

# PROJECT POLICY BRIEF

**Project No.: 217431** Assessment of patient payment policies and projection of their efficiency, equity and quality effects: The case of Central and Eastern Europe

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**Title:** **The relevance of demand modelling for the assessment of patient payment policies**

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## The relevance of demand modelling for the assessment of patient payment policies

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### SUMMARY

Patient payments are implemented in both tax-based and insurance-based public health care sectors as cost-sharing or cost-recovery policy tool depending on the conditions of the health care sector and the general economic circumstances in the country.

Regardless of the diversity in the policy objectives and the differences in the patient payment mechanisms implemented, patient payments influence the health care sector in a similar fashion. The prices of health care consumption imposed by patient payments reduce the quantities of health care demanded and consequently, the use of health care. Thus, the actual impact of patient payments on the overall performance of the health care sector in a country depends on how these payments affect the behaviour of individual health care consumers in that country and whether they provide incentives for a supplier-induced demand.

Therefore, demand analysis is often advised as an essential step prior to the implementation of a patient payment mechanism or its amendments. Preliminary demand analyses would be possible however, if among other things, policy-makers are provided with a functional model of health care demand suitable for the assessment of patient payment policies.

The development of such model is one of the primary objectives in project ASSPRO CEE 2007.

### Objectives of patient payment policies

Patient payments are implemented in both tax-based and insurance-based public health care sectors as cost-sharing or cost-recovery policy tool depending on the conditions of the health care sector and the general economic circumstances in the country.

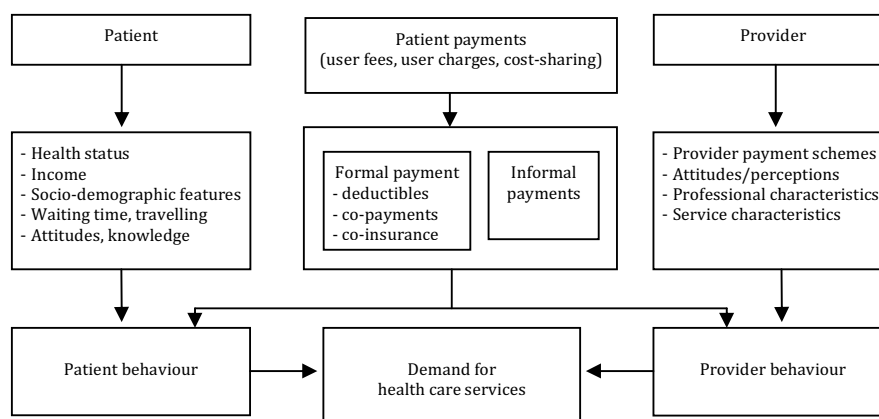
In high-income European countries and US, for example, patient payments are mainly implemented as a cost-sharing policy tool that is expected to enable the reduction of unnecessary overuse of health care services. It is assumed that when patients have to pay a part of the health care costs, they are likely to become more cost-conscious and to seek only services that they really need. In middle- and low-income countries (such as countries in Asia and Africa), patient payments are primarily applied as a cost-recovery policy tool that is expected to generate additional resource to sustain the health care provision. In particular, it is expected that patient payment revenues can enable the expansion of health care provision and the improvement of service quality either at national or local/community level.

Despite this broad division, in practice, a mixture of cost-sharing and cost-recovery objectives is often assigned to the introduction of patient payments either explicitly or inexplicitly. The implementation of patient payments in some countries is also a policy response to the widely spread informal payments for health care services.

### Patient payments and efficiency in health care sector

Regardless of the diversity in the policy objectives and the differences in the patient payment mechanisms implemented, patient payments influence the health care sector in a similar fashion. The prices of health care consumption imposed by patient payments reduce the quantities of health care demanded (see Figure 1) and consequently, the use of health care. However, the exact degree of reduction varies between countries, health care settings, and socio-demographic groups. Moreover, the overall reduction in health care utilisation due to the implementation of patient payments does not always indicate that unnecessary health care utilisation is also reduced. Consequently, this reduction does not necessarily imply efficiency improvements.

**Figure 1.** The impact of patient payments on health care demand



In addition to this, the efficiency improvement potential of patient payments may depend on the specific consumer-provider relationship in the health care sector. When health care providers are involved in the process of fee collection, the introduction of patient payments affects their behaviour resulting in a potentially excess supplier-induced demand.

While the efficiency improvement potential of patient payments at micro-level is still being discussed, current research indicates that the decline in health care utilisation after the introduction of patient payments do not significantly influence overall health care expenditure. The overall health care expenditure in a country is primarily supply-driven while patient payments are a demand-side policy tool. For that reason, assigning a cost-containment objective to patient payments leads to effects that can not be forecasted. As indicated by the experience in high-income countries, measures that act on the supply side of the health care market (e.g. placing the primary care providers in the role of 'gate keepers' to the specialised health care) appear to be more effective for containing the health care costs.

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**Patient payments as a source of health care funding**

The introduction of patient payments suggests a potential to generate additional revenue for the funding of the health care sector. This characteristic of patient payments is of a particular interest in a context of increased fiscal pressure and sustainability problems within the public health care system. Insufficient domestic resources impede the improvement of the health care sector and the provision of health care services with adequate quality for the entire population.

However, on an aggregate level, patient payments revenues do not present a significant contribution to the public health care funding. The gross revenues generated from patient payments in countries of all levels of development (including high-income countries) is not higher than 15% of the public health care expenditure with an average of 5%. Patient charges are usually very low to assure that the majority of consumers are able to pay them while offering even lower or no charges for those who cannot pay or use health care frequently. Even when patient payments have the potential to generate high gross revenue, the considerable administrative costs related to their collection at a national level, further decreases the yield of their implementation. Overall, patient payments have relative limited potential for generating health care revenue on an aggregate level.

A more appropriate role of patient payments in the health care system funding is their application as a contributory financing for local health care structures rather than as a nation-wide financial strategy. In some countries, where the public health funds have been slashed due to deteriorating economies, patient payment revenues are retained at the level of collection and are successfully reinvested in the local health care facilities to revitalise the health care provision. The collection and use of patient payment revenues at the point of service provision appears to make a major difference to the quality of health care services. Evidence from different countries indicates that consumers are in general willing to pay low fees if they receive health care services with good quality.

**Patient payments and equity in health care provision**

Although the efficiency and sustainability effects of patient payments are still a subject of scientific debates, the potentially adverse impact of these payments on equity is commonly recognised. In particular, research results suggest that patient payments are highly regressive. Whenever patient payments exist, the poor spend a larger part of their income on health care than the wealthy individuals irrespective of whether there are differences in price-sensitivity among these population groups. In addition to this, when patient payments are implemented in a context of persistent informal payments for health care services, the adverse equity effects are likely to be further aggravated.

Therefore, the introduction of patient payments is usually accompanied with equity protection measures (such as providing various limits, exemptions and fee reductions). Nevertheless, adverse equity effects of these payments are still observed. There are two main reasons for this: inadequate design of the equity protection measures and/or inability of policy-makers to implement them in practice. As result, population groups that are unable to pay for health care are not always accurately identified and exempted.

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**Demand analysis and the assessment of patient payment policies**

Overall, the social benefits of introducing patient payments in public health care sector are rather uncertain while their adverse effects for the health care sector are well recognised. Yet, the actual impact of patient payments on the overall performance of the health care sector in a country depends on how these payments affect the behaviour of individual health care consumers in that country and whether they provide incentives for a supplier-induced demand.

Therefore, demand analysis is often advised as an essential step prior to the implementation of a patient payment mechanism or its amendments. Lack of understanding of consumer demand for health care and its determinants could lead to the implementation of patient payment mechanisms that are potentially 'catastrophic' for the population. Preliminary demand analyses would be possible however, if among other things, policy-makers are provided with a functional model of health care demand suitable for the assessment of patient payment policies.

To be useful for policy assessment, the demand model needs to account for factors related to consumer behaviour (e.g. consumer preferences, perceptions, willingness and ability to pay) under alternative patient payment schemes. In addition to this, supply-side factors (e.g. providers' reimbursement schemes and reallocation of patient payments collected) also have to be considered. Other relevant factors predicted by economic theory are the existence and prices of alternative health care services (e.g. private health care services or services provided/paid informally).

Demand analysis appears relevant to the assessment of patient payment policies on both micro- and macro-level. The results of demand analysis can be used at micro-level to determine the responsiveness of health care consumers to changes in patient payments or their introduction.

Based on this, an appropriate mixture of patient payments for different health care services can be determined, as well as suitable exemptions and fee reductions for vulnerable population groups. This can help to provide the right incentives for an efficient utilisation of health care services and to avoid under-utilisation of health care by vulnerable population groups.

Demand analysis can also aid projections at macro-level. The results of demand analysis can be used to forecast the potential revenues that can be generated through patient payments given the specific patient payment mechanism implemented or considered for implementation.

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**Main approaches to demand analysis**

The basic concept behind demand analysis (incl. demand for health care services) is the concept of consumer preferences. According to economic theory, consumer preferences are closely related to the level of individual utility derived from the consumption of commodities or services, and thus, to the demand for these products. Demand is seen as a result of a constrained utility maximisation process where consumers behave in such a way as to obtain the highest possible utility of the consumption of commodities and services given certain constraints (e.g. income constraints). However, economic theory argues that consumer preferences can be used as an indicator of utility and demand as long as these preferences are consistent and rational. This presumes that consumers are always able to make an optimal (utility maximising) choice between all available options. Because the validity of this assumption is occasionally questioned in the literature, the measurement of consumer preferences has become a significant challenge for researchers.

Hitherto, literature suggests that the consumer preferences can be elicited using either revealed or stated preference approach. The main differences between the two approaches are the origin of the data and the method of data collection. Revealed preference approach refers to the collection of data on actual (past or present) consumer behaviour. Revealed preference data are gathered via observations and existing census data, as well as via records of past or present economic activities (e.g. type and amount of services provided by a health care organisation). In contrast to the revealed preference approach, stated preference approach requires the collection of data on hypothetical (future) behaviour of consumers. It takes the form of a survey where consumers are presented with hypothetical options and are asked to state their preferences for these options. Each of the above methods has pros and cons in both practical and theoretical terms.

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**Future research**

Project ASSPRO CEE 2007 aims to use both revealed and stated preference methods to develop a comprehensive model of consumer demand for health care services provided under official patient payments. The objective is to account for consumer preferences and perceptions, consumer willingness and ability to pay for health care, informal payments for health care services, and characteristics of health care providers. The importance of the above factors to demand analysis is broadly recognised but it is rarely considered in empirical investigations. The relevance of the model to policy analysis and assessment of patient is the primary consideration.

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