows that reducing hospital overcapacity will have a stronger impact on total healthcare cost than demand-side measures. In Hungary, financial incentives through the provider payment system could eventually support the effect of the Government supply-side strategy. Such financial incentives could be set to providers through capitation payment to reward better quality of care, and Diagnosis Related Group (DRG) payments with expenditure ceilings with strict utilization review and quality assurance control to set an incentive for efficient provision of care.

## 1. Introduction

In February 2007, the Hungarian Government implemented a cost sharing policy requiring direct payments made by patients for outpatient visits, hospitalization and emergency visits. Through cost-sharing the Government aims to support the following objectives: cost containment through moderation of service use; revenue raising; formalizing informal payments and making individuals responsible for their health. However, in many countries worldwide, the introduction of cost-sharing has caused critics, arguing that cost-sharing leads to inequity in access and is not an effective tool to control costs and suppress informal payments but rather creates an additional administrative burden to healthcare providers.

This paper has been written at the request of the Government of Hungary, and provides evidence on cost-sharing in the health sector and its application to Hungary.

Cost sharing refers to out-of-pocket payments made by patients to the providers at the time of service use. For patients with health insurance there are three main forms of cost sharing:

- *deductible*: amount that must be paid out-of-pocket before benefits of the insurance become active;
- *co-payment*: flat amount that the insured patient must pay for each service used;
- *co-insurance*: percentage of the total charges for a service that must be paid by the beneficiary.

Other policies that are frequently associated with cost sharing mechanisms include benefit maximums, out-of-pocket maximums, extra billings, pharmaceutical reference pricing and coverage exclusions. All these options aim to influence patients' care seeking behavior. These demand-side policies are often introduced based on the moral hazard argument, which posits that individuals with health insurance will overuse health services if they bear no portion of the financial burden. Overuse implies that the benefits are less than the risks and costs, which then could result in unnecessary cost increases.

The purpose of this study is to present information on cost-sharing arrangements and the level of out-of-pocket (OOP) payments in health facilities in Europe and the US<sup>2</sup>. The analysis focuses on the impact of OOP on (i) revenues in health facilities and insurance, (ii) financial sustainability, (iii) informal payments, (iv) overall service use, and (v) equity in access. Based on findings, the report provides policy advice on the definition, level and management of out-of-pocket payments to ensure health policy objectives including equity in access and financial sustainability.

## 2. Cost sharing for healthcare in Hungary

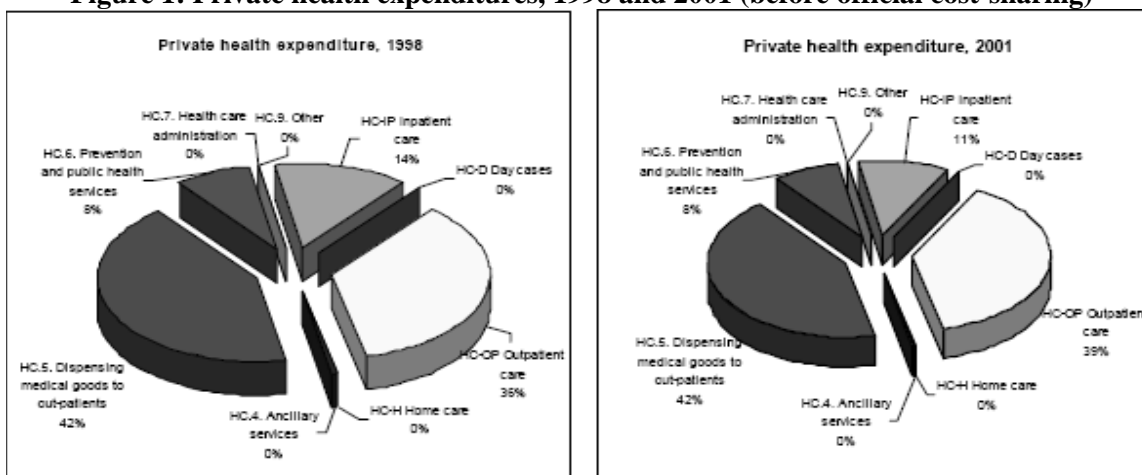
**Patients already finance one-fourth of total health expenditures before “official cost-sharing” was introduced.** Total health expenditures (THE) in Hungary are about 8.5% of GDP, similar to other EU countries. Informal payments (“gratitude”) by patients are estimated at 3% of THE, and it was hoped that cost-sharing would help in “formalizing” informal payments. Even before official cost-sharing was introduced, Hungary reported higher private spending than

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<sup>2</sup> Data were collected from Austria, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, Norway, Slovakia, Czech Republic, Poland, Croatia, Bulgaria, Romania, Estonia, Latvia, Lithuania, Albania, Kyrgyzstan and Cambodia.

several European countries that have cost-sharing policies in place. In 2004, Hungary reported similar values for private spending as a share of THE as the EU average (25%). Private sources include 90% direct payments by patients (co payments for pharmaceuticals, user fees to private sector providers, and informal payments), and 7% payments by enterprises. Almost 43% of private spending goes towards medicines and medical appliances and 39% for outpatient care (Figure 1). Within outpatient care, the largest care item financed from private sources is outpatient dental care: in 1998 62.8% and in 2001 58.9% of outpatient care was spent on dental care services, including prosthetics. About 11% of private expenditures went to inpatient care.

**Figure 1: Private health expenditures, 1998 and 2001 (before official cost-sharing)**



Source: Hungary National Health Accounts, 2001. OECD

**High service use is related to demand and supply-side incentives.** In 2005, prior to the introduction of co-payments, Hungary reported highest rates for hospital admissions in the EU8 countries and high outpatient visit rates (Figure 2 and 3). In the absence of household survey data, it is not known which socio-economic groups are the beneficiaries of this high service use and whether this utilization level contributes to inequity in access. However, high use rates point to moral hazard behavior among insured patients who do not pay the full price at the time of service use. In addition, several supply-side factors in health also induce a higher demand for care. A relatively high number of hospitals and hospital beds combined with Diagnosis Related Group (DRG) payments set an incentive to hospitals to increase the number of inpatient admissions. Outpatient providers who are paid fee-for-service have an incentive to see more patients. Hence, these supplier-induced demand increases require corrective measures on the delivery and provider payment side, while cost-sharing policies focus on the demand-side and influence patients' care-seeking behavior.

Figure 2: Inpatient admits per 100 population

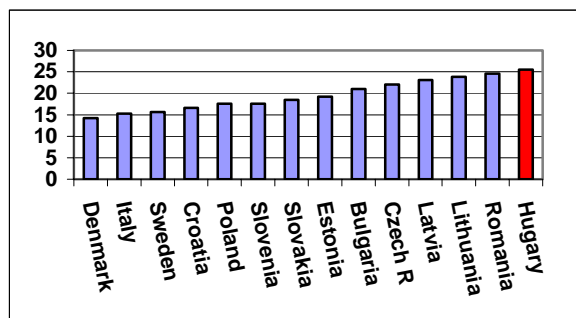
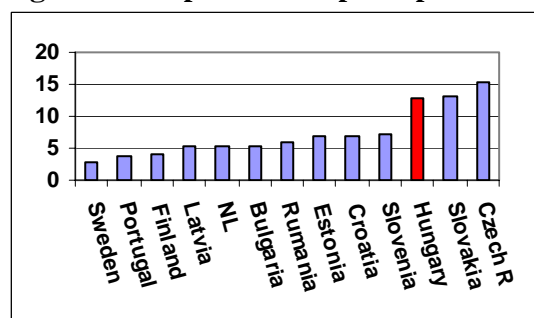


Figure 3: Outpatient visit per capita



Source: WHO health for all. 2005

**Hungary introduced cost-sharing in February 2007.** Patients co-pay €1.2 per outpatient visit, and €1.2 per hospital day (“vizitdíj”), leaving the remaining part to be paid by insurance. In addition, user fees are charged for services excluded from the national insurance benefit package, such as medicines and medical aids, and medical care provided in private sector. The Health Care Act defines cost-sharing as a financial support to providers from the health insurance fund. Co-payments and user fees are paid by patients when receiving healthcare services unless official exemptions are applied (Table 1). The responsibility for collection is with the provider. Based on Government recommendations, providers who collect OOP may use at least 30% of these funds to increase salaries of health workers or pay salary premiums.

Table 1: Fees introduced and effective since 15 February 2007

Type of Care	Cost-sharing paid by patient
Primary outpatient care	300 HUF (€1.20) per visit
Specialized outpatient care	300 or 600 HUF (€1.20 or €2.40) per visit (increased to 600 HUF at specialists if patient has no referral from GP)
Hospital (i.e. room and board)	300 HUF (€1,2) per day (max 20 days)
Emergency service	1000 HUF (€3,9) per visit

Source: Hungary Ministry of Health, 2008

**Like other countries, Hungary has explicit exemption criteria for co-payment.** Population groups and services exempt from fees include (i) children and adolescents under 18 years of age; (ii) homeless people; (iii) emergency services as defined in a separate law (the lack of attending the patient in emergency status involves threat of death or possibility of permanent damage to health); (iv) preventive services, public health services, pregnancy, obstetric and neonatal care services.

Although, it is a bit early to draw conclusions on the impact of cost-sharing, four short-term findings emerge and suggest that the policy could have the expected effect:

- (i) **Cost-sharing may have a moderating effect on utilization.** From January until August 2007, ambulatory care encounters decreased by 23% and hospitalization by 29% compared to the previous year. In 2007, the number of prescriptions decreased by 1 million compared to 2006.

- (ii) **Cost-sharing appears to support financial sustainability.** Hungary has a long tradition of health financing deficit. In 2007, providers raised HUF 21.7 billion from cost-sharing reflecting about 1.3% of the total health insurance budget. Almost half of this amount was raised by GPs<sup>3</sup>. For the first time, the Health Insurance Fund closed the year with a surplus in the amount of HUF 28.2 billion.
- (iii) **Cost-sharing may have a positive impact on the MOH cost containment strategies.** Together with other cost-containment measures (e.g. hospital restructuring) implemented by the MOH, co-payments led to a reduction in hospital costs by HUF 6 billion compared to the budget.
- (iv) **Cost-sharing seems to have a positive impact on provider income, quality of care and staff satisfaction.** Providers used the revenues from user fees to pay for health worker salary increase which resulted in a 25% increase in the average income for family doctors and a 17% increase for pediatricians. At the same time family doctors saw 25% fewer patients resulting in better working conditions for health staff and more time spent per patient.

### 3. Cost-sharing policies in other countries

**Western European countries introduced cost-sharing with the objective of reducing unnecessary demand for services.** The majority of Western European countries employ some form of cost sharing (Annex Table 1 provides an overview). In the three tax-funded health systems Denmark, Spain and the UK, access to inpatient and outpatient care is free for patients, but patients are charged a fee for pharmaceuticals and for the use of specialist care if used without referral from a GP gatekeeper. The most common forms of cost sharing in countries with health insurance are co-payments and co-insurance. Only insurance companies in Switzerland and the Netherlands charge deductibles before insurance coverage kicks in. Some insurers also charge different levels of prices mainly to set financial incentives to patients and direct them towards preferred healthcare providers (e.g. providers contracted at a lower rate). Generally, patients have to pay a higher fee in case of self-referral directly to the specialist without seeing a GP. All countries with cost sharing also protect vulnerable groups from inequity in access to care, mainly with exemption policies and co-payment ceilings.

**Central and Eastern European (CEE) countries have introduced cost-sharing policies to raise additional revenues for the health sector and to formalize informal payments.** In transition economies providers have been relying on informal payments from patients which often have affected the quality of services and led to inequity in service use. Poor patients did not seek care if they didn't know whether they have enough money to pay informally. Co-payments are thus seen as a measure to formalize informal payments and keep revenues from patients within the system. Explicit and transparent prices make the level of OOP expenses at the point of service use predictable for the patients.

**Most CEE countries have some form of cost-sharing.** Five countries introduced similar cost sharing mechanisms mostly in form of flat user fees charged to the patient by the provider – per ambulatory visit, per hospitalization day and per emergency visit (Table 2). In all countries, co-

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<sup>3</sup> Source: MoH website. The publication is from August 2007. Results are based on 10 months of cost-sharing experience.

payments are charged for diagnostics, pharmaceuticals, and some medical materials. In Bulgaria, fee levels were set at the equivalent of 1 percent of the minimum salary. Slovakia implemented user fees in 2003 which were abolished in 2006, but patients still have to co-pay for pharmaceuticals. The Czech Republic just implemented user fees on 1 January 2008. Some countries apply a stop-loss clause with an annual ceiling (e.g., Czech Republic). All countries use some form of exemption measures for low income persons and other vulnerable groups.

**Table 2: Current Co-payment practice in Central and Eastern Europe**

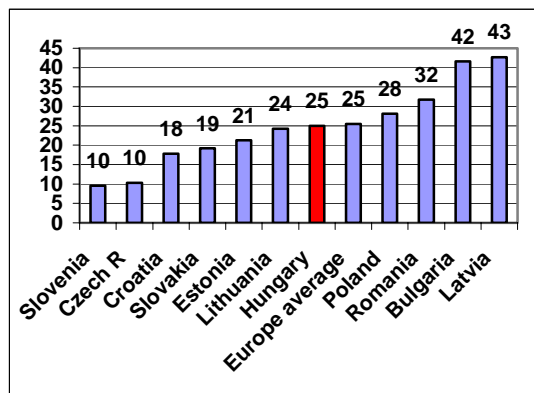
Country	Ambulatory physician (per visit)	Hospital (per day of hospitalization)	Emergency services (per visit)	Comments	Exchange rate (1 €=)
Slovakia	0 SKK (June 2003 -Sept 2006 the fee was 20 SKK)	0 SKK (June 2003 - Sept 2006 the fee was 50 SKK)	60 SKK	Fees were introduced from June 2003 until September 2006.	34 SKK
Hungary	300 HUF (Increased to 600 HUF at specialists if patient has no referral)	300 HUF (max 20 days)	1000 HUF	Fees introduced on 15 February 2007	251 HUF
Czech Republic	30 CZK	60 CZK	90 CZK	Fees introduced 1/1/08. Annual limit of 5000 CZK per person per year.	28 CZK
Poland	0 PLN	0 PLN	0 PLN	No plans to introduce fees	3,89 PLN
Croatia	10 HRK (max 30 HRK per month)	50 HRK (total fee 150 HRK, but 100 HRK is paid by the insurance company)		User fees were implemented in 2005	7,34 HRK
Slovenia	0 €	0 €	0 €	Payment for prescriptions	
Bulgaria	1,8 BGN (2007: 1% of min salary)	3,6 BGN (max 10 days) (2007: 2% of min salary)	0 BGN	User fees implemented in 1999	1,95 BGN
Romania	0 RON	0 RON		No plans to introduce fees	3,38 RON
Estonia	50 EEK	25 EEK (max 10 days)		User fees implemented in 2002	15,65 EEK
Latvia	0 LTL	0 LTL	0 LTL		3,46 LTL
Lithuania	0,5 LVL (home visit 2 LVL)	1,5 LVL + 5 LVL per admission (max 25 LVL per one hospitalization)		User fees implemented in 1999	0,71 LVL

Source: Health Policy Institute, 2007 based on a survey conducted with each country. Methodological comments:  
1. In some countries, some population groups are exempt from charging out-of-pocket payments (e.g., children, pensioners, chronically ill, expectant women)

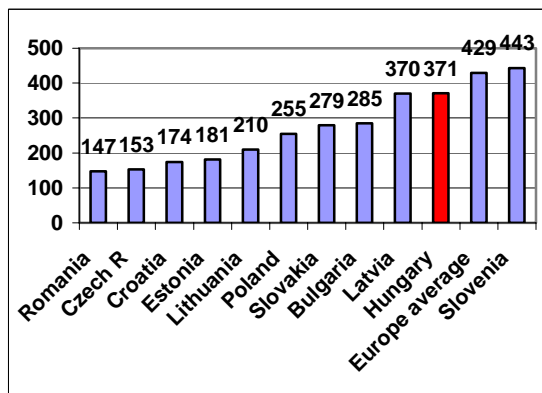
**“Free care” does not protect patients against high private health expenditures.** In 2004, several CEE countries – among them Slovenia, Latvia, Hungary, Czech Republic – did not have cost-sharing for inpatient and outpatient care and their insurance policy provides comprehensive coverage, or supplementary insurance for co-payment as in the case of Slovenia. Despite this “free care” several of these countries report substantial private health expenditures as expressed by the share of OOP in % of total health expenditures (Figure 4), and total private health spending per capita per year in PPP\$ (Figure 5). Without cost-sharing, Latvia, Romania, Poland and Hungary report an out-of-pocket share that is above the European average (which includes Western Europe with cost-sharing countries). Similarly, Slovenia, Hungary and Latvia report highest private spending per capita, despite “free care”. This experience shows that patients have

to pay for services and pharmaceuticals and seek care in the private sector where prices are higher and services not necessarily covered by health insurance.

**Figure 4: Out-of-pocket payments in % of total health expenditures, 2004**



**Figure 5: Private health spending PPP\$ per capita, 2004**



Source: WHO. <http://data.euro.who.int/hfad/>

**Private health expenditures in form of out-of-pocket expenditures may result in inequity in health financing (regressivity).** Wagstaff et al (1999) measure inequity in health financing using household survey data from early 1990s. Table 3 presents results based on the Kakwani index for four financing sources and selected European countries. Findings suggest that indirect taxation and out-of-pocket payments are regressive in all countries. Health financing is progressive under direct taxation. Social health insurance (SHI) is regressive with the exception of two countries (France and Switzerland) where SHI is progressive mainly because all income groups are insured and low-income groups are exempt from paying contributions. Social insurance is regressive in Germany since high-income groups are exempt from SHI and enroll in private insurance. In France private insurance is regressive due to a higher enrolment among high-income groups<sup>4</sup> who purchase supplementary private insurance to insure against co-payments under SHI. Similarly, in Switzerland higher income groups are more likely to purchase complementary private insurance to cover luxury care.

**Table 3: Equity in health financing**

Financing	UK '93	Spain '90	France '89	Germany '89	Switzerl'92
Direct taxes	progressive	progressive	progressive	progressive	progressive
Indirect taxes	regressive	regressive	regressive	regressive	regressive
SHI			progressive	regressive	progressive
Private insurance	progressive	regressive	regressive	progressive	regressive
OOP	regressive	regressive	regressive	regressive	regressive

Source: Wagstaff A, et al. (1999): Equity in the finance of health care: some further international comparisons. Journal of Health Economics; (18):263-290.

<sup>4</sup> Buchmueller, et al (2004) find that private insurance enrolment tends to be higher for managers and highly educated professionals than for semi-skilled and unskilled workers, and is lowest for the unemployed.



#### 4. Arguments and empirical evidence about cost-sharing

Cost-sharing tends to be criticized based on the following five arguments. For each argument supporting or refuting evidence is presented.

***Argument 1: Cost-sharing for health care helps to decrease an overuse of health care by insured patients (moral hazard argument)***

- Based on US data, Newhouse and Phelps (1976) found no substantial impact on the length of hospital stay in response to changes in prices charged to patients. A 10% price increase reduced the average length of stay by 1.7%.
- In Belgium, van de Voorde et al. (2001) exploited the price variation generated by a substantial increase in co-payment rates (nearly 50%) in 1994 to estimate the impact on demand for care. They find that a co-payment change has the strongest impact on the number of home visits. In the general population a 10-percent price increase results in a reduction of GP home visits by 3.4%; GP office visits decreased by 1.4% and specialist visits by 1% only. Price increases appear to have little impact on service use by the elderly and disabled.
- In Germany, Winkelmann (2004) evaluated the price sensitivity of demand for physicians' services following a 200% increase in co-payments for prescription drugs in 1997. Since all prescriptions are issued by physicians, the number of visits and the demand for prescription drugs are linked. Results show that increasing co-payments for pharmaceuticals prescribed during a visit caused a reduction in the number of physician visits by about 10 percent.
- In Slovakia, Pazitný and Zajac (2005) found based on insurance data that in the second half of 2003, following the introduction of cost-sharing, there was a 10% reduction in the number of outpatient visits compared to the same period in 2002. Similarly, the number of first-aid visits dropped by 13%. However, specialized outpatient-care doctors and hospitals saw only a slight decline (2%, respectively). Only 1.5% of individuals interviewed in a survey stated the fees prompted them to stop seeing their doctors. Cost-sharing mainly caused visits for unnecessary care to drop as indicated by 18% of respondents. This suggests that co-payments did have a moderating impact on service use but were not high enough to deter patients who needed care from service use.
- In the Netherlands in 2006 about 5% of the insured indicated that deductibles (individuals pay € 255 OOP before insurance coverage kicks in) had restricted their healthcare consumption. These were mainly younger and healthy persons suggesting that paying deductibles did not have a negative impact on the use of necessary care (Goudriaan et al., 2007; De Jong et al., 2006; Groenewegen & De Jong, 2004).

**Conclusion:** Findings from selected OECD countries suggest that cost-sharing can help reducing the utilization of healthcare services that are less urgent. Results also indicate that cost-sharing with exemption policies does not appear to influence the service use of more seriously ill patients as well as specialist and hospital care.

***Argument 2: Cost-sharing can help contain the growth of health care costs and thereby contribute to financial sustainability.***

- In Switzerland, in January 2006, co-insurance rates for original brand drugs with a generic product were set at 20% whereas the rate for the generic drug remained at 10% of the price. Prescribers are obligated to inform patients about different co-insurance rates. Exemptions exist for patients who due to medical reasons (e.g. side-effects) can not take the generic product. Schuetz (2006) identified two effects as a result of different co-payment price for drugs. First, patients used generics instead of brand drug which caused the market share for generics to increase from 19.6% in 2005 to 32.7% in 2006; resulting in a 46% revenue increase for generic drugs while total revenue for branded drugs with expired patent went down by 49%. Second, as a reaction to the co-payment policy, pharmaceutical companies reduced prices for brand drugs leading to a decrease in the average, weighted price difference between substitutable brand and generic drugs from 51% in 2005 to 28% in 2006<sup>5</sup>.
- In Slovakia, introducing cost-sharing and the resulting decline in patient-doctor encounters had two positive effects: first, the quality of provided health care improved because doctors spent more time with each patient; and second, the volume of prescribed drugs reduced. Co-payments for prescriptions prompted 20% of the patients to ask for fewer prescriptions (Pazitný and Zajac, 2005).
- In Slovakia, abolishing co-payments for hospital and outpatient care in September 2006 led to a shortfall in revenue for providers, which providers tried to compensate by negotiating higher prices with insurance companies. In January 2008, the largest insurer agreed to a 30%-40% price increase per inpatient admission paid to state-hospitals and a 7% increase in the capitation rate paid to GPs, which will be followed by another 5% increase in April 2008. As a result health expenditures by insurers are expected to increase, as is the number of patients on the waiting list (World Bank, 2008).

**Conclusion:** There is limited evidence suggesting that combined with supply-side and provider payment reforms cost-sharing could support the effectiveness of a cost containment strategy. However, little is known about how significant the marginal impact of cost-sharing actually is when combined with other strategies.

***Argument 3: Cost-sharing leads to inequity in access to care with low-income groups being excluded or paying a higher share of their income for health care than the rich***

- A study including nearly 80 countries (WHO 2006) suggests that countries with a higher share of OOP in percent of total health expenditures also have a high percentage of families that face catastrophic health spending (Interpharma, 2007).<sup>6</sup> However, catastrophic spending due to OOP was highest in poorer countries such as Vietnam (10.5%) and in Latin American countries, but not in Europe. In 2003, catastrophic payments were at a negligible level in Hungary (0.2%), as well as in Slovakia and the Czech Republic (0.1%).

<sup>5</sup> Weighted price reductions are calculated top down.

<sup>6</sup> Expenditure is usually defined as being catastrophic if a household's financial contributions to the health system exceed a determined percentage i.e. 40% of income remaining after subsistence needs are met.

- In Europe, exemption policies have protected low-income groups against the negative impact of cost-sharing on equity in access. Based on 1996 household survey data, and after adjusting for need of care, van Doorslaer *et al.* (2000) find in all OECD countries a fairly equal distribution of total physician visits across income quintiles when adjusted by the need for care. However, there is evidence that the rich report higher use of specialist care than what would be expected on the basis of their need for care. This finding was confirmed based on data from 2000, when several countries reported a significant pro-poor GP visit distribution, but the rich still have a significantly higher mean number of specialist visits per year, than the poor. The exceptions were the UK and Netherlands, where specialist use is fairly equal. Leu and Schellhorn (2004) find similar results based on Swiss household surveys from 1982-2002. Service use for GPs and hospitals is distributed equally across income groups, whereas the distribution of specialist visits is significantly pro-rich despite co-payments. These findings support evidence suggesting that the wealthier are less responsive to co-payment. Considering that the rich are more likely to report “unnecessary” specialist care, countries might want to explore income-dependent visit fees for specialists.
- In Bulgaria, household survey findings suggest that a majority of respondents accept payment in public health facilities provided that services are of good quality and access was quick. Respondents did not feel worse equity in access than before co-payment were introduced. The majority preferred flat-rate cost-sharing over co-insurance (percentage of actual service price). Nearly all considered a ceiling on payments appropriate, and strongly supported exemption mechanisms from payments. (Pavlova *et al.*, 2002)
- Some countries have introduced supplementary insurance to insure co-payment among them France, Slovenia and Croatia. However, supplementary insurance did not have the expected effect on equity and financial sustainability, which is one of the reason why it is forbidden in Switzerland<sup>7</sup> Evidence shows that supplementary insurance to cover co-payment is generally purchased by those who use a high amount of health care (Tapay, 2001). The resulting adverse selection endangers the financial sustainability of insurance. In Slovenia and Croatia, supplementary insurance run into financial sustainability problems caused by adverse selection of higher risk-groups into insurance<sup>8</sup>. In France supplementary insurance negatively affects equity in health, as lower income groups are more likely to be uninsured; and when insured, they use care less often than the rich (Buchmueller *et al.* 2004).
- There is only limited evidence about the effect of cost sharing on drug therapy compliance and, as a consequence, on health outcomes, measured through indicators of hospitalization and mortality. Not complying with medication, possibly because of affordability, could have serious consequences for health. This is suggested by surveys from the US and Italy where higher co-payments for drugs had a negative effect for low-income groups on drug compliance, and could have caused higher morbidity, emergency care admissions and mortality (Atella *et al.* 2005). Such adverse effects of cost-sharing could be prevented by defining clear and transparent exemption policies that protect vulnerable groups from being excluded from care.

<sup>7</sup> See Art 64 in the Swiss health insurance law (KVG)

<sup>8</sup> See: Stefan Skledar, Institute of Macroeconomic Analysis and Development. European industrial observations observatory. <http://www.eiro.eurofound.eu.int/2004/12/feature/si0412302f.html>; Miroslav Mastilica, Sanja Kusec: Croatian health care system in transition from a user point of view. In: BMJ VOLUME 331 23 JULY 2005

**Conclusion:** Several OECD surveys indicate that cost-sharing with exemptions policies can provide equity in access for physician visits and prevent adverse effects on health outcomes. However, these surveys also suggest that despite cost-sharing the better-off are more likely to seek unnecessary specialist care, suggesting as income increases, co-payments have less effect on limiting overuse of care. Higher income groups appear to be more likely to “shortcut” the GP gatekeeper and see a specialist directly resulting in higher fees. Therefore, countries could eventually explore income-dependent co-payment levels for specialist care and ensure exemption policies are implemented (sliding scale co-payments). Evidence from France, Slovenia and Croatia suggests that supplementary insurance to cover co-payments does not improve equity in access to care; rather it poses a financial risk for the system by generating an incentive for adverse selection and neutralizing the moderating effect of co-payments on service use.

***Argument 4: Cost-sharing is a means to formalize informal payments charged by providers and combat corruption.***

- In Slovakia, cost sharing has successfully reduced under-the-table payments. According to a study by Pazitný and Zajac (2005), in December 2002 (before cost-sharing), 32% of respondents considered corruption the most serious problem for the country’s health-care system. By January 2004 (after cost-sharing), only 10% of respondents still viewed corruption as the most serious problem. People do not see a need to give gifts or bribes to health personnel after they have already paid a legal user fee.
- In Albania the co-payment policy lacks clarity and transparency. There is insufficient information about official price and exemption policies. As a result, both insured and uninsured patients continue to make informal payments (Vian et al., 2004).
- Several low-income countries report that introducing a formal co-payment policy has helped combating corruption and retaining health funds in the system, and even improved access to care<sup>9</sup>.

**Conclusion:** As findings from Slovakia and Albania indicate, cost-sharing can help reduce informal payments and corruption and retain health funds within the healthcare system, as long as cost-sharing policies are transparent and widely disseminated to all stakeholders.

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<sup>9</sup> In the Kyrgyz Republic the government lowered informal fees by introducing a formal co-payment policy, which includes defining and publishing official price lists for drugs and services and implementing sound financial management in all health facilities (Kutzin, et al. 2002). In Cambodia (Barber et al., 2004) the Takeo Referral Hospital formalized informal payments through explicit user fees and implemented a resource management system with a transparent official fee system designed to generate revenue to cover a proportion of operational costs. Once fees were official, utilization levels increased by more than 50% for inpatient and surgical services, and cost recovery from user fees averaged 33%.

**Argument 5: Cost-sharing creates an additional administrative burden for providers.**

- A small, clearly delineated, across-the-board co-payment may not be perceived as a significant administrative burden for providers and their staff. However, some co-payment systems could increase administrative burden. For example, targeted and tiered co-pays could be confusing to patients and providers (Hopkins et al, 1975).
- Co-pays could reduce the administrative costs of claims handling (invoices to insurer) for providers and insurers because fewer claims would be generated (due to lower utilization).

**Conclusion:** Transparent and simple co-payments easy to understand for all will not increase providers' administrative burden. Rather, a reduction in service can lead to fewer invoices sent to insurers for processing; thus, co-payments could actually reduce administrative costs for providers and insurers.

## 5. Conclusion and Recommendations

This overview on cost-sharing for insured patients provides five key-findings.

- **Cost-sharing could lead to a reduction in unnecessary care provided to insured patients who do not have to pay the “full price” of care (reduce moral hazard).** However, findings from the US and Europe also show that the effectiveness of cost sharing in reducing the demand for care depends on several factors including patients' socio-economic and health status, the type of care, and the financial incentives set to the provider through the provider payment mechanisms.
- **Findings from OECD household surveys suggest that cost-sharing with exemption policies are a prerequisite to provide equity in access to care.** As the experience from Albania shows, exemption mechanisms need to be transparent and easy to apply to reduce administrative costs and ensure they reach their objective.
- **Slovakia and several low-income countries indicate that cost-sharing helps reduce informal payments and keeps patient payments in the system.** In poorer countries, formalizing informal payments can even contribute to the financial sustainability of hospitals.
- **Cost-sharing could support cost containment strategies** if implemented combined with supply-side measures and financial incentives set through the provider payment system. However, in the absence of any evidence on the marginal effect of cost-sharing over supply-side measures, the impact of cost-sharing on cost containment should not be overestimated.
- **The experience from OECD countries suggests that successful cost-sharing policies:**
  - (vi) Are transparent to all, simple and easy to understand;
  - (vii) Result in cost-savings to the insurance or state general revenue funds;
  - (viii) Ensure that patients share in the cost of health care;
  - (ix) Are administratively cost-effective, feasible and practical;

- (x) Provide positive reinforcement for patients' cost sharing behavior and encourage patients' "cost-sensitivity" and "thoughtful" utilization of care

These findings have implications for Hungary's cost-sharing policy. Preliminary results from Hungary based on data from the first months suggest that cost-sharing could have an effect in the expected directions, including reduction of overuse of care, better revenue management, and cost containment. While these results are encouraging, it is recommended that Hungary continues to monitor and evaluate the impact of cost-sharing on access to identify possible negative effects on equity in service use. Following the OECD example, household survey analysis could be conducted on equity in utilization adjusted by the need for care, and focusing on GPs, specialist and hospital care. In addition, analysis on equity in health financing could monitor the effectiveness of exemption mechanisms and detect any regressivity in health financing. As this is the case in OECD countries, telephone surveys with insured patients or patient exit surveys could be conducted of inpatients after discharge, and outpatients at the completion of treatment, with the goal of eliciting feedback on informal and formal payments, service satisfaction, and other factors.

In the longer-run, Hungary could eventually follow the example of Switzerland and the Netherlands, and consider implementing deductibles for insured care. Hungary might also want to consider exploring with different co-insurance rates for generic and brand-name drugs to stir the demand to cost-effective service delivery.

Similarly as Canada, Australia and Switzerland, supplementary health insurance for co-payments could be prohibited by law to prevent inequity in access and financial sustainability problems caused by adverse selection. However, Hungary may eventually wish to explore with complementary health insurance to cover services currently excluded from the basic benefit package or "luxury" services (e.g. 1-bedroom hospital room).

Given the absence of research on the marginal effect of different cost-containment strategies, the impact of cost-sharing on healthcare cost in Hungary should probably not be overestimated. The Hungarian Government has recently introduced substantial supply-side measures to reduce overcapacity, including closure of hospitals and beds. Although cost-sharing could influence prices and utilization of care, the experience from several countries shows that reducing hospital overcapacity will have a stronger impact on total healthcare cost. In Hungary, financial incentives through the provider payment system could eventually support the effect of the Government supply-side strategy. Such financial incentives could be set to providers through capitation payment to reward better quality of care, and DRG payments with expenditure ceilings with strict utilization review and quality assurance control to set an incentive for efficient provision of care.

**Annex Table 1: Current cost sharing practices in Western Europe**

Country	Ambulatory physician (per visit)	Hospital (per day of hospitalization)	Emergency services (per visit)	Other services	Exemption groups	Comments
<b>Austria</b>	0 to 20% of tariff rate, dependent on social insurance agency	Appr. €10 per day up to maximum 28 days per year, variations across social insurance agency and Federal State; additional co-payments of members of certain social insurance agencies	same as ambulatory visit and hospitalization day resp.	Prescription drugs: €4,80 per pack (from 2008: up to a maximum of 2% of yearly net income)	Exemptions due to socio-economic conditions are applied by all social insurance agencies with variations; exemptions for maternity and delivery	
<b>Belgium</b>	€0.99 to €14.86 co-payment and 10-40% of co-insurance depending on the provider and location (copayment set by income categories + maximum billing applied). Supplementary private insurance permitted	Co-payment by patient status, length of stay and type of hospital. General: First day: €40.33 or € 4.94 (poor) From second day on: €13.06 or €4.94 (poor) Psychiatric: €13.06 that increases to €21.78 from the 6th year onwards	Co-payment of €18.3 or €10.17 (poor) except when patient was referred by a GP or when patient arrived in an ambulance; only in these 2 cases the co-payment is reduced to €4.7 or €1.52 (poor).	Co-payments are paid for almost all medical services. The most important example are drugs, for which the co-payment is differentiated according to the medical necessity; 0-80% coinsurance.	Low-income households pay reduced co-payments ("preferential scheme").  Annual ceiling for individual cost-sharing for low-income households (€450, 650, 100, 1400, 1800 by net taxable income)	Very complex cost sharing mechanism..
<b>Denmark</b>	No	No	No	Variable co-insurance rate (0-50%) applied to reference price of drugs and to dental care.	n/a	If longer than 1 month on waiting list patient has the right to be referred from a public to a private hospital free of charge.

<b>Finland</b>	€11 per doctor's outpatient visit, or alternatively €22 annually. In addition to those mentioned above €15 duty payment on weekends between 8:00-20:00 o'clock may be charged. No charges for nurse visits, preventive care or ancillary services such as laboratory visits. In hospitals: €22 per ambulatory visit.	- €26 in somatic inpatient care, - €12 in psychiatric inpatient care - €12 for day and night care -long term care based on patient's income	No	In addition to inpatient care charge, special payment category patients may have to pay: - €68 per Radiography therapy - €673 per Other examinations and treatment - €68 per conservative inpatient treatment, plus care days for examinations and treatment procedures - Consultations €68 - €236 per anesthetic procedure Also, there are home nursing copayments, their magnitude depends on the income of the family	Patients up to 18 years, in health care centers. They may be charged in hospitals for a maximum of 7 treatment days (€26/€12) or for ambulatory hospital care (€22 per visit).  Health care charge ceiling adjusts the co-payments in public health care. The annual ceiling is €590 and after this payment limit the outpatient services become free of charge and the short-term hospital inpatient care charge drops from €26 to €12 per day.	OOP in public health care will be revised upwards by MOH in 2008. The last time this was done in 2002, when every payment was increased 6 % on average.
<b>France</b> <sup>10</sup>	Flat user fee of 1 € is due in addition to the co payment rate, in the limit of 4€ a day and 50€ a year; it is not reimbursable by supplementary insurances Special technical care: 18 € per service.	16€ per day, reimbursable by supplementary insurance (except for psychiatric care: 12€). Special technical care: 18 € per service	The same rules apply in ambulatory care and in private hospitals, extra tariff for emergency care: 22.60€, which is submitted to co payment rates as well as the basic fee. For emergency visits in public hospitals, there is no user fee.		Poorest people benefit from free supplementary insurance. Exempt from cost-sharing are patients suffering from a long and costly disease (in a list of 30), pregnant women over 5 months, victims of work accident or professional disease.	

<sup>10</sup> The French system is much more complex than described in this table.



<b>Germany</b>	€10 for the first physician visit per quarter. Second, third per quarter is free.	€10per day	No	Higher cost sharing for prescription drugs and dental care.	n/a	
<b>Greece</b>	HOSPITALS 1.) €3 in outpatient clinics 2.) €75 for consultant, €60 for senior registrar, €45 for registrar in evening (private hospital clinic of patient's choice) HEALTH CENTRES No OPP payment	No	€3 or nothing (For most hospitals there is no charge, but some providers charge the same as when attending an outpatient clinic)	For pharmaceuticals or some lab tests not covered by insurance, OPP payments may be required.	For people without income, who are under Welfare Benefits Scheme, the state covers all costs.	Hospitalization per diem fees need to be revisited in general in Greece, due to lack of valid costing systems.
<b>Ireland</b>	Free for hospital outpatient visit	€66 up to a maximum of €660 in any consecutive 12 months	€66 if not referred by GP	Individual/family must pay first €90 per month for prescribed drugs. This is statutory limit	All people with full eligibility <sup>11</sup> receive public health services entirely free of charge.	

<sup>11</sup> Entitlement to health services in Ireland is primarily based on residency and means. Any person who is accepted by the Health Service Executive (HSE) as being ordinarily resident in Ireland is entitled to either full eligibility (Category 1, i.e. medical card holders) or limited eligibility (Category 2) for health services. Persons in Category 1 are medical card holders and they are entitled to a full range of services including general practitioner services, prescribed drugs and medicines, all in-patient public hospital services in public wards including consultants services, all out-patient public hospital services including consultants services, dental, ophthalmic and aural services and appliances and a maternity and infant care service. Determination of eligibility for medical cards is the responsibility of the Health Service Executive.

Persons not entitled to a medical card, but with an income below a certain threshold (50% above the medical card income guidelines) may be entitled to a GP visit card. A GP visit card entitles the holder to free GP services. For those who do not qualify for a medical card, a number of schemes exist which provide assistance towards the cost of medication. Under the Drug Payment Scheme a person and his/her dependants do not have to pay more than €90 in any calendar month for approved prescribed drugs, medicines and appliances.

Persons in Category 2 (non medical card holders) are entitled, subject to certain charges, to all in-patient public hospital services in public wards including consultant services and to out-patient public hospital services including consultant services. The current public hospital statutory in-patient charge is €66 per night, up to a maximum of €660 in any twelve consecutive months. There is no charge for outpatient services, other than in respect of attendance at accident and emergency departments which is subject to a charge of €66 where the patient does not have a referral note from his/her doctor.

				reviewed annually.		
<b>Italy</b>	No fee in primary care. A specialist visit fee <sup>12</sup> is €20,66	No	No payment in case of real need or emergency, otherwise patients have to pay €25.	Pharmaceutical cost sharing and co-payments in laboratory tests.	Patients exempted are: who suffers from specific or chronic diseases; up to 6 years old; the elderly over 65 years old with low income (€36,000); retired, unemployed, low income groups.	
<b>Luxembourg</b>	Co-insurance of 10%=€3.18. For home visits by doctor 20% =€6.46.	€12,60 per hospital day (medical care is reimbursed by the funds at 100%)	€3,41 = 10% of the price	10% co-insurance is for generalists and specialist, 20% for dental care Co-payment for drugs	No exemptions exist	Fees must be applied by the doctors. There is no distinction between public and private sector.
<b>Netherlands</b>	<u>Deductible policy</u> <sup>13</sup> . For all services in basic insurance package, except for general practice services and obstetrical services, patients have to pay deductibles of €150 per year (introduced in January 2008). Patients can chose a higher deductible (maximum of €500 per adult) in order to pay a lower premium for their healthcare insurance.				Care provided by general practitioners, maternity care and children (< 18 years) are exempt from paying deductibles. Chronic patients receive €47 to compensate for the higher OPP paid by them (in comparison with non-chronic patients).	There was a major reform <sup>14</sup> of the insurance system in 2006

<sup>12</sup> Regional Laws can introduce less expensive charges and fees for specialist visit and treatments. Specialist visits and treatments are generally prescribed by the GP, who acts as a gatekeeper to specialist services. The GP can prescribe on a prescription form until 8 specialist treatments in the same specialist branch. In this case the payment is limited to €36,15.

<sup>13</sup> This cost sharing mechanism has just been implemented. Brief descriptions of the new systems can be found in Maarse & Bartholomé (2007) and Groenewegen & de Jong (2007).

<sup>14</sup> After a major insurance reform in 2006, the Netherlands has now a uniform system of health insurance. The current insurance system is based on public regulation in the Health Insurance Law, enacted by private organizations (insurance carriers). Insurance carriers are obliged to offer the basic package of coverage (which is the same as the former public insurance) and to accept everybody without risk selection or premium differentiation. People are free to take out additional insurance. Additional insurance is private and insurance carriers define the conditions in terms of acceptance, coverage, premiums and cost-

<b>Norway</b>	Primary care: NOK 120 (€15) Primary care (evening): NOK 220 (€27,5) Special ambulatory care: NOK 280 (€35)	No	No	Co-payments for drugs	Children under 12 years are exempt. Annual cost- sharing ceiling is NOK 1600
<b>Portugal</b>	Central Hospitals - €4,40 District Hospitals - €2,90 Primary care - €2,15	€5,10 per hospitalization day in the first 10 days €10,20 for ambulatory surgery	Central Hospitals - €9,20 District Hospitals - €8,20 Primary care - €3,60	Co-payments for drugs	Almost 50% of population, including pregnant, children until 12, above 65, people without salaries above €300 a month, some diseases, etc
<b>Spain</b>	No	No	No	Co-payments for drugs (40%) and special medical material and equipments (e.g., orthoprothesis, variable co-payment)	Pensioners
<b>Sweden</b>	SEK 100-150 (€11 – 16)	SEK 40 (€4)	SEK 150-300 (€16-32) Primary care SEK 120-400 (€13 – 43) Hospital care	Cervix cytology SEK 120-150 (€13 – 16) Mammography SEK80-200 (€9 – 21)	n/a
<b>Switzerland</b>	<u>Deductible policy:</u> A proportion of treatment costs is paid by the policy-holder. This proportion consists of: • a standard deductible of CHF 300 (€187)per year • a retention fee of 10 percent of the remaining invoiced amount up to a maximum of CHF 700 (€436) per year (CHF 350 for children and adolescents).				Children and adolescents up to 18 years of age do not pay a standard deductible;

sharing. Services covered include dental care for adults, physiotherapy and alternative and complementary therapies. See: Maarse & Bartholomée (2007) and Groenewegen & de Jong (2007).

	The standard direct contribution to costs is therefore a maximum of CHF 1,000 (€623) per year for adults and CHF 350 (€218) for children and adolescents <sup>15</sup> .			Mammography - no deductible is payable for mammography carried out for the early detection of breast cancer as part of a cantonal program	
<b>United Kingdom</b>	No	No	No	<p>Patient co-payment for drugs<sup>16</sup>: flat rate of £6.65 (per item in England, Scotland and Northern Ireland) £3.00 (per item in Wales)</p> <p>80% co-payment for dental care up to a ceiling of £354.00. £4.76 for a dental check-up.</p>	<ul style="list-style-type: none"> <li>• under 16</li> <li>• between 16-18 and in full time education</li> <li>• Students in full-time education</li> <li>• 60 or over</li> <li>• pregnant, or mother of a baby in the last 12 months entitled to medical exemptions</li> <li>• a war or Ministry of Defense pensioner entitled to prepayment certificate</li> <li>• People entitled to be included in the NHS Low Income Scheme<sup>17</sup>. Approximately 85% of prescriptions are exempt from the charge</li> </ul>

Source: Szabó, Tünde 2008

<sup>15</sup> Example: The cost of the treatment the patient receives in the course of a year (doctor, hospital, medication etc.) is CHF 2,000 in total. He pays a deductible of CHF 300 and 10 percent of the remaining amount, i.e. a total of CHF 470 (CHF 300 + 10% of CHF 1,700 = CHF 470). His health insurance covers the remaining CHF 1,530.

<sup>16</sup> People who frequently need prescriptions may apply for 4-month (£31.90) or annual (£87.60) prescription certificates.

<sup>17</sup> Persons receiving any of the following: a) income support, b) family credit d) Disability Working Allowance (DWA), e) job seeker's allowance (income based)

## References

- Allin, S., Davaki, K., Mossialos, E., Paying for 'free' health care: the conundrum of informal payments in post-communist Europe. *Global Corruption Report 2006: Special focus on corruption and health*. Transparency International, London Pluto Press pp. 62–71.
- Atella, Vincenzo, Peracchi, Franco, Depalo, Domenico and Rossetti, Claudio, "Drug Compliance, Co-Payment and Health Outcomes: Evidence from a Panel of Italian Patients" (October 2005). CEIS Working Paper No. 76. SSRN: <http://ssrn.com/abstract=871395>
- Barber, S., Bonnet, F., Bekedam, H. Formalizing under-the-table payments to control out-of-pocket hospital expenditures in Cambodia. *Health Policy and Planning*, 19(4): 199–208, *Oxford University Press*, 2004
- Buchmueller Thomas and Agnes Couffinhal: (2004) Private Health Insurance in France. OECD health working paper No. 12
- Cases, Chantal. "Sanitary shield". *Health Policy Monitor*, October 2007. Available at <http://www.hpm.org/survey/fr/a10/3>
- Chernew, M. Optimal Health Insurance: A Benefit Based Co-Pay. Available at: [www.ruf.rice.edu/~econ/conference/papers/chernew.doc](http://www.ruf.rice.edu/~econ/conference/papers/chernew.doc), 2006
- Couffinhal, A. and Paris, V. "Utilization fees imposed to Public Health Care System Users in France" *CREDES*, 2001.
- De Graeve D, Lecluyse A, Schokkaert E, Van Ourti T, Van de Voorde C. Eigen betalingen in de Belgische gezondheidszorg. De impact van supplementen. *Equity and Patient Behaviour (EPB)*. Brussel: Federaal Kenniscentrum voor de gezondheidszorg (KCE); 2006. The main text of the report can be downloaded from the KCE-site in English: <http://www.kce.fgov.be>
- De Jong, J. D., Verheij, R. A., and Groenewegen, P. P.. No-claimregeling werkt niet; vooral anderen zouden onnodige zorg gebruiken. *Medisch Contact* 61:1204-1205, 2006.
- Delnoij, D. M. J., Groenewegen, P. P., Ros, C. C. and Friele, R. D. Die Zuzahlungsregelung im Niederländischen Krankenkassengesetz: eine Evaluation der Effekte. *Das Gesundheitswesen* 62:39-44, 2000.
- Gaál, P. and McKee, M. 'Informal Payment for Health Care and the Theory of "INXIT"', *International Journal of Health Planning and Management* 19, 2004.
- Gaál, P. Hála-pénz? Hála-kényszer. *Egészségügyi Gazdasági Szemle*, 42. évfolyam különszám, 2004
- Gaál, P., McKee, M., Evetovits, T. Informal payment for health care: Evidence from Hungary, *Health Policy* 77 pg. 86–102, 2006
- Gaál P. Informal payments for health care in Hungary. *London School of Hygiene and Tropical Medicine, Department of Public Health and Policy, Health Services Research Unit, University of London*, 2004
- Hopkins, CE, MI Roemer, DM Procter, Gartside, F Lubitz, J Gardner, GA Moser, M Moser, "Cost-Sharing and Prior Authorization Effects on Medicaid Services in California: Part I: The Beneficiaries' Reactions," *Medical Care* 13, no. 7 (July, 1975).
- Interpharma, Jan. 2007; IMS HEALTH GMBH: Pharmamarkt Switzerland 2006, 22. January 2007.

- Joób, S., Idén először nyereséges az Egészségbiztosítási Alap, de nagy ára volt. *Index*, 14 august 2007. Available at: <http://index.hu/politika/belfold/oe4113/>
- Kutzin, J. "The Appropriate Role for Patient Cost-Sharing." In Saltman, Richard B., Josep Figueras, et al., Eds. *Critical Challenges for Health Care Reform in Europe*. State of Health. Buckingham: Open University Press, 1998.
- Kutzin, J. A descriptive framework for country-level analysis of health care financing arrangements. *Health Policy* 56: 171-204, 2001
- Kutzin, J. Note on patient awareness of copayment levels in Kyrgyzstan. *WHO, Manas Health Policy Analysis Project, Policy research paper no, 17*, 2002
- Leu R, Schellhorn M. (2004): The evolution of income-related inequalities in health care utilization in Switzerland over time. *Diskussionsschriften*. Universitaet Bern. [www.vwi.unibe.ch](http://www.vwi.unibe.ch)
- Groenewegen, P. P. and De Jong, J. D.. Dutch health insurance reform: the new role of collectives. *Eurohealth* 13 (no.2):10-13, 2007.
- Maarse, H. and Bartholomé, Y. A public-private analysis of the new Dutch health insurance system. *European Journal of Health Economics* 8:77-82, 2007.
- Newhouse, J.P. and the Insurance Experiment Group, Free for All? Lessons from the Health Insurance Experiment, *Harvard University Press*, Cambridge, 1993.
- OECD, SHA-Based Health Accounts In Thirteen OECD Countries Country Studies: Hungary National Health Accounts, 2001
- Pavlova, M., Groot, W. and Van Merode, G. Public attitudes towards patient payments in Bulgarian public health care sector: results of a household survey. *Health Policy*, vol. 59, p. 1-24, 2002
- Pazitný, P., Zajac, R., Health care reform in the Slovak Republic. *The William Davidson Institute at the University of Michigan*, 2005. Available at: [http://wdi.umich.edu/files/Publications/PolicyBriefs/2005/Pazitny\\_Peter\\_09w.pdf](http://wdi.umich.edu/files/Publications/PolicyBriefs/2005/Pazitny_Peter_09w.pdf)
- Phelps, C.E. and J.P. Newhouse, Coinsurance, the Price of Time, and the Demand for Medical Services, *Review of Economics and Statistics* 56, 334-342, 1974.
- Phelps, C.E. *Health Economics*. Harper Collins Publishers Inc., 1992.
- Ringel, J.S., Hosek, S.D., Vollaard, B.A., Mahnovski, S. The Elasticity of Demand for Health Care: A Review of the Literature and its Application to the Military Health System. *RAND Corporation*, 2002
- Ros, C. C., Groenewegen, P. P. and Delnoij, D. M. J.. All rights reserved or can we just copy? Cost sharing arrangements and characteristics of health care systems. *Health Policy* 52:1-13, 2000.
- Rosett, R.N. and L.F. Huang, 1973, The Effect of Health Insurance on the Demand for Medical Care, *Journal of Political Economy* 81, 281-305.
- Schokkaert, E., Van de Voorde, C., Health Care Reform in Belgium. *Centre for Economic Studies, Leuven*, 2004
- Schüth, T. Perceptions of the co-payment policy among patients and health personnel: raid appraisal study in the pilot area of Chui and Issyk-Kul oblasts in Kyrgyzstan, 2001

- Schuetz, Stefan: Case study on cost-sharing regulations in Switzerland. Background paper written for the World Bank. ECSHD. July, 2007.
- Szabó, Tünde: International experience in cost sharing in health care. Background paper written for the World Bank. ECSHD. January 31, 2008.
- Tapay, N., Private insurance, public health, OECD Observer, December 2001, [http://www.oecdobserver.org/news/printpage.php/aid/566/Private\\_insurance\\_public\\_health.html](http://www.oecdobserver.org/news/printpage.php/aid/566/Private_insurance_public_health.html)
- Van Doorslaer E, Masseria C. (2004): Income-Related Inequality in the Use of Medical Care in 21 OECD Countries. OECD Health Working Papers No. 14
- Van de Voorde C, Van Doorslaer E, Schokkaert E. Effects of cost sharing on physician utilization under favourable conditions for supplier-induced demand. *Health Economics*, 2001; 10:457-471.
- Vian, T., Gryboski, K., Sinoimeri, Z., Hall Clifford, R. Informal Payments in the Public Health Sector in Albania: A Qualitative Study, *Partners for Health ReformPlus*, 2004
- Wagstaff A, et al. (1999): Equity in the finance of health care: some further international comparisons. *Journal of Health Economics*; (18):263-290
- Wedig, G.J., Health Status and the Demand for Health – Results on Price Elasticities, *Journal of Health Economics* 7, 151-163, 1988.
- Westerhout, E. and Folmer, K. The Co-payment systems in health care: between moral hazard and risk reduction. *CPB Discussion Paper*, 2007
- Winkelmann, R., Co-payments for prescription drugs and the demand for doctor visits: evidence from a natural experiment. *Health Economics* 13: 1081–1089, 2004
- World Bank: Slovakia Public Expenditure Review. 2008.
- WHO. Approaching health financing policy in the WHO European Region, *Regional Committee for Europe, 56 session, Copenhagen*, 11-14 September 2006
- Xu, K., Evans D. B, Kawabata, K., Zeramdini, R., Klavus, J., Murray, C. J. L., Household catastrophic health expenditure: a multicountry analysis. *The Lancet*, Vol 362 ,July 12, 2003
- Zajac, R., Pažitný, P. & Marcinčin, A. Slovak Reform of Health Care: From Fees to Systemic Changes. *Finance a úvěr - Czech Journal of Economics and Finance*, 54, no.9-10, pp. 405-419 (2004).