

An assessment of possible improvements to the functioning of the Polish healthcare system

Co-payment and private health insurance



SPRAWNE PAŃSTWO
PROGRAM ERNST & YOUNG

Iga Magda
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Reviewers:

Agnieszka Chłoi-Domińczak, Łukasz Zalicki, Radosław Zubek

Graphic designer:

Kotbury

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SPRAWNE PAŃSTWO
PROGRAM ERNST&YOUNG

Better Government Programme
Ernst & Young Poland
Rondo ONZ 1
00-124 Warsaw
tel. +48(22) 557 70 00
fax +48(22) 557 70 01
www.bettergovernment.pl

Media patron:
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Governments are facing the challenge of coping financially with the growing needs of population health care around the world. The lengthening of human life span, the spreading of diseases caused by the development of civilization and technological progress, increasing the cost of applied technologies and therapies, are just some of the factors affecting the rapid growth of health care costs.

Expenditure on healthcare systems usually grows faster than GDP. With the current fiscal problems, this is a serious social and political issue in most countries. For a number of years, the governments have been taking various steps to increase the efficiency of healthcare systems, in order to improve the health effects resulting from the financial input. These steps have been taken in an environment, in which the principles of social solidarity, adopted primarily in European systems, are valued, amid the difficult political discussions, in which there is no shortage of various interest groups clearly voicing their opinions.

In the last few years, Poland has witnessed the debate on the possible changes in the healthcare system become far more important, involving many stakeholders. I am convinced that the present report, prepared under the Ernst & Young Better Government Programme, will be a valuable contribution to the ongoing debate and will aid the consideration of further directions of reforms. There is no ideal model in the healthcare sector and systemic solutions must take into account local characteristics (demography, epidemiology, wealth and purchasing power, the current state of the system, etc.). Nevertheless, I am sure that by learning about the experiences of other countries lessons for potential Polish solutions may be drawn.

Łukasz Zalicki

Business Advisory
Ernst & Young
lukasz.zalicki@pl.ey.com

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Summary

Healthcare systems are facing the challenges of demographic change and technological advancement in medicine alongside the limited possibilities of health funding augmentation. Therefore, a more intensive search for efficiency within the system is required. Additionally, the Polish healthcare system has relatively long queues and tends to use its resources inefficiently. Many proposals for reform are put forth in public debate, aimed at simultaneously improving the functioning of the system and increasing its funding. Nevertheless, such proposals have rarely been supported by reliable analyses, to support or refute specific solutions.

The purpose of this study is to support the debate on possible changes to the system, by examining the benefits, opportunities, risks and cost of implementation of selected institutional reforms to healthcare financing. In the analysis, we look at the experiences of countries using the specific solutions and support this evidence with macro- and micro-economic statistical data.

In the second chapter, an institutional description of the Polish healthcare system is provided, alongside the structure of its financing and a description of selected problems. Poland recorded a significant increase in its expenditure on health services between the years 2003 and 2008, putting their share in GDP to around 7%. Involvement of private funds can be said to be average whilst the share from private insurance is relatively low. One of the most important concerns of the healthcare service lies with the average patient's waiting time, particularly for specialized services. This is also a significant cause of the unmet health needs of society.

The third chapter briefly discusses an approach to possible solutions to improve the healthcare system, pointing out the economic theory justification of co-payment for healthcare services and additional health insurance.

The fourth and fifth chapter are devoted to a deeper analysis of two possible scenarios of institutional change. One strategy would be to introduce co-payments for the use of healthcare services. Empirical studies suggest that co-payment has the potential to reduce demand. This is significant as at least some of this demand is excessive consumption resulting from the phenomenon known as *moral hazard*. At the same time, the importance of co-payment is relatively low in many EU countries primarily as a result of the low rates of

co-payments and the mechanisms in place for protective relief and exemptions. Appropriately designed co-payment initiatives must have two equally balanced objectives. Firstly they should relieve pressure on the system through reducing demand and generate additional revenue and secondly, they should protect disadvantaged groups against the negative effects of co-payment. We investigate in detail the attitude of society towards co-payments and analyse the alternative scenarios for Poland, also regarding the fiscal impact of co-payment. We recommend that limited co-payments for medical services in the base system should be introduced, including fees for professional services and hospital stay. However, this should include a relatively small range of subjective exemptions.

In the next section, we analyze the experience of other EU countries with supplementary insurance which allows faster access to health services (and usually a greater choice of suppliers). In countries where it constitutes the dominant form of private insurance, it covers 10-15% of the population. Analysis conducted by us shows a great deal of potential in additional health insurance and one in every fifth household declared an interest in acquiring it. From an economic perspective, it is justified as an insurance against a (no small) risk of significant private spending on healthcare. At the same time however, the current market for subscriptions (and a smaller one for health insurance policies) seems to largely meet the demand and thus the potential development of private supplementary health insurance may involve primarily its value rather than the quantitative dimension. Moreover, in this chapter we point to the risk of subsidising the private sector from the public and the possibilities of limiting this. We recommend that the (amended) Act on additional health insurance be adopted with its effects monitored; furthermore, public healthcare providers should be allowed to contract with private insurers; steps should be taken to increase transparency in the health insurance market; a campaign should be launched to promote insurance as an alternative to direct expenditure. We do not recommend the introduction of tax relief on additional healthcare insurance.

An alternative approach is considered in chapter six. Requiring a thorough reconstruction of the current institutional environment of the healthcare system, the introduction of competition in the base health insurance system is an approach which appears to be successful in the Netherlands. This will be briefly discussed. However, the report by Więckowska (2010) discusses the issue further. The Dutch system, compared with the Polish one, is characterised by greater market transparency and efficiency of healthcare services - which is why we propose to follow the model in this respect (the issue of competition

in the base system is left open). We recommend, among other things, the stabilising of the pricing system for healthcare services, better informing the patient about providers and insurers, and clearly defined regulatory powers on the Ministry of Health - National Health Fund axis, as well as specialist and financial support for both institutions in fulfilling their functions.

The conclusions of the analysis, along with a unified list of recommendations, are presented in chapter seven. All three scenarios present an opportunity for improvement to the Polish healthcare system. However, only the first scenario can be introduced with relative ease. The others require numerous small improvements to the system, which collectively will have a huge impact on its functioning and determine the success of major reforms.

Introduction¹

According to widespread opinion, the healthcare system in Poland is in a serious and chronic crisis. This seems to be an exaggeration, given that the funding from the NHF increased from nearly 22 billion PLN in 2003 to over 60 billion PLN in 2011, but Polish patients are generally dissatisfied with healthcare provision as the vast majority evaluated it negatively (CBOS 2010)². Reports from the Supreme Audit Office indicate numerous problems and irregularities with, for example, the availability of healthcare services and rational use of human potential within primary care or procedures on waiting lists³. The Polish healthcare system also fails slightly in the Euro-Canadian Health Consumer Index⁴, even in comparison with other countries in the region (Eisen and Björnberg, 2010). There is a widespread expectation of reform, which, even without fundamental changes, can at least give hope for a gradual improvement of the system.

There are also overlapping challenges facing all healthcare systems, related to demographic processes and technological advancement. In comparison with other European countries, Polish society generally consists of relatively young people, however, the population is predicted to experience an above average aging growth over the next few decades (IBS, 2010). Low fertility rates and an increase in life expectancy will cause a significant change in the structure of the population. According to Eurostat projections, the share of those aged 65+ in the population will increase from 14% in 2010 to 22% in 2030 and 35% in the year 2060. This will give rise to financial pressures on the healthcare system, due to the greater likelihood of use of services by older persons, for whom the average cost of treating a single patient is higher (NHF, 2010)⁵.

The costs of technology and advances in treatment are suggested to be the most important determinants of increased spending on healthcare. While they allow for the unit cost of provision to be reduced, this does not compensate for the increase in demand which requires higher funding (OECD 2006). At the same time, the possibility of increase in healthcare subsidies is low, especially during the coming years where a reduction in general government deficit and public debt is sought. The argument for such an outlook is a stagnant NFZ budget for the years 2008-2011. The need to increase healthcare funding would entail a reduction in other expenses and/or increase in taxes.

There appear various proposals for amendments, many of which are concerned with the method of financing healthcare, particularly the issue of direct expenditure and health insurance system. Proposals

Healthcare system in Poland

Determinants of increased
spending on healthcare

have been put forth, such as the liquidation or division of the National Health Fund, a return to a system of health insurance funds, a return to the supply system, the introduction of co-payments for medical services, organisation of the additional health insurance market, or the foundation of some part of primary health care on private insurance. Relatively few of those have been examined in detail⁶. However, even as mere slogans, they do cover a whole range of potential solutions. Unfortunately, there have been few convincing arguments for or against specific solutions in this debate.

With a few minor exceptions⁷, the proposals outlined above lack detailed analysis of their potential strengths and weaknesses, their compatibility with present Polish and demonstrate little relevance to the problems facing the healthcare system. Therefore, the purpose of this study is to support the debate about changes in our healthcare system with relevant arguments.

We present an in-depth analysis of selected possibilities of institutional reforms to financing healthcare, based on three reform scenarios. The first one involves the introduction of co-payments in health protection base system, the second considers the opportunities and risks associated with the development of additional voluntary health insurance and the third examines the introduction of competition in the healthcare base system. The first and second scenarios are analysed in detail. First, we look at the experiences of other countries using the specific solutions and examine the elements which may be important for Poland. Statistical data will then be analysed in order to precisely determine the scale of possible benefits and costs associated with the changes scenario. The third scenario is discussed more briefly, due to its development in Więckowska's report (2010).

Scenarios, used to present possible reforms, serve as a method to better understand the advantages and disadvantages of each of the analysed solutions. These solutions are not mutually exclusive. On the contrary - they can, and do, coexist in the practice of many countries.

Due to the considerable complexity of both the healthcare systems, and of the health economics, it would be good to formulate, at the outset, a few definitions concerning the scope of protection offered in the additional health protection system. This will be based on the terminology used in the Polish literature, which is consistent with the terminology of the European Commission. It classifies the additional health insurance as substitutive, complementary and supplementary (see Figure 1).

Figure 1. Typology of additional health insurance

substitutive	complementary	supplementary
<ul style="list-style-type: none"> ▶ “in lieu” of base health insurance ▶ (usually) compulsory 	<ul style="list-style-type: none"> ▶ “over” the basic insurance ▶ insurance on services outside the basket or co-payment costs 	<ul style="list-style-type: none"> ▶ “side-by-side” with basic insurance ▶ basic insurance still holds ▶ raising the level of services-faster access

Typology of additional
health insurance

The structure of this paper is as follows. In the second chapter, the theoretical basis of our analysis will be presented and in the third, the institutional background of the Polish healthcare system will be introduced, presenting the structure of its financing, and some of the problems that it faces. The next three chapters are devoted to analyses of the possibilities and consequences of three scenarios of changes to the Polish healthcare system including the introduction of co-payments for some services (chapter four), the development of supplementary insurance (chapter five), and allowing payers competition in the base system (chapter six). The report concludes with a closing summary and recommendations.

2. Polish healthcare system

This chapter aims to present the structural characteristics and institutional conditions of the Polish healthcare system. In the first part of this chapter, the characteristics of the institutional environment of health protection in Poland will be presented. The second is devoted to healthcare funding issues and the role played by public and private expenditures. In the third part, an attempt will be made to present the key issues concerning the two (closely connected) problems of the health care system, namely the waiting time for access to benefits and the unmet health needs of society. These problems will also be referred to in subsequent chapters of this report, analysing possible reforms and their impact.

2.1. Institutional environment

The healthcare system, in relation to services, is regulated mainly by:

- ▶ *art. 68 of the Constitution* (which guarantees all citizens equal access to health care services financed from public funds),
- ▶ *Act on health care services financed from public funds* - determining the scope of these services and conditions for the provision; rules on health insurance and legal framework for the functioning of the NHF,
- ▶ *Act on healthcare institutions* determining rules for their creation and functioning,
- ▶ *Local government legislation* - governing the functioning of local and regional healthcare systems,
- ▶ *the Act on medical and therapeutic activity*.

The main source of funding for the universal public health care is a mandatory contribution fed into the National Health Fund (NFZ), equalling (in 2011) 9% of performance pay (net of premiums paid to the Social Insurance Fund, i.e. 9% of the so-called contribution assessment basis) and other income subject to contribution (retirement pension transfers, unemployment benefits, etc.).

Some contributions are financed with taxes: state budget or purpose funds/schemes that pay the fees, for example, for students or farmers and their household members (KRUS); labour offices - for the unemployed, social assistance centres - for non-active persons, not registered at labour offices, meeting the income criterion; the state budget through the Church Fund pays also for the clergy. Health premiums for the majority who pay, depend on the individual income (except for example farmers, where for the vast majority of them these are calculated based on the price of quintile of rye), which determines

Institutional environment

Source of funding

the redistributive nature of health insurance. The state budget also funds directly certain medical procedures, including highly specialised services. In addition to the NHF and the state budget, public health expenditures are also financed (to a minor extent) by employers, who pay for provisions in occupational medicine.

The primary contributor to the system is the NHF, purchasing provisions and health services from suppliers. In addition to the NHF, a significant portion of health expenditure is financed directly by households, and, to a lesser extent, by the state budget and local government units (LGU)⁸. This shall be discussed below in detail. The role of employers and private insurers remains marginal.

Providers of health services are primarily Independent Public Health Care Units (SPZOZ), Private Health Care Units (NZOZ), individual medical and dental practices, and care and medical facilities. Some of the clinic/health care facilities are employed in comprehensive care centres, for example Luxmed and Medcover, offering services partly within the National Health Fund, but primarily under subscription contracts with employers.

In Poland, there is currently no law to regulate the functioning of the supplementary health insurance and co-operation between independent insurers and the National Health Fund or healthcare centres. Work on the *Act on additional health insurance* has been going on for the past few years. In 2008, the Parliamentary Health Committee held two readings of a project by members of the Platforma Obywatelska (Civic Platform). However, in March 2011, the Ministry of Health submitted a new proposal for the Act, to be the basis for further work (cf. Chapter 5). So far, the law has not been enacted. The functioning of the market for supplementary health insurance (offered by the growing number of insurance companies) is primarily governed by the *Act on insurance activity*, not taking into account the specificities of the health insurance market.

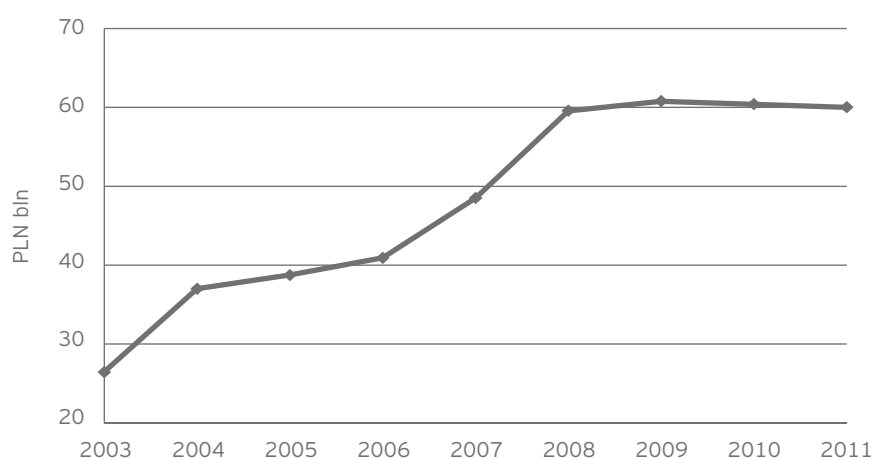
In the Polish system of health protection, co-payment plays a marginal role. The person insured by the National Health Fund does not bear any costs of treatment (except the premium). An exception to this is adult dental care, where the patient is responsible for the charges. Rehabilitation and sanatorium treatment are available for a flat fee, and medicines are available either at a flat rate or through partial payment. The availability of public healthcare provisions is determined by the so-called basket of guaranteed healthcare benefits. It contains mainly the provision of primary care, outpatient specialist care, hospital treatment, the supply of medicinal products and medical

devices, rehabilitation, medical emergency, preventive and health programs, psychiatric treatment and addiction therapy, non-oncology and oncology drug programs, and other highly specialised services. In addition, the basket includes provisions which are partially (dental services, some medicines, sanatorium treatment, provision of nursing care, provision of palliative and hospice care, sanitary transport passage). Approximately 300 procedures are not guaranteed in the basket of healthcare benefits. These include, for example, plastic surgery (except for reconstructions after severe accidents), some vaccinations, the periodic testing of drivers, or IVF treatment. Outside the guaranteed basket are also some of the procedures in maxillofacial surgery, sports medicine and transport medicine, which includes the initial and periodic testing of drivers of certain vehicle categories. The qualification of the provision as part of the "basket" is decided by the Agency for Health Technology Assessment.

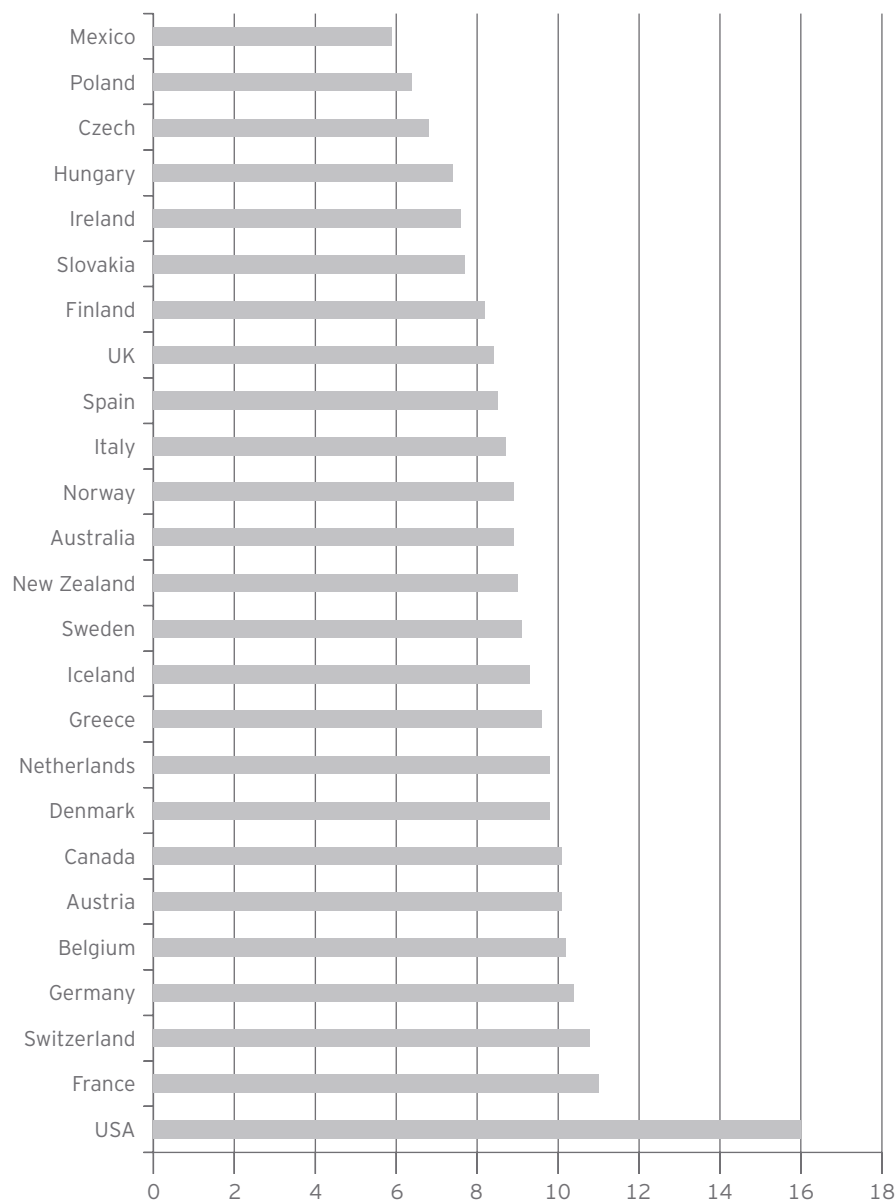
2.2. Public and private health care financing

Expenditure on health care in Poland grew significantly in the period 2003-2008 (see Chart 1). In relative terms, in the mid-1990s they absorbed about 5.5-6% of GDP, in 2008 amounted to 7% of GDP, with the average rate for all OECD countries at 9% (OECD, 2009). At the same time, the increase in health care spending throughout the last decade was significantly higher than in the vast majority of the OECD area. In Poland between 2000-2008, the real expenditure *per capita* grew by an average of 7.4% per year.

Chart 1. NHF expenditure on health services, 2003-2011, in 2011 constant prices, in PLN bln



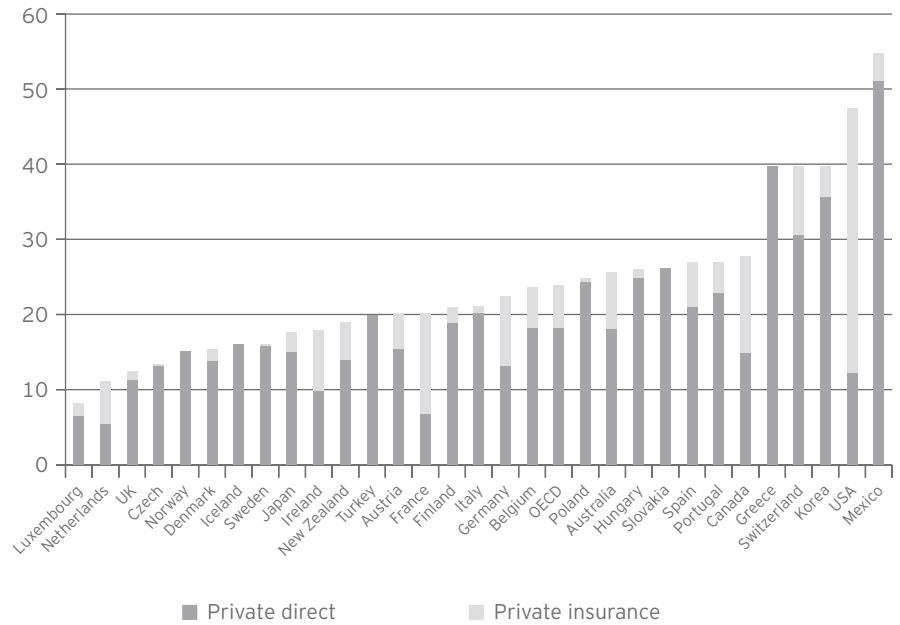
Source: NHF and OECD data.

Chart 2. Healthcare expenditure as % of GDP, 2007

Source: NHF and OECD data.

As with the vast majority of OECD countries, public funding remains the main source of financing health care in Poland. Private sources cover a little over 25% of total expenditure on health in Poland, and this proportion decreased slightly over the last decade (in the mid-1990s it exceeded 33% of expenditure). In Poland, the involvement of private funds (as a percentage of total expenditure on health) is average, compared to other OECD countries, where it ranges from 10% in Luxembourg to around 50% in the U.S. and Mexico (cf. Chart 3).

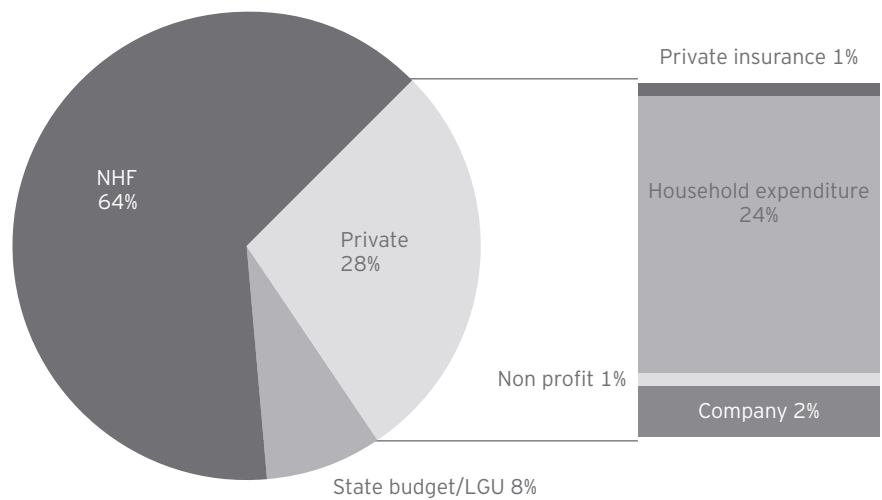
Chart 3. Private health expenditure as % of total health expenditure in chosen countries, 2007



Source: OECD Health data.

In Poland in 2008, the total, current expenditure on healthcare amounted to approximately 83.4 billion PLN. Within this, the NHF financed provision worth approximately 53.8 billion PLN. The State budget and LGUs spent approximately 6.3 billion PLN. Private household spending totalled around 23.2 billion PLN (see Chart 4).

Chart 4. Healthcare expenditure, 2008



Source: National Statistical Office (NSO), Basic healthcare data.

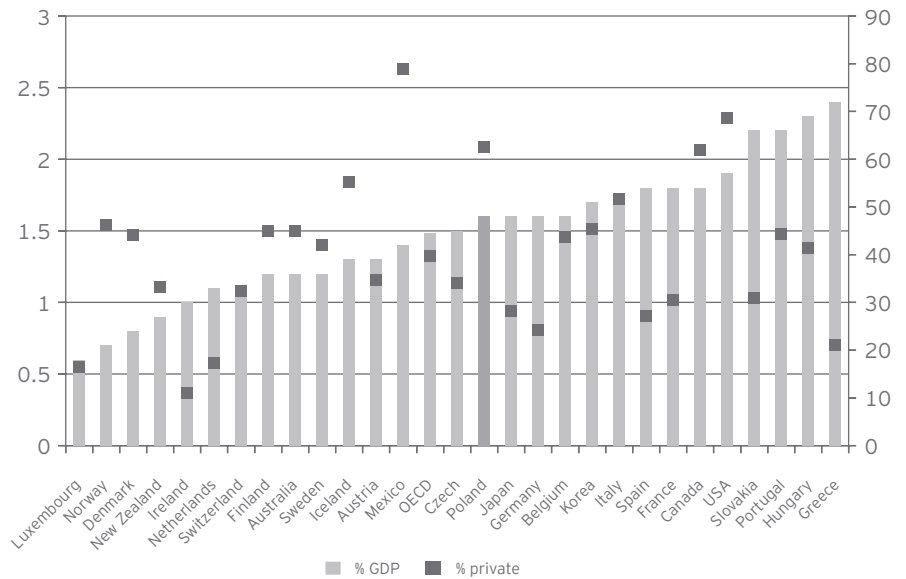
Private expenditure on healthcare services includes (i) expenditure on private health insurance (ii) the so-called “out-of-pocket payments,” or expenses incurred directly by patients - such as fees for the use of health care services and informal payments (iii) the expenditure of non-profit institutions, and (iv) the expenses of enterprises. Direct expenditure by households in Poland constitutes the vast majority of the total private expenditure on health; the share of health insurance paid for directly by households is low (in 2008 it amounted to less than 2% of private expenditure). A greater role is played by health subscriptions (pre-paid plans) offered to employees by their companies. The Ministry of Health estimates that in 2011 their market value amounted to approximately 2 billion PLN, while the additional health insurance market has been valued at approximately 200 million PLN⁹.

The minor role of private insurance expenditure against total private expenditure is confirmed by an international comparison of OECD data (see Chart 4). Interestingly, both Hungary and Italy, which do not differ from Poland significantly in terms of private spending, are characterized by a comparatively low share of spending on private health insurance (in total healthcare spending). The highest share of expenditure on insurance policies is characteristic of those countries in which the insurance market is a substitutive one, or those in which the majority of the population have decided to become policyholders. These issues will be discussed in detail, in Chapter 5.

Direct household spending goes primarily to purchase medicines (67%) and treatment services (30%). Funds from private insurance finance medication to a lesser extent than medical and physical rehabilitation services.

Expenditure on the purchase of drugs is significantly different between countries. In Norway, Denmark and Luxembourg, it is less than 1% of GDP whereas in Greece, Portugal and Hungary more than double (see Chart 5). Poland falls slightly above average for the OECD countries, amounting to 1.5% of GDP. It is difficult to observe a clear pattern of spending on drugs as in many developed countries, they are both relatively high and low. For example, in Canada and the USA, such expenditure constitutes the highest share of GDP¹⁰. Contrastingly, in Denmark, it is only 0.8% of GDP. These expenses also vary between the countries in the region, being much lower in Poland and the Czech Republic compared to Slovakia and Hungary. At the same time, private spending on drugs is rather high in Poland - it exceeds 60%. Compared to other OECD countries, it is higher in only Mexico and the U.S.

Chart 5. Expenditure on medication in the OECD as % of GDP (left axis) and the share of private expenditure (right axis), 2007

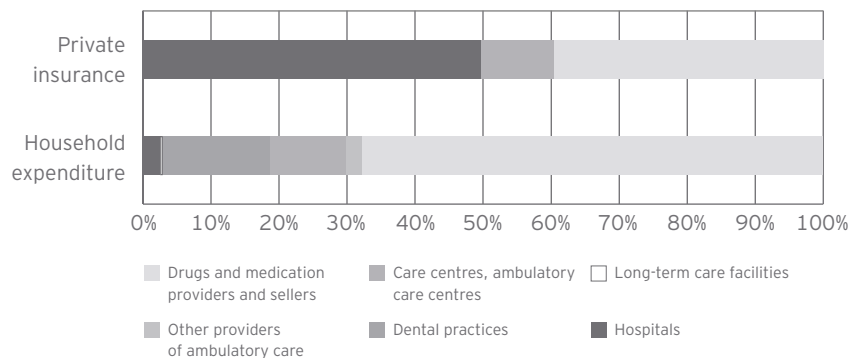


Source: NSO, Basic healthcare data, 2008

Private expenditure

The structure of direct private expenditure (“out of own pocket”) is very different from the expenditure within the private health insurance. In the case of private health insurance¹¹, expenditure is directed primarily to hospitals with direct household expenditure going mainly to dental practices and, to a slightly lesser extent, clinics and outpatient care centres (cf. Chart 6). Direct expenditure, to a greater extent, covers the purchase of drugs. Their participation in the case of private insurance is also significant, but does not exceed 40%.

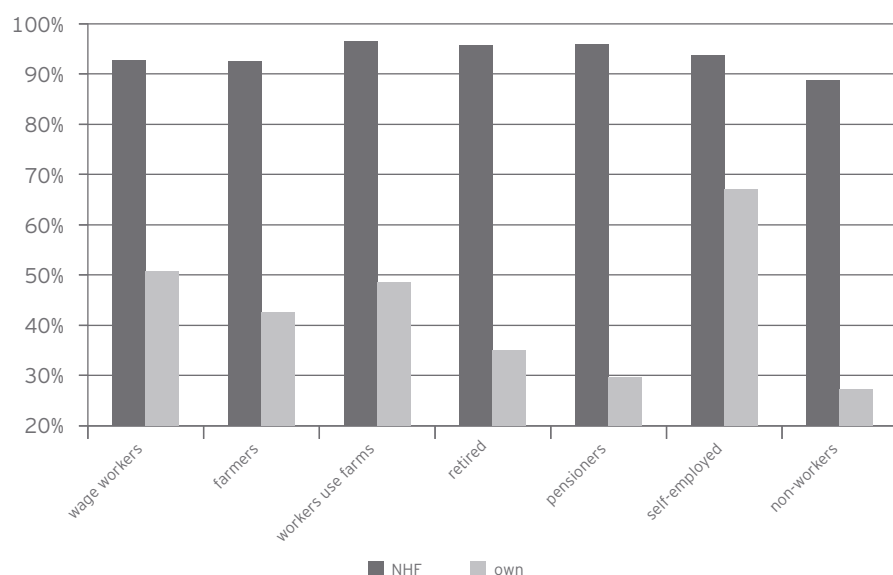
Chart 6. The structure of expenditures of private households and private insurance in %, 2007



Source: NSO, Basic healthcare data, 2008 r.

During 2009, over 49% of households in Poland paid for their health services out of their own pocket on at least one occasion. The frequency of use of private health services is highly differentiated between types of households. However, even in the poorest households, where the main source of income is either an old age pension or non-work related income, one in three bore private expenditure on health services at least once. Privately funded health services are most often used by members of households who are either employed or self-employed. The percentage of households co-financing health care from their own pockets increased in the years 2000-2009 (starting from 38% to 49%).

Chart 7. Use of financed health services by sources of financing (at least once a year)



A logit analysis was performed of the individual probability of using care paid out of one's own pocket. It was found that (all things being equal) the household income per capita has the strongest effect. Household type is also statistically significant - in relation to households of wage workers, the self-employed were more likely to use private healthcare services, while the probability was lower for the households of retirees and old age pensioners. It may be said that the effect of the socio-economic status of the household reflects the time constraints and time preferences. In addition, there is a strong likelihood of regional variation in using private healthcare services (in relation to Opolskie, it is significantly higher in the Podkarpackie Voivodship and lower primarily in Warmia and Mazury). It is difficult to conclude the reasons for such large inter-regional differences, however, one reason may be due to the availability of private and public healthcare services (supply) and, potentially, the differences in waiting time for provisions.

Problems of
the healthcare system

2.3. Problems of the system: waiting time for benefits, unmet health needs

One of the fundamental problems of the healthcare system¹² are the lengthy queues for services (Green Paper 2). It is difficult to illustrate the scale of this phenomenon quantitatively due to the lack of reliable, methodologically correct data allowing to assess any changes over time. However, based on collected statistics and the NAO monitoring reports, an attempt has been made in later chapters to describe it, indicating how far the scenarios of changes in the health sector can help reduce the waiting time for provisions.

A 2009 NHF report indicated that:

- ▶ in the case of outpatient treatment, the majority of patients are waiting for eye (almost 200,000) and cardiology (105,000) clinics. The median waiting time for these is 14 and 35 days, and the third quartile is 38 and 72 days respectively. Interestingly, in 36% of the outpatient ophthalmology and 24% of cardiology clinics, there are no queues (i.e. the average expected waiting time equals 0 days),
- ▶ in the case of hospital treatment, the greatest numbers are waiting for admission to surgical trauma and orthopaedic wards (about 51,000), where the median waiting time is 69 days and the third quartile - 171 days, and otolaryngological wards (median 65 days, third quartile - 140 days). At the same time 31% and 22% of such wards have no queues.

The only areas where there are no queue-free wards, are those specialising in musculoskeletal system rehabilitation, where across the country about 13,000 people are waiting, on average, around 225 days (median waiting time).

Longest waiting time
for treatments

Box 1. SAO reports on queues in the Polish healthcare system

These reports indicate that the barrier for access to the selected health services analysed by the Supreme Audit Office was caused by (i) a limit lower than the demand (ii) the lack of medical staff (13% of hospitals audited) (iii) outdated, malfunctioning equipment (15%), and (iv) difficult access to operating rooms. Unfortunately, this information does not allow for quantitative assessment of the extent to which each problem had contributed to waiting times. At the same time, the report identified a number of omissions and

irregularities in the organisation of waiting times. Directors of the hospitals surveyed also pointed to the problem of below market valuation of services in the clinics by the NHF, contributing to the hospitals generally deciding not to continue having clinics.

Source: SAO, Information on the results of control of the availability of selected health care services, July 2010; SAO, Information on the results of control of implementation of task by providers of primary health care and selected outpatient services within the specialist health insurance in 2006-2007 (first half), July 2008.

According to data gathered by the National Health Fund, the longest waiting time (median of up to 1,300 days) was for selected treatments such as hip and knee replacements, cataract procedures, and revision after total hip replacement and knee replacements. It is not known to what extent these figures reflect reality, due to the possible occurrences of the same people on different lists, delays during list transmission time and the quality of reporting itself. Unfortunately, aggregate statistics that would help to assess potential regional differences in waiting time for benefits are not available.

In theory, the need for long waiting times for health services may be the result of „rationing” the number of provisions through the amount of funding and/or inadequate medical infrastructure (space in the hospitals, availability of doctors). Queues to health services in Poland seem to be generated primarily by financial barriers, although there are also signs of problems with an inadequate supply of infrastructure and physicians. This subject will be discussed more widely when exploring scenarios of potential changes in the Polish system (see Chapters 4 and 5).

The problem of queues for health services is also discussed in social studies, to include assessment of the Polish healthcare system and how it corresponds to the health needs of society. An NSO survey, „Health care in households 2006” indicated that whilst the vast majority of respondents positively assess the access to primary care physicians, in the case of specialists most pointed to their poor or very poor availability. Access to medical specialists was particularly badly rated by the inhabitants of large cities.

It is also important to note the scale of the respondents indicating unmet health needs. According to the *Social Diagnosis* study, the problem relates to about 30% of households (including those resigning from the purchase of prescribed medication, the doctor visits or hospitalisation, and dental treatment).¹³ The intensity of unmet needs is strongly dependent on household income. The largest is among the households with the lowest income where in the first decile of income, more than half of households declared unmet health

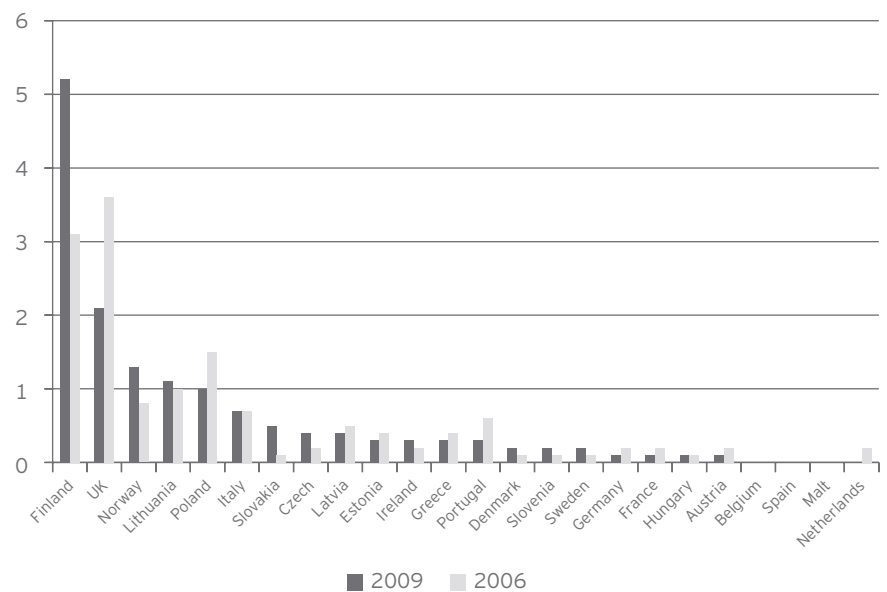
Queues to health services

Unmet health needs

needs. This decreases with the increase in income. For example, out of the 20% of households with the highest income, only 10% declared unmet needs. Microeconomic¹⁴ analysis also points to the impact of socio-economic characteristics on the likelihood of unmet health care needs. In particular, the households of pensioners, and to a lesser extent the retired, often declared (regardless of income) unmet health needs, which may reflect a worse state of health in this population and a greater frequency of having to use health services.

In a 2006 study, approximately 13% of household members said they had refrained from a medical visit, despite the need. 30% of these instances were due to lack of time while queues and lack of money constituted 20%. Lack of time was indicated primarily by the young, those at *prime age*, and persons with higher education. Long waiting times, meanwhile, were the cause for parents with children to refrain, while the elderly and those on low income dominated in the group declaring lack of money as an important reason for not using health services.

Chart 8. Unmet health needs due to queues, the EU, as a % of population, 2006-2009



Source: Eurostat, EU-SILC.

Some information about the declared unmet health needs of society due to waiting times for access to services is also provided by the European ‘Study on Income and Living Conditions’ (EU-SILC) which allows for comparisons of the situation in Poland to other EU countries. It indicates that a relatively large number of Polish citizens declare unmet health needs due to queues (1% in 2009 compared with an EU median at 0.3%,

see Chart 8). Nevertheless, this figure is much lower than in some EU countries such as Finland and the United Kingdom where in 2009, it amounted to 5% and 2% respectively. In addition, it decreased significantly during the years 2006-2009 (from 1.5%), reflecting a significant increase in healthcare spending and household income during this period. This is confirmed by a significant decline in the percentage of households declaring unmet health needs for financial reasons (in 2009 it amounted to 4% and equalled the medians for other countries of the EU).

The complexity of the problem regarding queues in the healthcare system is also highlighted in many studies on healthcare systems throughout the EU and OECD (EO surveys - European Observatory *Health In Transition* cycle). They indicate that the problems associated with waiting times are emphasised more strongly in countries with universal healthcare systems funded by taxes, in which the State is the employer of doctors (the Beveridge system or a system of supply). Underfunding is not the only indicated cause of queues for services. Case studies for Slovenia, for example, have emphasised the role of infrastructure deficiencies. They have also shown significant differences in the length of queues in hospitals with similar resources, which highlights the importance of the work organisation and productivity of providers.

3. Theoretical approach

It may be said that health economics examines economic aspects of human health problems, including the decisions made by people, companies and countries aimed at maintaining and improving the health of individuals. This is an extremely rich area and the range is vast. In Figure 2, the four inner rectangles (A, B, C, D) are the fundamental conceptual problems, and the four outer rectangles (E, F, G, H) are the widely recognised fields of applied research. This is just one of the possible approaches however, it is one slightly dominated by the American view that places a strong emphasis on market analysis and the issue of healthcare management rather than the public health problem. However, it contains all the relevant health economics research directions.

Since our topic is the question of possible modifications to the financing of health services, this study positions itself in the C and D parts of the theoretical scheme. In this chapter, the basic results of economic theory associated with co-payment and additional health insurance shall be briefly introduced. First, we explain what the phenomenon of over-consumption of health services (*moral hazard*) is and why its existence justifies the existence of co-payments for medical services. Then we will discuss the benefits and costs that are associated with the creation of the supplementary health insurance market.

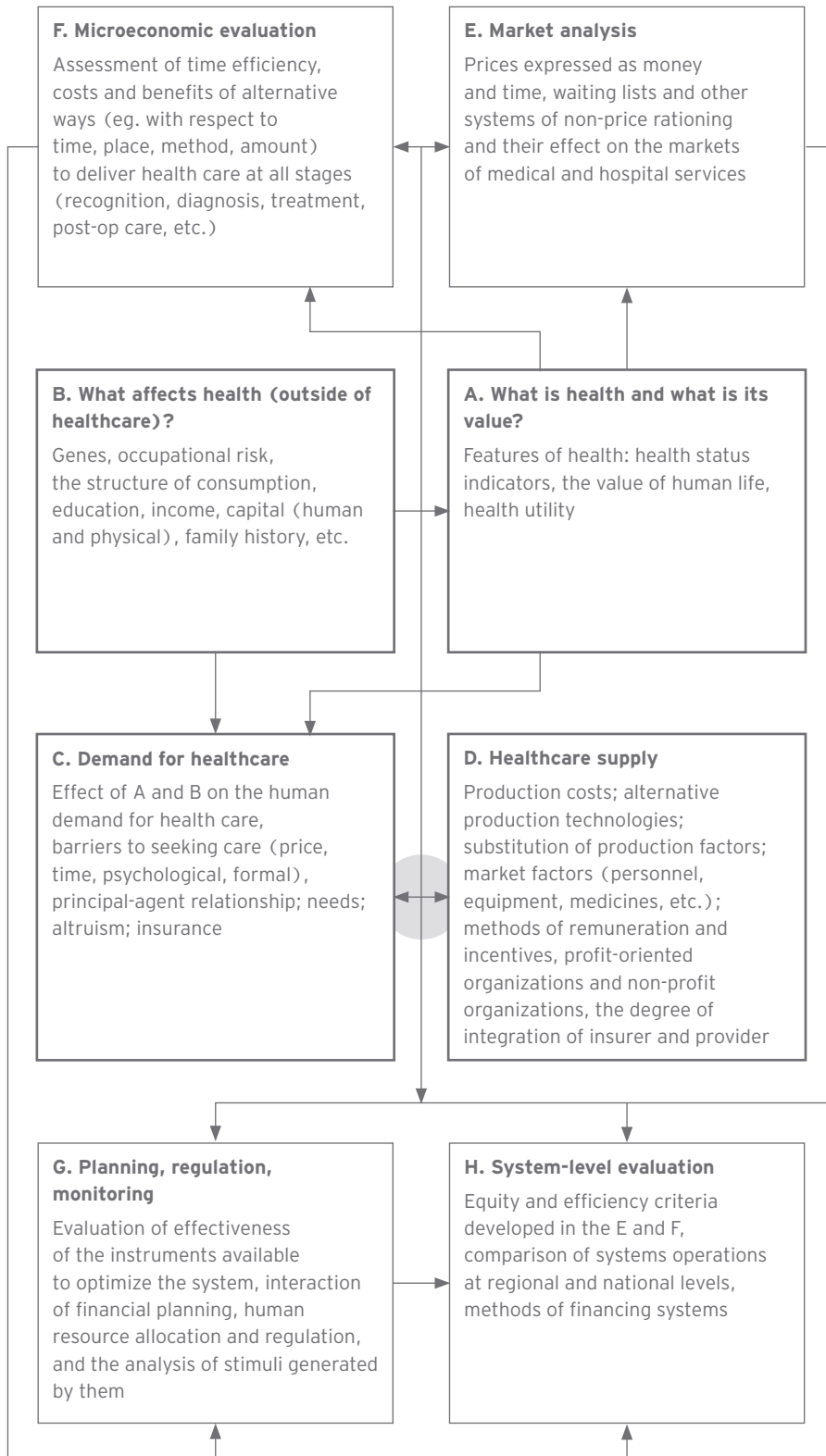
3.1. Co-payment

In theory, at least two arguments for co-payment can be found. The most important is the phenomenon of over-consumption of medical services (*moral hazard ex post*)¹⁵. The second argument applies if the premium is not actuarially fair.

Excessive consumption of medical services

The term ,excessive' consumption of medical services, in the sense in which it is used in health economics, makes sense only in the context of health insurance. Consumption is ,excessive' **in relation to what is assumed by the insurer contracting the insurance**. This does not mean that the insured violated the terms of the agreement. It simply implies they failed to follow the predictions of the insurer. If the insurer is the State, this results in a deficit in the state system of financing healthcare.

Figure 2. The scope of health economics



Source: Culyer, Newhouse (2000)

The theoretical argument for the existence of such a phenomenon as *moral hazard* was presented by, amongst others, Blomqvist (1997). In his model, the future health of the patient is a random variable with continuous distribution, which entails the application of optimal control theory. A simplified version of the model is proposed by Zweifel et al. (2009), who assume that a patient can be in one of a finite number of states of health (so we can limit ourselves to a simpler optimisation method). A more accurate, although non-technical, discussion of this model is presented in Box 2. The model proves that excessive consumption occurs whenever three conditions are simultaneously satisfied: (i) the insurer cannot observe the patient's health status, (ii) the patient decides on the choice of treatment, (iii) the insurer finances the treatment of the patient in its entirety. Note that the second and third assumption are a consequence of the first. If the insurer were to be aware of the patient's health, the insurer would not be then required to leave the decision on the type and cost of treatment to the patient. Moreover, it is assumed that the contribution is actuarially fair, that is, equal to the expected value of damages. The case when it is not true will be dealt with later in this chapter.

The reasoning is as follows: when concluding the insurance contract, the parties agree to a levy which the patient pays in advance. At the same time, the insurer makes certain assumptions about the cost to be incurred if the patient is ill. However, if, after the contract has been finalised and the premium paid, the patient actually becomes ill, then he or she has no reason to include the opinions of the insurer. The marginal cost of treatment is zero, so the patient will consume enough of it until its marginal utility becomes zero (saturation point). This proves that it will always be more than assumed by the insurer.

If, however, only partial reimbursement of medical expenses is introduced, or a de facto co-insurance (see Box 3), then the optimal level of treatment for the patient will be less than before. Zweifel et al. (2009) show that for every patient, a co-payment rate can be determined so that he or she will choose the level of treatment that meets the expectations of the insurer. This is an important result, which will be invoked later in the study.

What is the conclusion from these theoretical considerations for the Polish healthcare system? To the extent that patients decide on treatment, this may be followed by excessive consumption of medical services. It is excessive in relation to the 'social' contract of insurance that exists in Poland. Under this agreement, the health insurance contribution is 9%, and the NHF budget for health services is about 60 billion PLN (2011). If, in addition, we want the system

Box 2. Model of health insurance contracts (Zweifel et al. 2009, pp. 237-247)

Patient (the policyholder/insured) derives utility only from the income. The income depends on the state of health, both directly, because income from work is a function of health, and indirectly, because of the health costs related to specific treatment and insurance. The utility is an increasing and concave function of income. With a known probability, a patient will come to one of a finite number of states of health. This condition can be improved by releasing a certain amount for treatment - the more is released to be treated, the better the health.

The patient's decision is to define an insurance policy, i.e. to determine the level of compensation he or she expects to receive in each state of health. However, deciding on the compensation vector, the patient must accept the contribution which is associated with it. The higher the compensation, the higher the premium. The form of the contributions function, i.e. the function the argument of which is a vector of damages, and the value the premium rate, is one of the key assumptions of the model. It contains, in itself, the assumptions on the supply side of the insurance market. In this case, we assume that the premium is actuarially fair.

The model is solved by maximizing the expected utility with respect to the compensation vector, the vector of medical costs and premiums, with the condition resulting from the premium function. The solution to the model (not given explicitly) is the vector of claims, premium, and the vector costs of treatment. These values can be called optimal (the optimal level of fees, damages, costs).

To consider a slightly different model a patient may simply be given an insurance policy and a premium. When the patient finds him or herself in one of the states of health, he or she alone determines the cost of treatment and the insurer pays the compensation. Formally, the patient is maximizing utility defined as above. It can easily be shown that the cost of treatment chosen corresponds to the optimal level, as defined above if and only if the compensation is equal to the optimal compensation. This can be interpreted as meaning that the insurer is aware of what state of health the patient is in and would pay the adequate compensation. However, if the insurer returns the cost of treatment in full, which is interpreted as the insurer being unaware of the condition of the patient and must rely on his decisions, then the level of treatment chosen by the patient will be higher than optimal. Thus, there occurs excessive consumption of medical services (moral hazard).

Model of health insurance
contracts

not to produce a deficit, then with all these parameters, it is possible to provide patients with a specific (or limited) level of treatment. If, in some parts of the system, this level is exceeded, for example, someone uses a specialist twice a year when once would suffice - then elsewhere the system would be unable to provide sufficient care and/or providers unable to reduce the queues. So, if the optimal level of treatment is exceeded, the introduction of co-payment may protect the 'social' insurance contract and thus be beneficial to the public interest.

Naturally, the discussed model, like any economic model, is based on numerous simplifications. Above all, it does not take account of the existence of a physician as a third entity, through which the insurer has some idea about the state of health of the patient and affects the choice of treatment. Note, however, that the doctor does not participate in all of the patient's decisions such as to visit the GP in the first place. However, even when he has an impact on decisions, with no additional stimuli he has no reason to take the interest of the insurer into account.

High cost of insurance

Theoretically, it is possible that the patient will not be interested in an insurance contract providing a full refund. This will happen whenever the insurer did not offer him the actuarially fair premium. Higher premium may be due to the high costs incurred by the insurer (e.g. administrative costs) or a result of insufficient competition in the insurance market. If there is a surcharge for risk, and the contract does not provide for co-insurance, then the optimal compensation scheme for the patient contains a *deductible* (excess deduction). A formal argument for this statement is presented by Zweifel et al. (2009). Their model assumes that the insurer may decide on the choice of treatment. If not, this raises the problem of *moral hazard* and there arises need for co-payments.

The results for healthcare financing system are as follows. If the insurer has high administrative costs and the country has no co-payment for medical services, either the premium is higher than optimal, or the system generates a deficit.

3.2. Supplementary insurance

The introduction of additional health insurance is usually justified by the desire to give patients a wider choice of medical services. A classic tool that can be used to analyze the costs and benefits of this solution is the Dixit-Stiglitz monopolistic competition model (1977). In this model, consumers' utility increases with an increasing number of available diverse good options (*love of variety*). Conversely, as each of the variants of the goods shows economies of scale, more variants of the goods means greater average cost. There are thus an optimal number of variants¹⁶. In order to answer the question as to whether supplementary insurance increases welfare, the Dixit-Stiglitz model can be applied. The chance that this will be the case increases the greater the need for a broader spectrum of medical services and the smaller the economies of scale in their production. The latter are obviously dependent on the type of services - medical advice is characterised by low fixed costs, and hospital treatment - by huge ones.

The Dixit-Stiglitz model only suggests a way of thinking about the problem. While in this model there is only the horizontal variation of the goods (all variants are of the same quality), it is obviously different with supplementary insurance. The whole point of insurance is to deliver an above average level of quality to consumers who are willing to pay for it. Neither the variants of goods, nor consumers, are symmetrical. Suppose there are only two insurances: base and supplementary, and only two types of consumers: poor (who will remain only at the base insurance) and wealthy (who will buy supplementary). Let us now assume that the utility increases for the richer when there's an option to purchase additional insurance. The utility of the poorer can thus drop, due to the increased insurance rates resulting from the reduced rate of production of medical services financed by the insurance. Of course, such a pessimistic scenario cannot materialise if, from the start, there is in the health care system spare capacity and additional insurance will allow it to be used. It seems that the existence of such reserves is an important factor in the success of reforms through the introduction of supplementary insurance.

The Dixit-Stiglitz model

4. Scenario one - co-payment

4.1. Introduction

In this chapter we consider the possibility of introducing co-payment for medical services. Co-payment is a mechanism of the patient having to cover a certain part of the cost of medical services consumed, regardless of participation in the health insurance system (in the Polish case - regardless of being insured in the NHF). The part borne by the patient may be determined in different ways (Box 3).

Box 3. Forms of co-payment

There are three basic forms of co-payment: *co-insurance* - when the patient is covered by a fixed proportion of the cost of medical services, *co-payment* - each time the patient pays a fixed amount for the service, and the *deductible* (excess deduction) - when the patient covers all the costs to a set limit, after which the service is free during the given period (Ros et al 2000).

In every EU/OECD country, including Poland, there is co-payment system for the purchase of drugs. However, most EU countries charge a fee for tests or treatment, which may come as a surprise to Polish readers. As presented in Table 1, a situation similar to the Polish pattern (lack of co-payment) occurs only in Denmark, Spain, Great Britain, Hungary, Slovakia and Lithuania.

Inevitably, the question arises, whether it would make sense to introduce such a solution in Poland. We shall consider this issue in two stages. First, in section 4.2 the advantages and disadvantages of co-payments in the light of international experience are considered. Then, in section 4.3 we apply the accumulated knowledge to the Polish conditions, and present the results of our research on the potential effects of co-payment in Poland.

In section 4.4, systems, in which insurance on co-payment is common shall be discussed. While in most OECD countries, such insurance is either relatively small or even impossible (for example in Switzerland it is prohibited, OECD (2004), p. 55), in some cases, insurance from co-payment is an integral element of the system. Insurance from co-payment changes the structure of incentives in the system and can

Table 1. Co-payment for medical services in the countries of the European Economic Area

Country	Year	GP	Specialist	Hospital	Dental
Austria	2007*	√	√	√	√
Belgium	2010	√	√	√	√
Bulgaria	2007	√	√	√	√
Cyprus	2007*	√	√	√	√
Czech Republic	2009	√	√	√	-
Denmark	2007	-	-	-	√
Estonia	2008*	-	-	√	√
Finland	2008	√	√	√	√
France	2007*	√	√	√	√
Germany	2009	√	√	√	√
Greece	2008*	√	√	√	√
Hungary	2011**	-	-	-	√
Iceland	2003	√	√	-	√
Ireland	2009	√	√	√	√
Italy	2009	-	√	-	√
Latvia	2008	√	√	√	√
Lithuania	2007*	-	-	-	√
Luxembourg	2007*	√	√	√	√
Malta	2007*	√	√	√	√
Netherlands	2010	√	√	√	√
Norway	2006	√	√	-	√
Poland	2010	-	-	-	√
Portugal	2007	√	√	√	√
Romania	2008	-	-	-	√
Slovakia	2011	-	-	-	√
Slovenia	2006	√	√	√	√
Spain	2010	-	-	-	√
Sweden	2003	√	√	√	√
Switzerland	2008	√	√	√	√
UK (England)	2007*	-	-	-	√

Source: Own compilation, based on report series 'Health Systems in Transition', apart from:

* - source: Thomson et al. (2009) and ** - source: own research.

significantly affect its financing. Therefore this option, and examples of countries where such insurance exists (France, Ireland, Slovenia, Australia), will be examined separately.

4.2. Opportunities and risks of co-payment - international experience

Among the hypothetical benefits of co-payment, the first to mention is the limiting of over-consumption of health services by reducing the phenomenon of *moral hazard*. If this effect exists, then co-payment necessarily reduces health care costs both public and private¹⁷. It also has an impact on reducing queues in the base system. Another potential benefit is the influx of additional resources to the system.

A fundamental risk associated with the use of co-payment is that in addition to excessive consumption, health services that are truly needed may become limited. This would therefore have negative consequences for the health of society, especially those at the lower end of the socio-economic ladder. Furthermore, co-payment can be said to complicate the system of financing health care.

These aspects of co-payment shall now be examined in turn, referring to the experiences of other countries. We also discuss institutional arrangements that are used worldwide to reduce the risk of co-payment.

Co-payment and the use of health services

In theory, it is suggested that by increasing co-payment rates, defined as the share of the fee paid directly by the patient towards the total cost of medical services, the reported demand for medical services reduces (see Chapter 3). Empirical studies show that this can be reflected either by a smaller number of services consumed, or by shortening the waiting time for service, thus reducing queues¹⁸. In an attempt to answer the question whether such effects actually occur in healthcare systems, the experiences of other countries shall be examined. This is because, there has not yet been any such co-payment initiatives for essential health services in Poland¹⁹.

Assuming that the availability of health services is not a problem, we would like to answer the question, whether the rate of co-payment affects the intensity of health care use. The vast majority of research indicates that the answer is positive. The literature is dominated

by the results of natural experiments (analysis of the effects of changes in the system), but we begin with a discussion of results of a controlled experiment.

In the 1970s, the U.S. government commissioned the RAND Corporation to conduct an experiment in which it observed the behaviour of nearly three thousand American families belonging to five different health insurance plans, each differing in the degree of co-payment (Box 4). The results clearly indicate the importance of co-payment. For example, a family belonging to the program in which services were free, visited their doctor on average once or twice a year more often than those who had to pay. The latter also recorded 20% fewer hospitalisations. The differences in the usage of other medical services, including drugs, dentist visits, and psychological and psychiatric consultations, were similar (RAND, 2006)

Box 4. Health Insurance Experiment

The classic controlled Health Insurance Experiment, conducted between 1971 and 1982 by the RAND Corporation, was commissioned by the U.S. government. It covered a random sample of 2,750 American families - a total of more than 7,700 people from 6 U.S. cities and towns (RAND, 2006). Each of the families was offered a free health insurance program for a period of 3-5 years. People involved in the experiment were less than 61 years of age to ensure that for the duration of the study they would not enter the state system of health care for the elderly, Medicare. Also excluded from the experiment were families from the three upper percentiles of income distribution. There were five main insurance programs, each differing in scope and degree of co-payment, ranging from 0% to 95% (taking into account differences in options, it may be said there were 14 programs). For families on the lower end of the socio-economic ladder, a threshold of the costs which they may incur during the year was introduced, so that healthcare would become free after it had been crossed. Participants were not able to freely choose the programs. They could only accept or reject the insurance schemes proposed to them (so as to reduce the risk of auto-selection). During the experiment, the use of different types of medical services by the participants was carefully observed. In addition, their health status was examined at the beginning (60% of randomly selected participants), and at the close of the project (all participants).

Health Insurance Experiment

The Health Insurance Experiment provided material for a number of interesting studies and is cited in virtually all publications on the problem of co-payments. On the other hand, as emphasised by Zweifel and Manning (2000), it is rather old and does not correspond to the contemporary realities of the organisation of the healthcare system. This is particularly the case when it comes to organising the supply side. Currently, payers often try to reduce costs by influencing the health care provider. Therefore, inefficiency in the healthcare systems maybe smaller than in the 1970s and there is also less scope for savings.

Keeler and Rolph (1988) conducted a very thorough analysis of the data from the RAND experiment in order to estimate the 'pure price effect', i.e. isolate the effect of co-payment rate (not disturbed by the maximum amount of co-payment). Their analysis shows that the costs of treating people who had to pay extra are, depending on the plan and the type of medical services, from 18% to 51% lower than people who benefited from free insurance plan (Table 2).

Table 2. Estimated cost of medical services in the hypothetical plans without the maximum amount of co-payment - as a percentage of the cost for the plan with zero co-payment rate

Co-payment rate	GPs and specialists				Hospital	Med.costs total	Dental
	Sudden	Chronic	Healthy	Total			
25	72 (4)	67 (6)	75 (4)	71 (3)	71 (7)	71 (4)	79 (6)
50	56 (5)	56 (7)	69 (6)	58 (4)	68 (13)	63 (7)	68 (5)
95	49 (3)	51 (5)	45 (4)	49 (2)	60 (7)	55 (4)	50 (3)

Note: Standard dev. in parentheses.

Source: Keeler and Rolph (1988)

A great deal of research analysing the effects of co-payment is based on natural experiments, provided by the policy changes by insurers in the United States and the reform of the security systems in different countries; these include both the developed and developing nations (and a number of methodological problems: see Box 5). These changes usually consisted of increases to co-payment rates, although there were some reverse cases. For example, the 1995 reform in Taiwan, saw health insurance cover people who would previously only receive treatment funded out of their own pocket. In their case, the rate of co-payment has decreased from 100% to a set fixed rate, and in some cases to

zero (Chu et al. 2005). All the results for U.S. and Canada discussed by Zweifel and Manning (2000) suggest that the use of health care decreases with the rate of co-payment. Furthermore, the report by Thomson et al. (2003), devoted to the old EU countries, cites numerous studies indicating the limiting role of co-payment in countries such as Finland, the Netherlands and Sweden (although for Finland and the Netherlands there are studies with different results). Kim et al. (2005) analyses the use of health services in Korea, a country which has one of the highest co-payment rates in the world (40-55%, plus a large direct expenditure). Their results indicate a negative price elasticity of medical services²⁰. Interestingly, according to some research, there are certain types of co-payment that influence the reduction of consumption more strongly than others. The most effective reducer of demand is the excess deduction (*deductible*, see Box 3).

It is worth noting that when co-payment is reduced, the consumption of health services grows. This happened in the case examined by Heaney and Riedel, where a private insurer in Connecticut introduced a zero co-payment option for hospital stays for selected patients (Heaney, Riedel, 1970, after: Zweifel, Manning 2000). In Taiwan, after the above-mentioned health care reform, costs jumped from 4.93% of GDP in 1994 to 5.27% of GDP in 1995 (Chu et al. 2005).

Box 5. Analysis of the effects of co-payment - methodological problems

Generally, it is recommended to use the micro-level data (Zweifel, Manning 2000, p. 406) and a very careful handling of international comparisons. National healthcare systems differ considerably between themselves, and each of them is embedded in a certain context - economic, social, cultural and institutional. Even within one country, it can be risky to study aggregated data (even at the level of regions or groups), due to possible result flaws.

Microeconomic studies themselves are not without their problems. Consider the natural experiment of increasing co-payment rates. It is possible that expecting the increase, patients benefit from intensive medical services shortly before the reform. In this case, shortly after the change is introduced, the consumption of medical services drops drastically. However, it is obvious that this effect may be short-term, and any assessment of the elasticity of demand for medical services based on a simple comparison of the number of patients before and after the reform will be overstated. Another problem lies with the possible change to the supply side.

For example, where a change of co-payment covers the entire system, it can affect the motivation of providers to offer health services.

Numerous studies examining the co-payment issue address the differences in consumption of medical services by examining them not in time, but as a cross section, depending either upon the type of insurance policy the patient holds, or the degree of patient co-payment assigned to a given medical service. Here, the auto-selection problem may arise. Healthier individuals are more likely to benefit from lower insurance premiums and accept the associated higher degree of co-payment (due to the probability that it actually comes to their consumption is low). In this case, the observed differences in the use of medical services by people with different insurance status may result not from the incentive effect of co-payment but from a different baseline health status of the insured (Zweifel, Manning 2000).

Factor limiting
the effectiveness of
co-payment

Nevertheless, the attitude of many authors to co-payment remains negative. An example is Thomson and Mossialos, who, despite citing examples which demonstrate that co-payment actually affects demand in numerous studies (2003, 2009, 2010), remain negative in their basic attitude to this instrument. They stress that internationally, there seems to be no evidence that co-payment leads to long-term cost control (Thomson et al 2009, p. 67). This is, strictly speaking, true. However, this does not negate the meaning of co-payment in any particular country. Firstly, the comparisons of entire national healthcare systems are of limited educational value (see Box 5), and secondly, no element of the healthcare system management ensures cost control by itself.

It must be noted, however, that both theory and empirical studies suggest that the cost reducing effect may be small and/or short-lived. This is due to the fact that the decision to undergo treatment is usually a joint decision made by the patient and doctor. While the patient looks at the total amount of direct expenditure, the healthcare provider is primarily concerned with the total cost of services (i.e. provider's income) and the amount of direct expenditure. This is only to the extent that the service-provider acts as an agent which helps the principals (patients) decide on the amount consumed or the scale of treatment services (see Keeler and Rolph, 1988). Therefore, co-payment limits the consumption of these goods and services, which were previously determined by the patient, including visits to the GP and OTC medicines (Ros et al 2000).

This confirms the results of the RAND experiment given in Table 2 that the differences in spending on hospital stays between categories of patients are smaller than the corresponding differences in spending on medical consultation. Ding and Zhu's (2007) analysis of health insurance in China's urban population, suggests that the introduction of co-payment in 1998 failed to reduce health care costs. One of the reasons for this was said to be that doctors and hospitals received no incentive to limit the amount of benefits provided. The role of providers can be seen even more explicitly in the case of drug policy. In several Western European countries the introduction of a fee, calculated based on prescriptions issued by physicians, simply resulted in a greater number of drugs per prescription. The reduction of subsidies for medicines in Spain intensified competition among pharmaceutical companies, but the main beneficiaries were the pharmacies (Thomson et al. 2003)²¹.

Another factor limiting the effectiveness of co-payment in reducing health costs is the substitution between different types of medical services. A phenomenon observed in some countries was the excessive use of emergency rooms by patients unable to pay (or co-pay) for a GP or specialist visit. In most cases, the use of ER is free of charge²². This effect was observed in France by Lang et al. (1997), and in the United States by Simonet (2009). In the second case, hospitals reported not only the uninsured, but also those with difficulty accessing a GP (e.g., Medicaid beneficiaries on state insurance, who are relatively non-attractive customers for doctors). Substitution can also occur in case of drugs. An interesting example can be seen in Germany, where in 1983, one of the health insurance funds excluded some basic drugs from their list of reimbursements. This resulted in increased consumption of better and more expensive drugs (Thomson et al, 2010).

The third reason for the ineffectiveness of co-payment lies with the inconsistent application of the mechanism. A whole range of protective instruments are available, which are used in health security systems in order to prevent the negative effects of co-payment. This subject is discussed in subsequent subsections²³.

Co-payment and queues

If there is a negative correlation between co-payment and demand for health services, there should also be a negative correlation between the co-payment and the length of the queues - in those systems where there is a problem with the availability of benefits. Little research is available on this topic, except the study of reforms in Quebec

in the 1970s, cited by Manning and Zweifel (2000), which confirms the importance of co-payment (the reduction of rates was associated with prolongation of the queue). At this point, it must be emphasised that the waiting time for a medical appointment or a place in a hospital also depends on the supply side (see Section 3.1). It is therefore important, what changes occur to the providers with the change of co-payment rates. For example, if the fee is paid by the patient directly to a doctor and a reduction in demand occurs, then there should be an increase in supply, reducing the queue even further.

It is, at the same time, debatable whether the problem of queues can be substantially mitigated by the use of co-payment. Simple international comparisons suggest that the size of the supply of health services is an equally significant factor. Table 3 shows the results of a linear regression of the percentage of people declaring their unmet health needs due to too long a queue for medical care²⁴, with respect to “quasi-price” of health services and the measure of supply of services. “Quasi-price” is the share of patients’ spending on co-payment for health care (excluding drugs) in GDP. Data on the total of these expenses could be established for 18 European countries on the basis of the WHO report series “Health Systems in Transition” and in some cases on the basis of other studies. The relation of co-payment expenditure to GDP is supposed to measure the burden of charges on citizens, and therefore has been called “the quasi-price”. The measures of supply used are the number of physicians per 100,000 inhabitants (1) and the share of spending on health care in GDP (2).

Table 3. Queues and co-payment and the supply of health services

Dependent variable: % of patients with unfulfilled health needs because of the queues (2009)	(1)	(2)
Quasi-price of health service (in basis points)*	0.01 (1.58)	0.01 (1.57)
Number of physicians per 100,000 inhabitants (2008)	-0.01 (-2.00)	
Share of spending on health care in GDP (2009)**		-0.40 (-1.56)
R sq.	0.20	0.29
N	15	16

Source: Eurostat, OECD, and * - as explained in the text; 100 basis points = 1%

Note: values in parentheses Student’s t-statistics

This analysis does not attempt to ,explain’ the problem of queues in European healthcare systems. Rather, it is simply a concise summary of data used for comparing several European countries. It shows that although co-payment may have some impact on queues, it is only one of the factors.

Negative effects of co-payment and protective mechanisms

The idea of introducing co-payment generally raises concerns that patients will reduce their use of health services to the detriment of health, and that it would affect mainly those with lower incomes. These fears are not unfounded. Although theory would suggest that in reducing consumption, patients would above all give up the services offering them the lowest marginal utility that is the least important to their health, empirical studies do not confirm this. It is indeed extremely difficult to verify because of the lack of measures of 'valence' of the service.

Studies using the RAND experiment results (see discussion in Manning and Zweifel, 2000, and Rolph and Keene, 1988), indicate a lack of such dependence. Instead, they suggest that patients who have to pay more reduce both the less important services and the necessary and important ones. These studies, however, are based on indirect evidence (number of visits to the hospital, length of hospitalisation). Literature provides stronger arguments about the patient redemption of prescription drugs. Chernew et al. (2008) examined the degree of redemption of prescriptions by patients with diabetes and cardiovascular diseases in the U.S. In this case, it can be concluded that consumption should not at all be restricted. However, it became apparent that the larger the amount (co-payment proportion) that the patient had to pay for the medicine out of his or her own pocket, the more often a prescription had not been redeemed. Similar conclusions were reached by other authors studying the American health care system (see discussion in Chernew et al. 2008).

There is a great deal of evidence to suggest that co-payment strongly affects reducing consumption by people with lower incomes than those with higher ones (this is indeed indirect evidence that not only superfluous consumption is reduced). In the study by Chernew, patients living in deprived areas not only were more likely not to buy medicine, but their sensitivity to price was greater. Lexchin and Grootendorst (2004) reviewed studies measuring the impact of rising co-payment on the use of drugs by specific risk groups (the poor, welfare recipients, the chronically ill and people with general poor health). Virtually all studies showed that increased co-payment resulted in less frequent purchases of drugs by people with low incomes and those chronically ill. Thomson and Mossialos (2003) cite studies from Belgium and Sweden, which led to the same conclusions.

Similarly, people on low incomes, to a greater extent, reduce the use of medical care. In an article on the Swedish healthcare system, Andersen

Negative effects of co-payment

et al. (2001) cite studies showing that during the 1990s (when the rates of co-payment were rising), the differences in the frequency of medical visits among people with contrasting levels in education and between mental and physical workers increased. Rueckert et al. (2008) obtained similar results for Germany where the introduction of charges for visiting a GP (EUR 10) resulted in cancellation or delay of visits not only among the young and healthier, but also among those with the lowest incomes. The study by Kim et al. (2005) for Korea showed that the price elasticity of medical services was higher for poorer than for richer people.

Because co-payment unevenly affects the income groups in society, protective mechanisms exist in all European countries to limit the encumbrance of citizens (especially disadvantaged groups) with health care costs. These take various forms (Box 6).

Box 6. Protective mechanisms

Mechanisms to protect the public from the harmful effects of co-payment usually mean that for certain groups of patients, the co-payment regime shall be mitigated. These groups are usually defined by (cf. Ros et al 2000): (1) age (children, elderly), (2) income (low income), (3) health status (e.g. patients with severe and chronic illness). The lenient treatment of these patients may involve (a) their total exemption from fees, (b) the application of reduced rates for their co-payment, (c) determining their annual (monthly) total spending limit, above which the co-payment rate drops to zero. There are also more complicated patterns of preferential treatment for vulnerable groups. A limit of expenditure for all insured is very frequent in health care systems.

Table 4 presents an overview of protection mechanisms applied in the EU and some other European countries. As demonstrated there is often an upper limit of expenditure which the patient may incur within a year. In fact this limit actually exists in more countries than the table would suggest. For example, there are systems (such as the Portuguese or Greek) in which there is either no payment for the hospital, or a yearly spending limit for this service, while the co-payment rates for outpatient care are so low that there is no risk of patients incurring high costs²⁵.

Table 4. Overview of protective mechanisms in the European countries

Type of mechanism		Upper cost limit	Exemption	Preferential rate
Criterion				
All		AT, BE*, CR, FI, LV, DE, IE, SE*, CH, NL*, NO, BG (hosp**), EE, PT* (hosp)		
Age	Children and Youngsters	IL, SE*, IS*	BG, CR, CZ (bas), CZ (nb), IT (dent), LV (< 6 years), SJ, NL*, NO (< 12 years)	EE (dent), CH*, IS (<16 years)
	Elderly		IL, IE, IT	IS (>= 67 years)
Illness		SE*	AT (medication), BG, IL, IT, SJ	
Income		BE*, DE, NL*	AT, BG, CY, CZ, IE, IT, SK, SJ, FR (bas),	BE, CY
Unemployment			BG, CR, SJ	
Other***		IS*	BG (veterans), CR (disabled, students, veterans), LU, LV, CZ - women-pregnant and postpartum	

Source and year: see Table 5

* In Belgium and Iceland, the upper limit of the cost and the rate of co-insurance (see Box 2) are different for different groups of patients. In Sweden, the total expenditures do not include fees for hospitals and (except for those from privileged groups) for dental care. In Switzerland, a person under 18 years of age pays no deductible, but has to pay co-insurance. In the Netherlands, the national insurance (AWBZ) applies a complicated allowance scheme, while under private insurance (Zvw), the insurer may waive the patients co-payment in exchange for use of designated service providers or participation in preventive health programs (see also Chapter 6)

** hosp - hospital treatment, bas - basic medical care, dent - dental care, nb - newborns

*** only some groups have been mentioned

The instrument used to protect the most vulnerable groups is a total exemption from fees or, less often, the upper cost limit. The differences in defining groups deserving of special treatment are interesting. With regard to age, in the post-socialist countries and Scandinavia, the privileged are the children but in Israel, Ireland, Italy and Iceland the elderly. Quite often, low income is an entitlement to preferential treatment. The preferential treatment of the unemployed in the three post-socialist countries that are not particularly affected by unemployment is interesting. It is worth noting that the preferential rate is rarely applied, presumably due to the difficulties that administering a complex system of co-payment must pose (although in theory, setting different rates of co-payment for different types increases the prosperity. See subsection 3.1).

The costs of management and control are a disadvantage to any co-payment system. In extreme cases, they may question the logic of the whole project. An example can be taken from the Netherlands, where the reform of 1997 introducing co-payment was withdrawn after two years for this very reason (Thomson et al. 2003). New, simpler mechanism for co-payment was introduced in 2009.

Protective mechanisms, although well-founded and to some extent necessary, not only complicate the system, but also weaken the incentives associated with the co-payment and reduce the amount of fees. This subject will be discussed in the next section.

It should be emphasised that everything discussed so far concerns the mandatory co-payment. In many countries, including those with zero fees for patients such as the United Kingdom, or low fees such as Estonia, there is the possibility to pay for hospitalisation in a room with a higher standard. In this case, there is no problem of negative social consequences.

Fiscal effects of co-payment

Although co-payment occurs in the vast majority of European countries, the variety of rates and mechanisms of protection cause this mechanism to appear and arguably operate in contrasting ways. The differences in the real co-payment rates between countries will be analysed below.

In over a dozen European countries, it is possible to establish the share of revenues from co-payment (excluding charges for drugs) in the total expenditure on health. The results presented in Table 5 are somewhat

surprising. There are whole groups of countries in which, although with co-payment for health services in place, its role in financing health care is marginal. There are two countries, for which the exact sums are unknown, but from the literature, it can be seen that they are small. There are also a few countries for which the contribution rate is between 1 and 2%. Comparing Table 4 and Table 5 it can be seen that the cause of lower revenues from co-payment is the widespread use of safeguard mechanisms. It may be presumed, therefore, that a few other systems, for which we do not know the exact sum of charges, fall in this group (e.g. Greece, Slovakia in 2004-2006).

The question therefore arises as to why these countries have not yet resigned from charging the patients? The answer would require a separate study, but we can venture the following hypothesis. First, it may be that the charges, although of negligible interest in the whole system, are an apparent source of revenue for certain interest groups. This can happen especially where co-payment revenues are not transferred to the payer, but remain with the care provider (e.g. in Bulgaria). The second hypothesis is that if the healthcare system is facing serious financial problems, then any income would be precious. This may have been the case in Germany, where revenues from co-payment introduced in 2004 helped the *Krankenkasse* (sickness fund) pay old debts (Steinbronn 2005).

At the other end of Table 5 are Switzerland and Finland, where co-payment revenues finance more than 10% of the costs of the healthcare system. Characteristically, these two countries use very restrained safeguard mechanisms. In Finland, for example, there is no relief at all for disadvantaged groups only social support whilst in Switzerland, only young people can count on a real reduction in the rate of co-payment. Interestingly, Switzerland and the Netherlands are the only two countries in the study population using an excess deduction (deductible). In Switzerland, the patient pays all the costs amounting up to 300 CHF per year. Literature, quoted earlier, suggests that among the co-payment models, the deductible most effectively limits demand. Perhaps this is also the most effective method from the fiscal point of view?

It is also informative to look at the problem of queues in Switzerland and Finland. While the first of these countries appears not to have such problems (unmet health needs due to waiting times were declared by 0% patients from the SILC study 2008), the second is at the head of the shameful statistics (5.1%, see also Chart 8). Obviously this is determined by the number of doctors and medical staff - here Switzerland is at the helm while Finland tails behind the countries of Western Europe.

A third group of countries that can be distinguished on the basis of Table 5 is that in which the fee covers several (maximum six) percent of health expenditures. These countries are characterised by a medium range of exemptions and relief (see Table 4).

Table 5. The share of the proceeds from co-payments (excl. charges for drugs) in the total expenditure on health care

Country	Year	Share (in %)
Croatia	2005***	~ 0
Malta	1998***	~ 0
Portugal	2007	1.00
Israel	2005	2.00
Germany*	2009	2.18
Sweden**	2003	3.04
Iceland	2000-2003	3.46
Latvia	2004	4.40
Austria	2004	4.79
Belgium	2006	5.70
Finland	2008	10.40
Switzerland*	2009	14.30
Bulgaria, Cyprus, Czech Republic, Estonia, Greece, Luxembourg, Netherlands, Norway, Italy	-	no data available
France, Ireland, Slovenia	-	different system

Source: Own study based on reports from the WHO cycle 'Health Systems in Transition', with the exception of Germany (BfG 2009) and Switzerland (BAG 2010)

* The share of fees paid by patients in the expenditure of sickness funds (the main payer in the system)

** The share of fees paid by patients in local governments' expenditure (major payers in the system)

*** Date adopted - a year before the date of the report in the 'Health Systems in Transition' series

The co-payment system and the system of remuneration of providers

The mechanism of co-payment for medical services is part of the healthcare system and as such should be compatible with the rest of its parts. Meanwhile, not every method of co-payments can be combined in a logical way with any of the means to pay providers (Box 7).

As Ros et al. observe (2000), the institution of co-payments in the form of coinsurance and deductibles requires that the exact cost of medical services is known. This, however, is possible in a system in which service-provider is remunerated on a *fee-for-service*, but not

in the capitation system or in the case of recruitment of providers by the state. Nevertheless, 'shared payment' is the universal form of co-payments and can always occur.

Indeed, a review of the healthcare systems of the old EU 15 countries plus Norway, Iceland and Switzerland showed that in 1997, co-insurance only occurred in those systems which operated on the principle of *fee-for-service* (Ros et al. 2000). Co-payment has performed well in such systems, as when physicians were recruited directly by the state. However, among the countries in which GPs were paid at capitation rates, there were not any which could have had any co-payment for this type of medical services.

How can this last fact be explained, since there is no technical impediment to connect co-payment with capitation in the form of shared payment? This may be due to the philosophy of the system and/or the system of values of a society. Firstly, it should be noted that capitation involves buying medical services in advance by the purchaser, who thus no longer has any interest in reducing demand. Co-payment may have, in this case, only a fiscal sense. What is more, paying for doctors in advance is intended to protect access to health care and may testify to the fact that society attaches great importance to the welfare state. The existence of co-payments, however, increases the responsibility of the individual for the treatment (see Ros et al.)

Box 7. Remuneration for service providers by the purchaser (systems financed largely from public funds)

- ▶ *Capitation* - a form of remuneration for primary care physicians, the physician is paid an annual/monthly quota dependent solely on the number of patients registered with that doctor (and not the number of patients actually seen by the doctor).
- ▶ *Fee-for-service* - is the covering by the purchaser of costs - previously valued accurately - of medical services.
- ▶ *Direct employment* - doctors and other providers (e.g. physiotherapists) are directly employed by the state and receive a salary from it.

Another problem with the consistency of the healthcare system is the matter of primary care physicians as 'guardians of the system' whose acceptance (referral) is necessary to obtain specialist advice. In this case, a visit to a primary care physician is often a necessity and as such should not be subject to a fee. This is the case in most countries

except Norway and Portugal where, in 1997, GPs collected fees in the form of patient co-payment, despite the fact that referrals to specialists were necessary.

4.3. Possibility of introducing co-payment for medical services in Poland

Before the knowledge gained in the international review may be used to propose a mechanism for co-payments in Poland, a look at the attitude of the population to that institution is necessary. Then, the advantages and disadvantages of possible variants of co-payments may be assessed.

Social reception of co-payment

Table 6 summarises the attitude of society towards co-payment - and, as can easily be seen, it is a negative one. Interestingly, the declarations of consent to co-payment are strongly varied depending on the type of medical service. Although 10 to 15% of the participants in the 'Social Diagnosis' survey agreed to pay a fee for a stay in at a hospital, a visit to the doctor, or a specialist, only every fourth person agreed to pay for any of these services. The acceptance of co-payments is much broader for 'additional services' - physical therapy, doctor's home visits (excluding ambulance staff) or a higher standard of hospitalisation. In total, half of the respondents agreed on the fees for any of these services or basic services.

Table 6. Acceptance of co-payments for medical services in Poland, 2009

	20 PLN for a day of hospital stay	For GP visit	For a specialist visit	For any of the previous	Any of the previous and additional services*
YES	15%	10%	13%	23%	51%
NO	85%	90%	87%	77%	49%

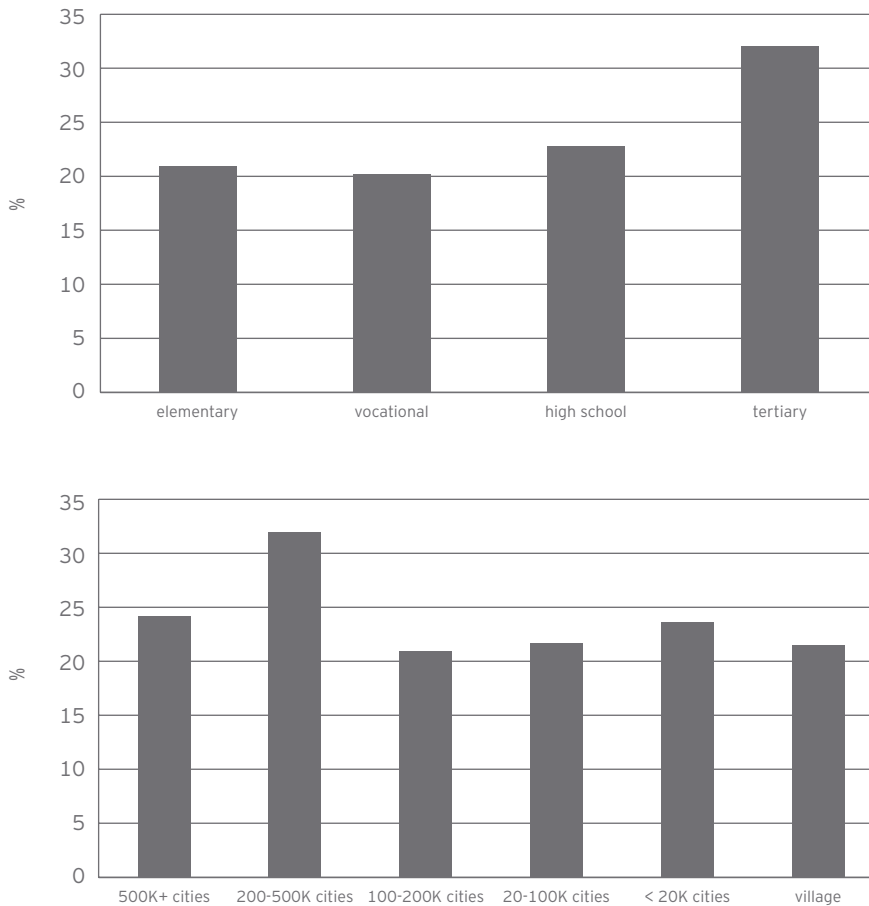
Source: Own compilation based on the Social Diagnosis 2009

* as explained in the text

The readiness to co-pay is strongly dependent on income - the higher the income, the more likely the agreement to pay fees. Moreover, households whose main wage earner is well educated often agreed to co-pay (see Chart 9). Domicile varies acceptance of co-payments to a much lesser extent. It is significantly higher in large cities (but not the

largest). Households whose main wage earner belongs to the 25-55 age range are more likely to agree to co-payment than households more 'mature' or 'younger'²⁶.

Chart 9. Percentage of people declaring consent to co-payment for medical services or hospital stay, 2005



Source: Own calculations based on the Social Diagnosis study

Due to the small percentage of people who agree to co-payment, it is not possible to take into account all the characteristics of households in a single econometric study without disturbing the significance of variables. Using the probit model, however, we have examined the relationship between selected characteristics of households with a probability of consent to fees for visiting the doctor or hospital. Income is an important variable and increases the acceptance of co-payments, even after taking into account variables that may be interpreted as the health of the household such as the use in the previous year of hospital or reporting unmet medical needs²⁷.

Considering the household income, as well as age and education of the main wage earner, retains significance and sign of all variables.

Co-payment is unpopular not only in Poland, but generally in all post-socialist countries. In recent years, there were two cases of rapid abandonment of the reforms of this type. In Slovakia, co-payment was introduced in 2003 and actually abolished immediately after the change of government in 2006 (EO 2011, p. 137-139). Shorter still was the life of fees introduced in the Hungarian healthcare system in 2007. The government withdrew after a referendum in 2008 (Sinko 2009, Sándor 2008). What is more, the negative attitude of Polish society is appreciated by political parties, of which only Prawo i Sprawiedliwość (Law and Justice), and PJN allow the possibility of introducing co-payments in a restricted form (DGP 2011).

Co-payment scenarios

Building a co-payments scenario in Poland, several issues must first be resolved. First, **the scope of the co-payments** ('for what?'), second, the **persons covered** ('Who?'), and third **the rate** ('how much?').

The first two questions are interrelated. To begin with, co-payment is only considered for (1) primary health care, (2) advice by medical specialists, (3) hospital treatment in general hospitals and (4) some other treatments and benefits²⁸. Therefore, co-payments are not assumed for medical emergencies, long-term care for the elderly, palliative and hospice care, as well as psychiatric care and addiction treatment²⁹.

In Poland, there is a capitation method of remunerating general practitioners. As shown above, combining it with co-payment for the services of these doctors would be artificial. Therefore, there are two options which include either the introduction of fees for visits to specialists and hospitalisation and other benefits, or the introduction of charges for the entire spectrum of health services considered, together with a transition to a system of fee-for-service in rewarding primary care physicians.

'Persons covered' by co-payments is a particularly difficult matter in Poland. On the one hand, considerable social expectations regarding the safeguarding mechanisms may be likely whilst, on the other hand, the widespread use of exemptions and preferential rates calls into question the meaningfulness of co-payments. So the following assumptions have been adopted. Above all, safeguarding mechanisms

will rely on exemptions from fees, to avoid the administrative costs resulting from a more complex system (e.g., with preferential rates). Regardless of the age and material status of the patient, co-payments exclude gynaecology and obstetrics³⁰, oncological treatment, cardiovascular disease and diabetes, and other chronic diseases or extremely expensive treatments. Next, it is assumed that recipients of Social Assistance benefits will be exempt of co-payments. Finally, the question of age must be settled. Let us consider three variants. The first will be the exception on grounds of age, in the second only a person under 18 years of age will be exempt from co-payments and in the third a person over the age of 65 years will also be exempt (The idea of exemptions for the retired will be addressed separately). The existence of the upper limit of cost will not explicitly be assumed, assuming that these protective mechanisms actually introduce such a limit.

How much exactly should the fees for patients be? Firstly, they should not be too low as the co-payment will have little or no impact on demand and would fail to generate additional revenue to the system. Secondly, given the little support for co-payments in society, the rates should not be too high. We propose to designate it as a percentage, as a share of the costs incurred by the NHF. Thus, it would not preclude co-payment taking the form of coinsurance at some point (which would be impossible with the current mode of financing primary health care). NHF costs are used as a reference model. For primary care and specialist advice, this paper suggests the lowest rate from the RAND experiment - 25% of the NHF costs, and 10% for one day in hospital. According to the review of the U.S. market, quoted by Cutler and Zeckhauser (2000), the early 1990s saw the co-payment rate stand at 20%, but at the same time, reducing franchises had been used (deductibles). The results of several simulations, the authors of which attempted to determine the optimal co-payment rate based on the model of Blomqvist (see theoretical section), suggest a rate close to 25% (though again with a deductible, see Cutler and Zeckhauser p. 587).

Table 7 shows the actual costs. The fees given are **approximate** - and are based on, for example, the average cost of 'ordinary' medical advice and the cost of such advice with the necessary tests. In practice, separate rates for medical appointments and for the tests would have to be introduced.

Table 7. Possible charges for medical services

	PHC (medical advice*)	Specialist (medical advice*)	Hospital treatment (1 day)
Approximate NHF cost	48 PLN	72 PLN	537 PLN
Co-payment rate	25%	25%	10%
Fee	12 PLN	18 PLN	54 PLN

* The average cost of advice - see explanation in text.

Source: Own compilation based on NSO (2010) & NHF (2010) data

Expected fiscal effects

We conducted a simulation of revenues from co-payments for the previously described scenarios. It should be emphasised that the information presented in this section are approximate estimates, based on publicly available and strongly aggregated data. Before this is discussed, a few words about the adopted assumptions.

The basis on which the expected revenues were counted, were costs planned by the NHF in 2010 (after modification to the plan by the NHF). To estimate the effects of protective mechanisms, the costs of drug therapy in hospitals will be excluded (which takes into account the co-payments exemption from those with severe and chronic diseases) Part of the costs of outpatient services and hospital treatment, which corresponds to the proportion of visits to specialist doctors such as oncologists, cardiologists, diabetologist, gynaecologists and obstetricians is also excluded (in total this is almost 25% of visits). Depending on the variant of the co-payment exemptions and consideration of various age groups, the basis will be reduced to calculate the income in proportion to the participation of these groups in the consumption of medical services.

It is assumed that the introduction of co-payments will somewhat reduce the demand for medical services. Assuming that the scale of this reduction will be smaller than in the RAND experiment, we predicted that consumption of PHC services will fall by 15% and specialist advice and treatment in hospitals by 5%. When it comes to specialist doctors advice, it is hard to expect a radically smaller consumption - given the current waiting times. However, some shortening of queues can be expected.

Estimated revenues
from co-payments

Table 8. Estimated revenues from co-payments - hypothetical values, 2010

	Planned NHF cost in 2010	Estimated revenue from co-payments:			
		Variant 1*	Variant 2	Variant 3	Variant 4
Primary health care	7 274 510	1 455 369	1 126 430	699 939	486 587
Ambulatory specialist care	4 227 275	733 307	637 349	412 914	351 069
Hospital treatment without drug therapy	25 085 696	1 740 651	1 512 874	980 135	833 333
Health services contracted separately	1 397 642	96 980	96 308	54 608	46 429
Total		4 026 308	3 372 961	2 112 006	1 930 771
Participation in the total costs for health care (THE)**		4.01%	3.36%	2.10%	1.92%
Total excluding primary care		2 570 939	2 246 531	1 412 067	1 230 832
Participation in the total costs for health care (THE)		2.56%	2.24%	1.41%	1.23%

All amounts in PLN K

* Variant 1 - only beneficiaries of social assistance exempt from co-payments.

Variant 2 - exempt from co-payments: the beneficiaries of social assistance, and children and young people under 18 years

Variant 3 - exempt: the beneficiaries of social assistance, and children and young people under 18 years, persons 65+ years of age

Variant 4 - exempt from co-payments: the beneficiaries of social assistance and children and young people under 18 years, persons 60+ years of age

** THE - Total Healthcare Expenditure. It is assumed that THE in 2010 will equal the THE in 2008 times in the NHF budget increase

Source: Own compilation based on NSO (2010) & NHF (2010) data and Hryniewiecka (2009)

Table 8 presents four options for the growing range of exemptions. The last one of these exempts people over 60 (and not 65) years of age. This is a significant difference, despite appearances. This means an almost complete exclusion of retired pensioners from co-payments. In 2008, up to 87% of people receiving retirement benefits were over 60 years of age, with 64% over 65 years of age (ZUS 2009). This is very significant for Poland given that, should the debate about co-payment begin, the idea of exemptions for the retired would almost certainly arise.

The estimated revenues from co-payments range from 2 billion to 4 billion PLN. Comparing the share of revenues in total health care

costs with similar values for other countries (Table 5) we find that the contemplated projects would situate Poland in the lower or middle part of the ranking. Crucial here, as always, are the protective mechanisms. In particular, a co-payment waiver for the elderly visibly reduces the inflow into the system.

All in all, even in the smallest of the considered exemption scenarios, the possible income is unimpressive. In comparison, it is estimated that an increase in the health premium of one percentage point would give an additional revenue of approximately 5.3 billion PLN. Of course, raising premiums burdens all the insured, not just those using health care and would not affect the demand for medical services.

4.4. Co-payment insurance

An interesting, 'hybrid' form of financing health care is the co-payment insurance. In countries which have opted for this system, patients must co-pay for medical services and can insure against the risk of such costs. The result of this solution, provided it is widely used, is a system so different that it deserves separate treatment.

The difference lies mainly in the fact that such a system does not encourage the (already insured) patients to reduce the consumption of medical services and thus **has less impact on reducing over-consumption and reducing healthcare costs**. This is the reason why in some countries, such as Switzerland, it is not allowed to take out insurance on the costs co-payments. Contrastingly, the existence of insurance on co-payment does not change the fact that the system benefits from additional fees. It may also be argued that with insurance, patients have more choice, as they can manage the risks of co-payments. Perhaps, this is the reason why in countries where there is co-payment, it is formally possible to insure against fees.

This does not mean that many countries have developed markets for such insurance. Insurance on co-payments does not usually play a major role. In Europe, the exceptions are France, Ireland and Slovenia and their experiences will be referred to in our discussion. As for non-European countries, we call up the case of Australia³¹. A summary of key information about the role of private health insurance in these countries is presented in Table 9.

Table 9. Private health insurance in selected countries

	France	Slovenia	Ireland	Australia
Percentage of patients covered by health insurance	85.1 (2000)	85* (2007)	50** (2007)	43% (2003)
Percentage of health expenditure covered from private insurance (2007 or 2008)	13.6	13.1	6.6 (2006)	7.1
Total health expenditure as % of GDP (2007 or 2008)	11.2	8.3	7.6	9.7

Source: OECD and HiT reports.

* 98% of those, who are bound to co-pay

** this represents around 70% of those bound to co-pay

Why did insurance against co-payments develop in only a few systems? One reason seems to be the amount of co-payment rates. In order for the patient to feel the necessity to take out insurance, the risk must be great otherwise, if the fees paid by the patient were to be small, then the risk would become negligible. This theory seems to be confirmed by the fact that the co-payment rates in the above three European countries are quite significant. For primary health care and ambulatory care in Ireland³² they reach 100%, whilst in France and Slovenia the figure stands at 25%. Furthermore, the rates for certain treatments in Slovenia reach even higher levels³³.

The high rate of co-payment may, of course, be a problem for the disadvantaged groups. This is especially the case when insurance for patients from such groups can be expensive due to the increased risks. The answer to this problem lies with the protective mechanisms i.e., such as can be seen in Ireland and Slovenia where the elderly are exempt of co-payment or in France where the lower income groups are exempt. Alternatively, non-profit insurance companies may also be a solution (in 2000 they insured 50.4% of the French).

Among the countries where insurance plays a vital role in co-payment, **two types of systems** can be distinguished. The first is the system where supplementary insurance plays an important role and insurance against co-payment becomes only a part of the package. An example of this is Ireland, where the supplementary insurance not only covers the cost of co-payment, but also allows the use of private beds in hospitals with shorter waiting times for benefits. Similarly, in Australia, supplementary insurance primarily funds treatment in private hospitals but also covers the cost of co-payment. However, this only applies for services from physicians in private practices (cf. Colombo, Tapay

2003)³⁴. In the second system type, both France and Slovenia may be used as an example, where insurance against co-payment is included as complementary insurance and sold only as part of a broader package.

The difference between the two systems is within the role of private insurers. In Ireland and Australia, they must develop a close relationship with the healthcare providers in order to negotiate the cost of medical services, to create a billing system and so forth. In France and Slovenia, insurers play a passive role. They simply pay the compensation. In countries pursuing this model, such as France, it could be said that the state allows private companies and/or employers to collect additional premiums for healthcare. This contribution is voluntary. Nevertheless, it generates additional costs when performed by profit-oriented insurance companies.

Despite the voluntary contribution, almost the entire adult population pay it, as evidenced in Table 9. In systems identified as the first type, the interest in insurance is significantly lower as is the fiscal role of private insurance. It is worth noting that in both systems, spending on healthcare has a high share in GDP. France ranks second in the OECD, after the U.S., while Slovenia appears to have a lower percentage of GDP than the other two countries in the table. Slovenia is, after all, a country with a lower GDP per capita. Therefore, given its level of development, Slovenia seems to be spending a great deal. It can therefore be concluded that the model of 'additional premium' is typical of countries characterised by high levels of spending on healthcare.

Assuming the introduction of co-payment in Poland is implemented, as proposed above, we believe that there should not, at least initially, be an option to insure for co-payment. This is to prevent the impact of co-payment on the demand for health care from weakening. This decision may be revised in the future if, for example, reforms were to be introduced to stimulate the growth of private health insurance (such as the Dutch-style system, discussed in Chapter 6).

With regards to the system of the second type, whereby a high rate of co-payment and the possibility of insurance against such expenditure exists, this paper does not recommend its implementation in Poland. As argued above, this is an additional premium on healthcare. Such a co-payment system is likely to have little effect on demand. The fiscal effect, therefore, can be achieved more simply and cheaply by raising the rate of the main health insurance.

4.5. Summary and conclusions

Co-payment for medical services applies to the majority of EU countries and others around the world. It takes various forms ranging from fixed low-level fees (co-payments) to the quite substantial deductive franchises (deductibles).

Co-payment has some impact on demand and is likely to limit the phenomenon of *moral hazard*. This is indicated by both the experience of many countries that have introduced such a solution in parts of their healthcare systems as well as the results of a controlled experiment in the U.S. in the 1970s. Therefore, it has the potential to reduce costs and shorten queues. However, the latter depends almost equally on the size and organisation of the health service supply.

There is evidence, nevertheless, which suggests the negative effects of co-payment are unevenly distributed throughout the society. Therefore, to protect vulnerable groups against excessive restrictions on the consumption of medical services resulting from co-payment, protective mechanisms have been put in place. They rely on the partial or full exemption of some citizens from the co-payment and/or the introduction of an upper limit for the charges a patient may incur during the year. However, the widespread use of safeguarding mechanisms in many EU countries, implies that the importance of co-payment becomes limited. It appears that in some cases, this instrument has been introduced rather inconsistently and simply lies dormant in the system, with only some groups or institutions protecting it from liquidation for their own interests.

The majority of Polish society is reluctant to the idea of co-payment for an essential part of medical services (currently included in the 'basket' of guaranteed benefits). Although the acceptance of this solution is higher among the wealthier, better educated and belonging to the prime-age group, the negatives more than often outweigh the positives. Political support for co-payment is also low.

Co-payment in Poland might slightly reduce the queues and increase revenues into the system. The scale of the latter, however, strongly depends on how widely the protective mechanisms would be used. In determining the rate and extent of co-payment, two objectives, which are difficult to reconcile, must be taken into account, to preserve the purpose of co-payment without causing social resistance. The low co-payment support from society and the recent cases of failed reforms in both Hungary and Slovakia must be taken into consideration.

The recommended approach would be to introduce fees for specialist advice and hospital care and other treatments - but not for primary health care - with a small range of exemptions. Opinion polls show that the public would accept co-payment more easily for some specific medical services rather than for the entire range. Such a solution would not prevent further reforms in the future, such as the introduction of co-payment for primary care physicians and the change from fixed salary to fee-for-service. Moreover, as shown in the analysis, this solution would generate additional funds for the system. We propose that the co-payment revenues flow to the NHF and not remain with the service providers. This is to ensure new interest groups around this mechanism are not created. We believe that, at least in the initial period of co-payment, there should be no possibility to insure against such costs.

5. Scenario two - supplementary insurance

5.1. Introduction

This chapter is devoted to the analysis of a second, alternative scenario of changes to the Polish healthcare system, which consists of choosing supplementary insurance as the main direction of market development. Insurance of this type (‘double’, or ‘duplicates’ - see Chapter 1) allows for faster access to public or private health services, if the law allows it which can often raise their quality and standard. An example of this can be the provision of access to single rooms in hospitals. Furthermore, if people were to take out supplementary insurance, they would remain in the universal healthcare system, paying health premiums and/or taxes.

As part of the analysis conducted in this chapter, the experience of a selection of European Union countries, where supplementary private health insurance is the dominant form, will be presented. We study in detail the size of the private insurance markets and their revenue along with the existing insurance regulations and how they impact the market. We refer, furthermore, to the arguments raised, indicating the risks associated with the functioning of supplementary insurance for social cohesion and the public finance sector. We also try to answer the question whether the development of the supplementary insurance policies helped reduce the problem of waiting times for health services in the public sector.

The second part of this chapter is devoted to an analysis of the potential of a supplementary insurance market in Poland. Using the described experiences of other countries, conclusions will be drawn about the opportunities, risks and threats resulting from supplementary policy popularisation in Poland. The Act on additional health insurance in Poland, presented in March 2011, will also be referred to as a framework for the operation of supplementary, and potentially complementary, insurance.

Scenario two
- supplementary insurance

5.2. International experiences - the demand for voluntary supplementary insurance

Where does supplementary health insurance function?

Voluntary supplementary insurance operates in many EU and OECD countries but its role, nature and scope varies greatly. In the Mediterranean countries such as Italy, Greece, Spain and Portugal, supplementary health insurance is the dominant form of voluntary health insurance. It is also relatively popular in the UK. In these countries, universal health services are provided primarily by the public health service (in the majority of these, they are universal supply systems, often referred to as Beveridge systems, financed by taxes). The role of private insurance in the vast majority of EU countries is lower than in the U.S. or Australia. This is mainly due to the nature of the healthcare systems functioning in the EU, offering universal access to a wide range of public health services, funded by compulsory contributions and/or taxes.

International experiences

Demand for supplementary insurance and its determinants

In the countries where supplementary insurance dominates in the voluntary insurance sector, about 10-15% of the population are covered. While during the 1980's and 1990's there was an observable increase in demand for voluntary supplementary health insurance, its present level practically does not change, suggesting stabilisation and market saturation within the currently existing health care systems (*EO Health Systems In Transition: Portugal 2007, Italy 2009, Spain 2010, Greece 2011*). The largest range of double insurance exists in Ireland and Australia, where more than 40% of the population has it. In these countries, however, voluntary insurance is not purely supplementary, but is rather insurance against co-payment, the rates of which amount to 100% (see Box 8 and the previous chapter).

Available data on the characteristics of those holding supplementary insurance indicate that they are generally better educated, have higher income and live in wealthier regions (OECD 2004). Moreover, as the data for Greece, Italy and Portugal shows, the likelihood of having supplementary insurance is greatest among those in the prime-age group (25-44 years). Also, experience from the UK shows that the structure of purchasing supplementary insurance remains relatively constant, despite the institutional moves to change it. The tax rebate

for health insurance for people aged over 60, between 1990-1997, did not practically increase the participation of older people among the insured.

The elasticity of demand for voluntary health insurance, with regard to prices and income, is highly variable. In Canada and New Zealand, lowering the tax reduction on the additional insurance offered by employers decreased demand. In contrast, in Spain and the UK, demand for additional voluntary insurance seems to be inelastic with respect to changes in price premiums. However, the low impact of prices on demand in these countries may stem from the fact that supplementary insurance is mostly acquired by people with higher income (OECD 2004).

Supplementary insurance is purchased for the wide opportunities to choose service providers entailed in it. Available studies often also show a clear relationship between perception of service quality in the general system, especially the waiting time, and the demand for additional insurance, which would allow to bypass the queue (Besley et al. 1999, Harmon and Nolan 2001, Costa and Garcia 2001, Srivastava and Zhao 2008). This relationship, however, is far stronger in the case of the individual policies rather than the group ones. Moreover, the problem is complex and the relation of cause and effect between the two variables is not obvious. Mossialos and Thomson (2004) present a study showing that the regions of Great Britain, where a relatively large proportion of the population had supplementary insurance, devote a smaller share of resources to keeping the queues to the services short.

The scope of supplementary insurance

Within the supplementary insurance, a relatively wide range of services aimed at increasing consumer choice and improving quality of health services is usually offered. Primarily, this is achieved through faster access to benefits and a higher standard of accommodation in hospitals such as single rooms, separate bathroom, and so forth. Generally, the funded services are those offered in private hospitals and include relatively simple surgery, although in some countries the cost of services in public hospitals can be financed by patients opting to go as a „private patient‘. Supplementary insurance also widens the choice of providers of health services. This choice may be limited to the preferred network of suppliers, particularly those integrated with the insurer, but this is not a frequent phenomenon in the countries of the European Union (EO surveys, Health In Transition), especially where the market for private insurance is relatively small.

Box 8. Supplementary insurance in OECD countries

Systems of universal health insurance and supplementary insurance, despite their similarities in the basic assumptions of the system, differ significantly in details of their construction and efficiency measures. They also have some characteristically important advantages and disadvantages. Below we present selected characteristics of the systems from several countries. Those which seem interesting, from the standpoint of our research, have been chosen

In **Spain**, the popularisation of supplementary insurance was largely a response to the problem of queues in the universal health insurance system. It is difficult to unambiguously determine whether a larger share of the additionally insured (approximately 4% at the beginning of the decade to 6%, 8 years later) helped to reduce the problem of waiting for services. Available data indicates that the queues for surgery decreased slightly, but those to see specialists did not. Unfortunately, the opinions of society on the issue of queues for health services worsened. Spain has the lowest number of hospital beds among the 27 European Union countries, and it also faces the problem of shortage in medical staff. It can be assumed that the supply-side issues play an important role in generating long waiting lists for service.

In **Greece**, supplementary insurance is relatively popular, with approximately 12% of the population insured. At the same time, however, the revenue is rather low, comprising only about 2% of total expenditure on health. Other private expenditure is also very high compared to other OECD countries. The reason is primarily a high share of informal payments. In fact, expenditure on voluntary supplementary insurance in Greece (allowing for faster access to services, higher quality and greater choice of providers) does not replace private payments. Mossialos and Thomson (2004) explain the role primarily as 'habits' and 'special relationships' whereby changing the relationship and transferring payments to third parties from (the habitual way of) paying a doctor or hospital directly may be seen as a 'disorder' of contacts between patient and doctor. Among the barriers to the development of the Greek supplementary insurance sector, the issues of relatively low incomes of many households and the public perception of healthcare as a public good, available under the general insurance in full and with no additional charges, are also listed. The offer of supplementary policies is directed primarily at younger people, with higher incomes and better health status, which also limits the potential demand.

Ireland stands out with a very different system of compulsory and supplementary health insurance. It does not operate a comprehensive system of universal financing and access to healthcare, and the responsibility for personal health remains largely an individual matter. This public-private mix of financing in the delivery of health services developed between the years 1947-1970. Currently, the universal (free) health service is guaranteed for approximately 30-40% of the population (particularly those on the lowest incomes). Persons not eligible for this support are paying from their own pocket for visits to primary care physicians, and bear part of the cost for outpatient care and hospital stays - this is commonly covered under voluntary private insurance. Half the population has private insurance and, in addition to hospital charges, it guarantees the repayment of costs incurred in primary care.. This allows faster access to certain benefits, such as becoming a 'private patient' in public hospitals. Due to the prevalence of private insurance and its nature, which merges supplementary and complementary insurance, in Ireland the sector has been subjected to much greater regulation than in the vast majority of other EU countries.

Source: EO 'Health In Transition' for individual countries .

The scope of benefits offered under supplementary insurance is not regulated and depends on the decision of the insurer. As a result, countries within the European Union have a wide range of supplementary insurance policies and a diverse range of services, funding mechanisms, financing, spending limits and, as a result, a diverse amount of contributions.

Financing

Supplementary insurance does not play a significant role in financing health care in the European Union countries. Its share in total health spending does not exceed 5-6% (see Table 10, which presents data for countries where supplementary insurance is the most common). The low share of spending on private health insurance in total health expenditure is attributed primarily to the universal health service in the public system. This determines the role of supplementary insurance to cover the more frequent, but less costly, health risks. The share of supplementary spending in total spending is slightly higher in Ireland and Australia (7%). In these countries, the scope of the risks of those uninsured in the universal health care is rather broad (e.g. visits to the family doctor for the majority of the population in Ireland),

and thus the insurance is not, strictly speaking, supplementary. The share of expenditure under the supplementary insurance in most countries presented does not exceed 0.5% of GDP.

Table 10. Expenditure on private voluntary health insurance (PHI)

	IE	AUS	ES*	GR	PT	IT	UK
% total health expenditure in GDP	7.6%	9.7%	8.5%	9.0%	9.8%	8.7%	8.0%
% PHI expenditure in total expenditure	6.6%	7.1%	5.5%	2.1%	2.5%	2.0%	1.0%
%PHI in GDP	0.5%	0.7%	0.5%	0.2%	0.2%	0.2%	0.1%
% persons covered by PHI	50%	43%	13%	12%	10%	15%	11.50%

Source: Own study based on HIT WHO.

* in Spain, a small proportion of the population (civil servants) may exclude themselves from general insurance (about 14% of officers have taken the decision), then their private insurance becomes substitutive.

Individual vs. group policies

Group policies played an important role in the development of the voluntary supplementary insurance market. Purchased mainly by employers as benefits offered in addition to staff salaries, group policies gained an increasing share of the market in 1990 and are now an important part of the insurance market throughout the EU. According to some sources (cf. Mossialos and Thomson, 2004), the vast majority of voluntary health insurance in countries such as Great Britain, Greece, Portugal, Sweden, and Ireland is group insurance, with Spain, where the group policies are less than 20% of the market, being an exception.

The advantage of group policies is the valuation of risk at group level and lower transaction costs. This is reflected in the prices which are usually high for individual policies due to estimations of individual risks³⁵. In addition, policies offered through employers are, on average, aimed at the healthier, younger population (relative to the general population). The advantage of group policies is also to promote competition in the insurance market as the employer is more likely than an individual to compare various offers, looking for the best.

5.3. International experiences - risks, regulations and framework for the functioning of supplementary insurance

As already mentioned, most OECD countries have supplementary insurance and for many it is the dominant form of additional voluntary health insurance. However, in some healthcare systems there are legal prohibitions against duplicating the public health security system (partial or total). For example, in Canada, most provinces prohibit private insurers to cover the costs of medical services (hospital, ambulatory care) provided by the public system³⁶, and Australia prohibits insurers to cover the costs of co-payment for some outpatient services.

Below, the potential risks and challenges associated with the functioning of voluntary and, in particular, supplementary health insurance are presented, along with suggestions for regulation and systemic solutions, allowing the risks to be minimized. It is worth mentioning that the European Union countries have relatively less individual possibility of regulation and legislative adjustments, with regards to the functioning of private health insurance, due to their need to comply with European law regulations³⁷.

The risk of positive and negative selection

In many countries, insurance companies for voluntary supplementary health insurance have strong incentives to ‚cream-skim‘ the market. This may be done by selecting individuals in a way which allows the health risks, and consequently expenditure, to be minimized. This is often the case when it is possible to refuse to insure higher-risk people, exclude applicants, or to interrupt policies based on the applicants present health status. Therefore, negative selection occurs. ‚Natural‘ selection of risk may also be heightened by the possibility of estimating the health premium based upon medical/health data. Applicants with a higher risk receive higher premiums. This selection often raises concerns regarding issues of equality in access to health services and the situation of people in poor health, forced to pay higher premiums, which they may not be able to afford. Insurers may also use more ‚subtle‘ forms of selection in order to reduce their portfolio risk, for example, marketing activities, such as the promotion among certain groups of people, known as positive selection. This can be achieved through targeting people employed in selected sectors, or users of specific services, i.e. online bank accounts.

In the case of not taking account of individual data, however, when premiums are calculated based on group risk (i.e. for a given

The risk of positive
and negative selection

community - *community rating*), people with lower risks may decide to forgo the insurance cover. Should this be possible, people with higher health risks may dominate in the structure of the insured, resulting in increased premiums and/or bankruptcy of the insurer.

Solutions minimising the risk of „cream-skimming“ might be:

- ▶ the obligation of insurers to guarantee insurance (open recruitment),
- ▶ providing automatic renewal of contracts (after their expiry, e.g 1 year),
- ▶ limiting exemptions based on existing illness
- ▶ balancing risks between insurers.

Such solutions are, however, rare in the European Union.

They particularly concern the insurance of a wider-than-supplementary nature and/or the market in which private insurance plays a significant role (e.g. in Ireland or the Netherlands). For supplementary policies, many insurers exclude conditions existing at the time of the policyholder commencing the agreement and contracts are usually valid a short period of time. Moreover, the majority of insurers impose an age limit for their insured around 60–75 years and some dissolve the agreement after the insured person retires. Solutions for the equalisation of risk in strictly supplementary insurance do not function in any country of the European Union³⁸. Contracts entered into as long-term or permanent are available in just a few countries, such as in Portugal, in the case of the most expensive policies.

In countries where insurance companies offer open access to policies, a waiting period is often applied, during which time, benefits and health damages are unavailable. Such periods vary between countries, but in the case of supplementary insurance, they usually range from 3 to 12 months.

Supplementary insurance excludes most existing conditions (i.e such as the policy holder may have at the time of signing the contract). It also excludes a range of risks and their list can be relatively long. For example, in Britain it covers such items as visits to a GP, emergencies, pregnancy, illnesses such as diabetes or asthma, HIV/AIDS, infertility and many others (OECD 2004).

Empirical evidence on the occurrence and scale of the risk of negative selection is limited and often inconclusive. For example, Cardon and Hendel (2001) find no confirmation of the negative selection on the American health insurance market, while Finkelstein et al. (2004) obtained different results. The amount of research on negative

selection for the European supplementary insurance market is also limited. However, Bolhaar et al. (2008) cite evidence of positive selection in the Irish market, resulting primarily from the heterogeneity of policyholders in terms of income, health and health preferences. Then again, the available data on the structure of the additionally insured in various European countries may indicate the limited scope of negative selection.

The risk of subsidising the private sector

In the literature, questions are raised regarding the effectiveness of the use of beds by private patients in public hospitals. In particular, the appropriate valuation of their cost and potential risk of subsidising the private sector in this regard. This is indicated by the experience of Ireland where in 2006, it was estimated that fees for private beds in public hospitals were only 80% of their actual costs (EO Ireland, 2009). Underestimating the real cost for public sector also creates an incentive for insurers to direct patients to public hospitals (and not private ones, where costs are higher), which may result in reduced availability of places for public patients. Another example comes from the UK, where in 1990 the valuation of private beds in hospitals belonging to the National Health Service was reformed. Private insurers clearly felt it financially, and the largest of them withdrew from financing of services offered by NHS hospitals (Mossialos and Thomson 2004).

The risk of deepening inequalities in access to health services

In the debate on voluntary private insurance, the argument of equality in access to health services by the individuals covered and not covered is often raised. Increasing inequality is often discussed, due to the fact that the holders of supplementary (or complementary) policies may have faster access to necessary health care. Nevertheless, it is emphasised that the additional insurance of a part of the population helps to reduce waiting times and pressure on public sector spending. This helps to improve the situation for those without additional health insurance policies.

The argument citing less pressure on public expenditure is questioned. There is evidence that the growing role of private insurance in financing health expenditure not only shifts the burden of its financing from public to private, but can also raise the aggregate demand for benefits (OECD 2004). Lu and Savage (2006) use Australia as

The risk of deepening
inequalities

an example. They show that the increase in the share of population having supplementary insurance caused a much larger scale of use of private services in relation to the reduction in demand for public services. Therefore, the effect of the shift in funding from the public to the private sector was very modest (and expensive, due to the introduced financial incentives for private insurance policies).

Interestingly, given the fact that purchasers of supplementary health insurance policies in virtually every country are mostly those from higher income groups, it can be assumed that in the absence of supplementary insurance these people could benefit from faster access to health services through private providers and higher expenditure, from their own pockets'. Furthermore, the existence of insurance may offer an alternative to private spending and reduce the risk of excessive costs, thereby improving the availability of services for people deciding to take out insurance against risks.

According to many opinions, supplementary insurance does not reduce the progressiveness of healthcare systems, despite the fact that the person may pay double the charge. The results of studies on the effects of voluntary supplementary insurance on inequalities in the use of health services is inconclusive. Many of these point to the effect of increased inequality, although not extensive (OECD 2004). It is worth noting that the inequalities in the use of health services exist independently of the functioning of health insurance, both in countries without extensive voluntary insurance schemes, and with. The services of medical specialists are more often used by those better educated and with higher incomes.

The risk of limiting access for persons not covered by supplementary insurance primarily concerns those systems where the distinction between privately and publicly funded health care is unclear (i.e. no clear definition of the allocation of working time of doctors between provision of public and private care). This risk is also higher in countries where there are limited resources (doctors, hospital beds, medical equipment), especially if service providers are paid by both the public and private sector. This is also the case if the voluntary insurance creates incentives for physicians to treat public and private patients differently. In most European Union countries where supplementary voluntary insurance is relatively well developed, doctors have the right to provide services in both the private and public sector, the exception being Greece. However, a time restriction is in place for private practice, in Portugal, Spain, United Kingdom and Italy. Systemic solutions can provide incentives to different treatment for private and public patients such as financial rewards for services,

as opposed to regular wages for assisting public patients, which can be observed in Spain. Mossialos and Thomson (2004) cite examples of private patients receiving more frequent examinations in countries such as Spain and Portugal. Some countries, in view of the possible dangers, decided to regulate the working time of doctors in the private sector by imposing time limits or prohibiting the options to work in both sectors.

In countries with a dominant supplementary health insurance, such as Portugal and the UK, some insurers use private beds in public hospitals. In countries such as Greece, Spain and Italy, public hospital beds are not available to private patients. Imposing limits on the number of beds which can be used 'privately' in public hospitals is one possible solution to reduce the potential risk of unequal access to healthcare for people with or without voluntary insurance, practiced in such countries as Austria and Ireland. Another solution has been introduced in Estonia, which stipulated that the service provider had the right to provide services to private patients who jumped the queue. However, this was only the case if it was due to financial reasons rather than problems with the supply-side, such as when the contract with the EHIF (primary payer, counterpart of the Polish NHF) expired (EO Estonia 2008).

Asymmetry of information

Consumers in many European markets now have access to a relatively wide range of products in the field of health insurance. Theoretically, this promotes an appropriate variety of products best suited to individual needs. The problem in many European countries, such as the UK and Portugal, is the availability of information to allow for comparability of policies. This is particularly the case when it comes to complementary and supplementary insurance (OECD 2004). The offers available are so many that this can become a hindrance to the consumers who are unable to choose an optimal policy.

Solutions, meant to reduce information asymmetry on the market, may take the form of regulations requiring the existence of standard products (with a defined scope of services). Often requirements to provide information on the products offered and to create easily accessible resources with information about all the offers (e.g. a properly constructed database) are put on insurance companies. Standard service packages are required in several countries, but only for substitute insurance.

Asymmetry of information

Tax incentives for individuals and companies

During the 1990's, many countries with a relatively advanced supplementary insurance system, such as Italy, Portugal, Greece and the United Kingdom, had tax credits to purchase health insurance policies. It is difficult to estimate the extent to which tax incentives influence the demand for additional insurance. This is due to the fact that demand is determined not only by the price of policies, but also by many other factors including perceptions of the quality/availability of universal health care.

At present, the trend is either to reduce or move away from tax credits for individual health insurance policies due to their low efficiency in stimulating demand (OECD 2004). For example, the withdrawal in Spain had no effect on the demand for insurance. During the late 1990's, the British government withdrew insurance relief for those over the age of 60. This was because it failed to fulfill its role after a few years of functioning and its costs significantly outweighed the benefits. In Spain, the initial reliefs enjoyed by individuals turned to incentives for employers. It was employer benefits that contributed to the increase in demand for voluntary health insurance in many EU countries (Mossialos and Thomson, 2004). In the last decade, only Portugal maintained a relatively generous tax credit for voluntary individual health insurance policies. Stabile (2002) studied the effect of tax credits for health insurance companies in the U.S., noting their significant effect among small businesses, which, when there were to be no incentives in the form of tax exemptions, would give up acquiring health insurance for their employees.

The regulations on determining the contributions

Premiums for insurance may be determined on the basis of individual risk or average risk of a given group (e.g. community, employees of the company). In light of EU directives, insurance companies are free to determine the level of premiums for supplementary insurance. In the case of estimating individual risk, information typically considered includes age, sex, occupation, residence, household size, health status, medical history and the history of disease in the family. The range of benefits that are included in the policy are also assessed depending upon the individual circumstances. Premiums determined, based on the risk of groups (e.g. community), are much less popular in the European Union.

Relationships between insurers and suppliers and/or the insured

The experiences of OECD countries point to the three basic models of the relationship between the insured, the insurer and the provider: (i) integrated service delivery system (where the service provider is also the insurer), (ii) the agreement between the provider and insurer for the provision of services, (iii) the contract between insured and insurer, offering 'insurance cover for damages' (i.e. the cost of health services).

Integrated health services delivery systems created by insurance companies mean that they have, create or contract networks of hospitals and health facilities, linking finance and the delivery of services in one organisation. These are relatively unpopular in European countries, although they function in Spain. Their example may be the HMO's (health maintenance organisations), operating in the U.S., managing the provision of health services and controlling their funding³⁹.

An agreement between service providers and independent insurers is the most popular solution. Insurers usually offer access to established providers. However they often permit a limited reimbursement of the costs from non-designated providers (with a limit of cost per each service). Prices for individual services are often agreed with suppliers (i.e. *fee for service*, see also Box 7), although there is also the settlement based on the capitation rate (to a small extent in Spain for example). The prices are the main criterion for negotiation between two parties. Other criteria, such as quantity, type, and quality of health care, are much less likely to be the subject of agreements between insurers and providers (OECD 2004).

Agreement between the insured and an insurer, offering 'insurance cover for damages' is popular in those countries where the additional insurance market does not play a significant role. Insurers choosing this solution generally impose a spending limit, setting a maximum reimbursable cost of each benefit and / or limits on total spending.

The operating models of cooperation between insurers and providers of health services, affect in different ways the behavior of both the supply and the demand side of the market, and thus the prices. Integrated systems have the broadest possible benefits of cost control, whereas in the case of contracts for 'compensation' they are the smallest. Regulation of contracts between insurers and providers, is generally in place in countries where private insurance plays an

The regulations on determining
the contributions

important role (Australia, Ireland, Switzerland, Netherlands) and relates to, among others, possibilities of selective contracting of health services providers.

Administrative costs for voluntary private insurance

The administrative costs of voluntary health insurance schemes are much higher than the mandatory, universal system of health protection, for a number of reasons. These include the necessity of collecting and processing information necessary to assess individual risk, the design of a variety of policies, marketing activities, insurance brokers maintenance and own insurance cost etc. Available data collected by Mossialos and Thomson (2004) confirms these observations. In most countries, the administrative costs of universal security systems reach 3-5%; in Denmark and Italy these are even lower. In the case of voluntary insurance, they range from 10% (mutuals in Germany, France, the Netherlands) to 25% in Belgium, Portugal, Italy. With supplementary health insurance, they amount to 15% in the UK and Spain, to over 25% in Italy and Portugal. Supplementary insurance market in Poland

Supplementary insurance
in Poland

5.4. Supplementary insurance market in Poland

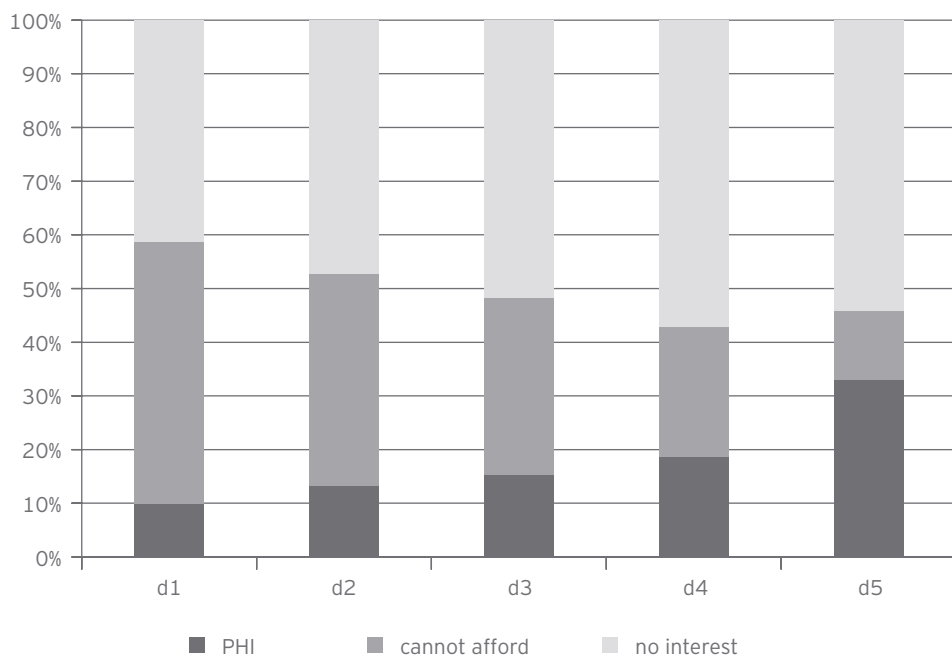
This section is devoted to the issue of supplementary insurance in Poland. We present the current market for additional health insurance policies, and, based on a survey on Polish households and the experiences of other countries, we try to answer the question surrounding the potential demand for additional voluntary health insurance, both in quantity and value. We also analyze whether the expenses for private insurance can replace the direct private expenditure and if they can reduce the queues for health services in the public system.

The potential market for supplementary voluntary health insurance

Despite the relatively high share of private spending in total expenditure on healthcare and the frequent use of private health services, interest in purchasing insurance against health risk is relatively low, at 19%, as declared by the households surveyed. More than half of the households surveyed expressed no interest in purchasing additional health insurance and those with a lack of

interest came higher among households off the top of the income distribution (see Chart 10).

Chart 10. Interest in voluntary PHI by income quintiles, 2007



Source: Own calculations based on Social Diagnosis 2000-2009.

Notes: PHI = private health insurance. The question concerned the interest in acquisition of additional, voluntary private health insurance covering medical expenses for household members. Given the current structure of guaranteed services, the answer to this question should be regarded as a declaration of interest in the supplementary insurance.

Poorer households often declared the lack of financial capacity for the acquisition of voluntary private health insurance. This barrier decreases with increasing income. While in the first quintile of income less than 10% of households declared an interest in acquiring additional insurance, among the richest 20% one in three households would possibly buy it. The vast majority of the declarations concerned the contributions of up to PLN 100 per month. Higher values (and in particular above 250 PLN) were infrequently declared.

In the analysed period, 4% of households declared that they benefited from health services funded by subscriptions paid by the employer (see Chapter 2). Declarations of interest in additional health insurance in this group were significantly more frequent (36% compared to 4% in the group of households not using subscription care.) This indicates that part of the potential demand is already met in solutions (other than health insurance) operating on the market today.

The potential for supplementary voluntary health insurance

Box 9. Income elasticity of demand for PHI in Poland?

Income is a very strong determinant of demand for voluntary supplementary health insurance (see review of research in the OECD, 2004). In particular, in countries where the public system guarantees a relatively wide range of primary care, supplementary health insurance is seen as a luxury, and demand for it grows with income. At the same time, the impact of income on demand is difficult to estimate, and the results are inconclusive in this area. This is primarily due to the role of other factors such as perceived quality universal health care.

Data gathered in the 'Social Diagnosis' survey, demonstrates how the declared interest in acquiring additional health insurance changed in relation to differences in household income. During the analysed period between 2005 and 2007, apart from the significant increase in household income, interest in acquiring additional private health insurance also increased from 13% to just below 19%. This increase affected households from all income groups and spread among them relatively evenly. At the same time, however, the percentage of households declaring no interest in the purchase of additional insurance increased significantly from 43% to 51%, pointing to the growing polarization of interest. Change of interest in purchasing health insurance policies (newly declared desire to acquire it or loses of interest) does not depend on changes in income. The average percentage increase in income was the same in households declaring an interest in purchasing insurance for the first time in 2007, as among those who between the years 2005 and 2007 declared to lose interest.

Income is a strong, but not unique, determinant of demand for additional, voluntary health insurance in Poland. Analysis of data from the Social Diagnosis survey (2005-2009), indicates that the socio-economic status of households and the declaration of unmet health care needs are also important. In microeconomic analysis, these observations find confirmation at the aggregate level where the upper quintiles of household income distribution have a higher probability of interest in the purchase of health insurance policies. Households of pensioners have a (*ceteris paribus*) lower probability of interest in the purchase of additional health insurance. An interesting result concerns the unmet health needs. Where this is the case in any given household, the likelihood of interest in purchasing private health insurance is reduced⁴⁰. The size of place residence (and the division of urban/ rural) is statistically insignificant for the analysed declarations.

The experiences of other European countries, in which supplementary health insurance is popular, indicate that those who have it belong to a relatively homogeneous group - better educated, with higher incomes, at the age of highest activity (25-54), and most are residents of major cities. Analysis of data from the Labour Force Survey and Household Budget Survey (see Table 11) indicates that the potential demand for voluntary health insurance among households in Poland of similar characteristics would range from 1.4 to 2.3 million people (5-9% of the adult population). Some of these people would also be paying premiums for family members, especially children, thereby increasing the insurance coverage rates for the entire population. However, these estimates should be treated with caution as they are aimed solely at the potential number of recipients of supplementary health insurance policies and reflect the characteristics of those holding 'double' insurance in other European Union countries. Note that these values (including insurance policies to cover the additional members of households) are similar to indicators for supplementary policies in EU countries (see Table 10). Moreover, they suggest that even the present size of the market for subscriptions and health insurance policies covers the potential demand defined in these terms.

Table 11. The potential demand for additional insurance, 2007

Group characteristics	Share of 18+population (number)
those with at least secondary education, aged 25-54, living in cities with more than 50 thousand inhabitants, with a salary (income from employment) of at least 2000 PLN net	8% (2.1 million people)
people with higher education, aged 25-54, living in cities of more than 100 thousand inhabitants, with a salary (income from employment) of at least 2000 PLN net	4% (1.2m)
the self-employed outside agriculture, of at least secondary education, regardless of place of residence and age - 20% of them	0.7% (0.2m)
Households from the 4 or 5 decile of income (per capita GD), living in municipalities with over 100 thousand residents, employees or self-employed	13.5% households (11% of all people (incl. children), that is a. 4.2 m); roughly ca. 1.5 m adults

Source: Own calculations based on BAEL 2007, BBGD 2007, DS.

It is equally difficult to estimate the potential value of the supplementary insurance market in Poland. Available information (see Chapter 2) shows that in 2011, the medical subscriptions market was worth around PLN 2 billion. Assuming that these subscriptions cover 1.5-2 million Poles and that their average cost is 100 PLN per month, we can assume that the current market value could be

worth 1.8-2.4 billion PLN annually. Interestingly, the market for health insurance policies in 2010 was estimated at approximately PLN 160 million. However, the Ministry of Health reported in 2011 its value to be PLN 200 million.

Referring to the experience of those European countries where supplementary insurance became popular (with a relatively broad access to health services under the universal health care, as in the U.K, Italy, Spain, and Greece, see Box 8) it can be assumed that the value of the Polish supplementary insurance market will be in the range of 1-2.5% of total expenditure on health, which suggests spending of about 1-2.3 billion PLN. This indicates that the current market value of the additional expenditure on health in Poland is already high (close to 'target') - in terms of the share in total expenditure on health, rather than nominal size. It is difficult to predict the chances of growth of the total share of spending on private health insurance in general spending on healthcare (as is the case in Spain). This would depend both on the perceived quality of universal health care and the prices offered to the policyholders (and possible tax solutions.) Thus it seems that the main determinant of growth of the nominal value of the health insurance market will be the change in income of households and GDP growth.

Is supplementary insurance an opportunity to reduce direct private costs?

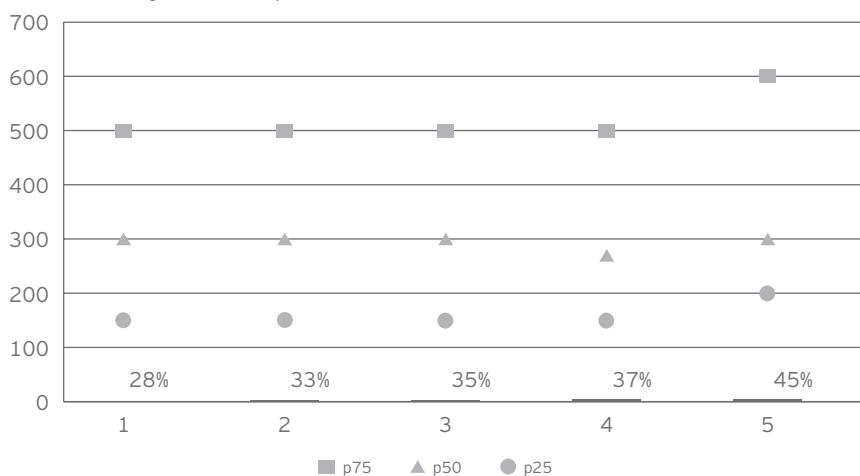
Chapter 2 presents data on spending on health services in Poland. It shows that the share of private spending in general expenditure is higher by several percentage points than the average in OECD countries. However, unlike the vast majority of OECD countries, Poland has by far the greatest share of direct household expenditure with a marginal role of private insurance (see Chart 4). The question as to whether the development of the private insurance market could change the structure of the total private spending and by what extent arises. Another important question concerns the potential substitutability of private expenditure on health policy and public expenditure.

The experience of OECD countries shows that private expenditure on health insurance seems to be no substitution to public health expenditure. In particular, among the countries with the dominant role of supplementary insurance, the comparable share of spending on private insurance (as a percentage of GDP) coexists with both a relatively higher (Portugal, 7%) and lower (Greece, 5.4%) share of public expenditure. There is also no clear change in the structure and level of expenditure over time (OECD, 2004).

There was also no ‚convergence‘ among OECD countries with regards the share of direct private expenditure and expenditure under supplementary insurance. For example, expenditure is currently high in Greece and is almost directly financed by individuals from their own pocket, while lower private spending (as a share of the total) in Spain and Portugal, is much more likely to be financed under additional insurance. Moreover, it is worth noting that in the Southern European countries such as Spain, Portugal, Greece and Italy, despite the relatively high out of pocket expenditure (compared to other OECD countries), the participation of persons with supplementary insurance remains relatively low (10-12%, see Table 10). Mossialos and Thomson (2004) indicate that what is important in this case, is the reluctance of households to pay a third party, which alters the relationship between patient and provider. They also emphasise that these cultural considerations are of particular importance in countries with relatively high informal payments.

More information on direct health expenditure of households in Poland is provided by the ‚Social Diagnosis‘ survey. Using this data, spending on health services, excluding expenditure on drugs (these are then primarily the costs of visits and tests in clinics and private practices), is analysed. Within three months of 2009, nearly 40% of households incurred such expenses, and their median (for a period of three months) amounted to PLN 300, with average spending at the level of 555 PLN. The amount of these expenses were virtually identical for all households, regardless of their income (see Chart 11). Among households with lower incomes, only the share of those that have borne any expenses was lower.

Chart 11. Expenditure of households on health services (PLN) by income quintiles, 2007



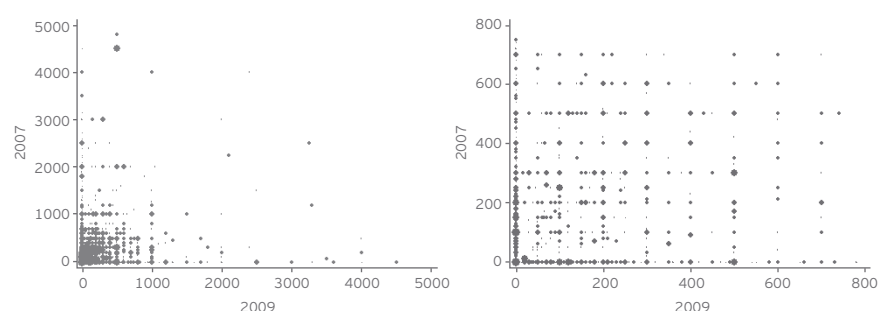
Source: Own calculations based on Social Diagnosis 2000-2009.

Note: p25, p 50, p75 means the appropriate percentiles of expenditure. Size in percentages given for each quintile means participation in households that have borne during the period any private expenditure.

Expenditure of households
on health services

The question arises as to what extent the risk of incurring personal expenditure on health is distributed between households. If these expenditures relate frequently to the same households, the tendency of the remaining households to get insurance will be low. However, if the risk of having to bear medical expenses exists for many households, then buying insurance policies against them seems more likely, especially if the cost of insurance were to be less than the observed median expenditure.

Chart 12. Expenditure of households on health services - 3 months in years 2007 and 2009



Source: Own calculations based on Social Diagnosis 2000-2009.

Note: the right panel is a chart detailing the left panel (limited to spending below 800 PLN).

Private health insurance
and queues

Chart 12 shows how private health expenditure of households developed during two three month periods of 2007 and 2009 respectively. It appears that there is an explicit contrast in expenditure during this time. A significant proportion of households, which in 2007 declared to be spending zero PLN on health services, began to spend several hundred PLN in 2009, although the amount varied considerably. Similarly, households with private insurance expenses in 2007 declared an increase in spending in 2009 just as often as a decrease to zero. This indicates that the risk of having to bear the expenses of private health concerns all households. The amount, possibly reaching several hundred PLN, represents an important part of the budgets for many households, especially those from the lower income groups. From the economic point of view, these households are likely to be interested in buying insurance against the risk of such expenditure.

Private health insurance and queues in the public system

In Chapter 2, the problem of queuing for services in the Polish healthcare system has been outlined. In this section, we answer the question as to whether, and to what extent, the inflow of

additional resources to the system under private health insurance could help to reduce the waiting lists for service. Experiences from other countries will also be reviewed. We also try to analyze the extent to which the queues in the healthcare system result from insufficient funding, and to what extent from problems of insufficient resources in the healthcare system.

In all the countries analysed, where supplementary insurance is the most popular among general additional voluntary forms, the waiting times for health services in the public system are an important factor determining its acquisition. The acquisition of additional policies significantly facilitates the access to health services and reduces waiting times. This has been evidenced by, among others, the experience of Great Britain, Italy, Spain and Ireland. Nevertheless, there is no simple answer to the question as to whether the popularisation of supplementary insurance helped to reduce queues in the public system.

The experiences of some OECD countries show that the additional funds from private insurance had allowed the expansion of private sector hospitals. OECD (2004) gives an example from Australia and Ireland which, despite their similar interest in dual insurance, differ significantly in their waiting times for surgery. This suggests that in Australia, contrasting to Ireland, the development of private hospitals played a significant role (following the dissemination of supplementary insurance). The total availability of beds in hospitals in Ireland is much smaller, which may indicate that infrastructure resources play a more important role for the waiting time for services than the structure of their financing. The experience of Spain, presented in Box 8, did not show any noticeable improvements in access to health services following their popularisation of private insurance. However, the limited resources of health infrastructure in Poland, as in Ireland, should be noted as they could cause a barrier to improving waiting times for access to benefits. It is also necessary to highlight the methodological limitations of these comparisons. It is not possible to capture the pure impact of increased funding on the length of waiting lists. It is more likely that it remains unnoticed because of unchanged length of queues. However, without a shift in funding from the public to the private sector, the queues in the public system would potentially be longer.

Box 10. Health system resources in Poland compared to other EU countries

In terms of the number of hospital beds per 100,000 inhabitants, Poland is above the average for European Union countries. The frequency of hospitalisation is also relatively low, significantly below the median number of hospital discharges per 100,000 inhabitants among the European countries for which data is available. The available information also indicates that Poland has the average time of hospitalisation, putting it at a median level among EU countries. It may therefore be assumed that neither limited infrastructure resources, long hospital stays nor their length should significantly determine the waiting time for availability of this type of health services in Poland.

It is worth noting that both the supply of beds in hospitals and the number of hospitalisation varies considerably between EU countries. There is a statistically significant and relatively high correlation between these, as illustrated by Chart 15. Poland is, in this context, a country in which the number of hospitalisation is relatively low in relation to the number of available beds.

Chart 13. Number of beds per 100K residents

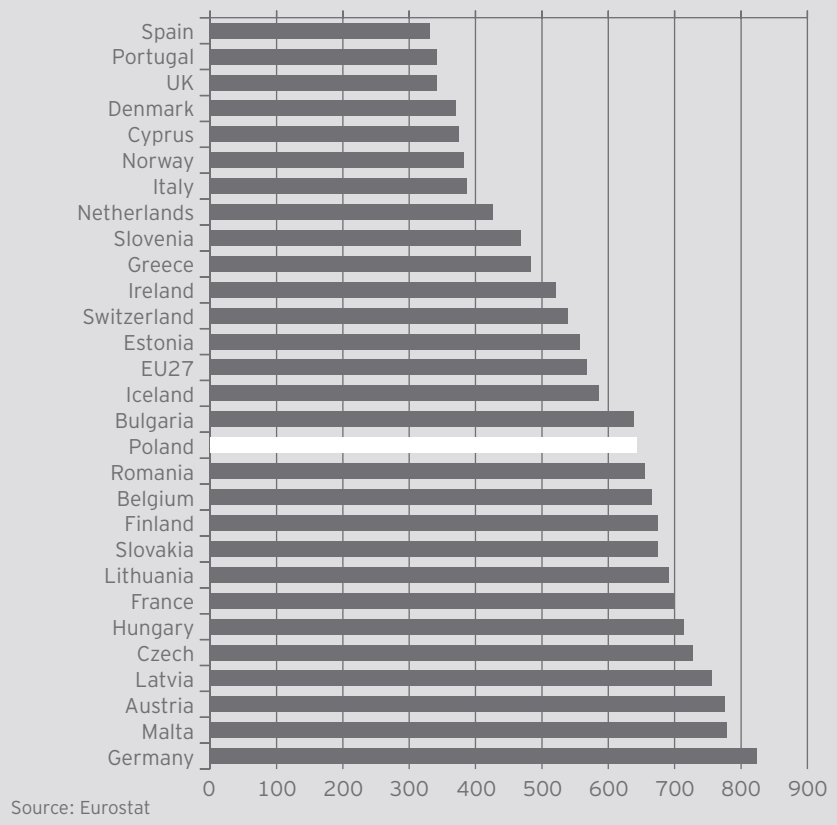
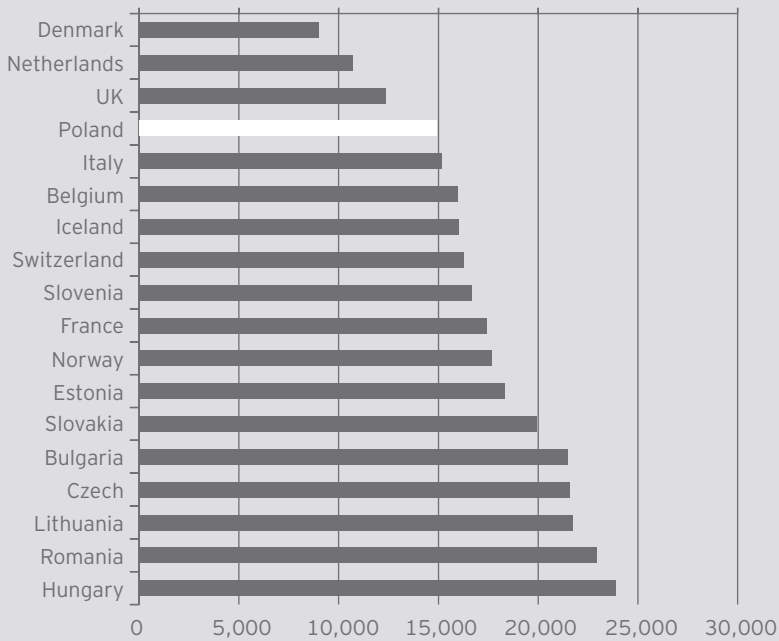
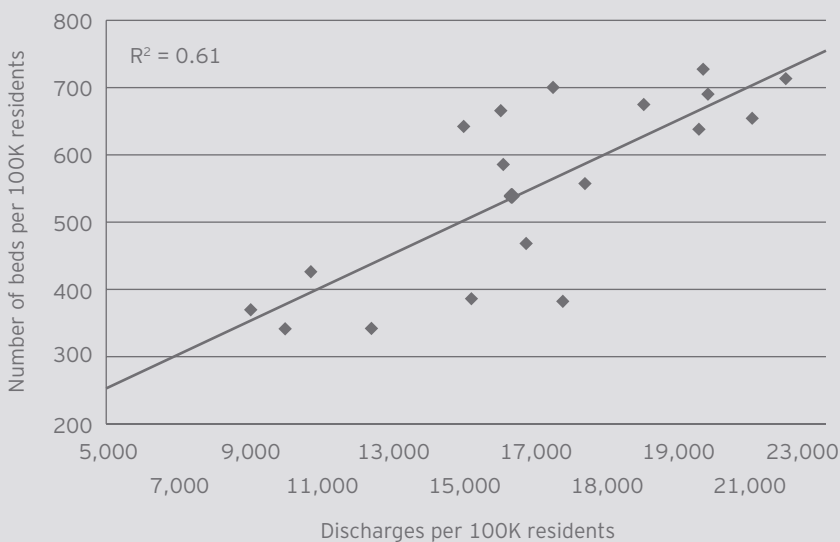


Chart 14. Discharges per 100K residents (number of hospitalization)



Source: Eurostat

Chart 15. The ratio of beds in relation to the number of hospitalisation in the EU



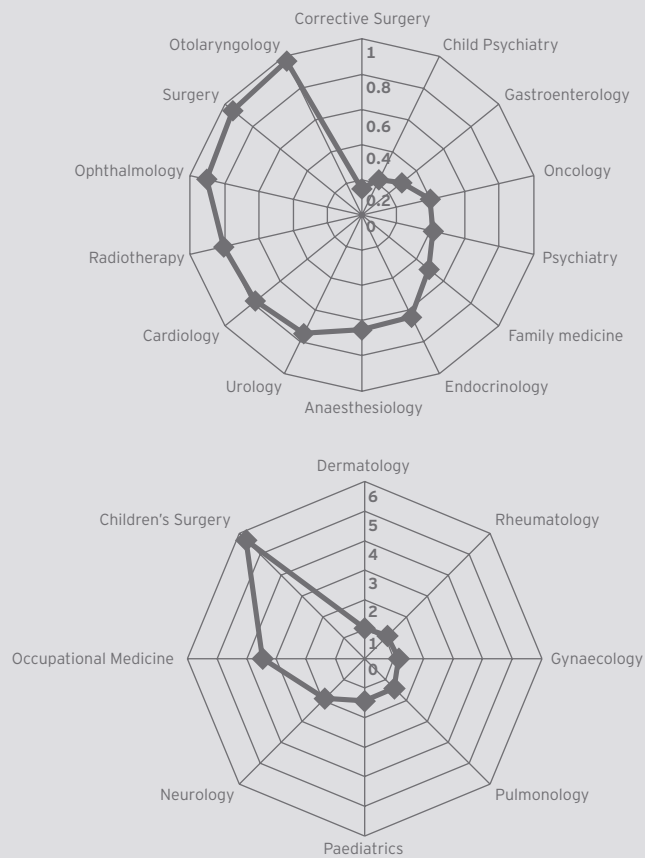
Source: Own calculations based on Eurostat data for 2007-2008.

Where access to specialised equipment is required, its scarcity may be a problem. Available statistics indicate that in comparison to the median for OECD countries (2007), the number of MRI machines in

Poland is three times lower whilst the number of computer tomographs is twice as low. Nevertheless, these differences decreased significantly over the last decade, suggesting that the potential barriers to access benefits may cease to exist relatively quickly.

In terms of the total number of medical personnel (per capita), Poland is below the observed median for European Union countries. Meanwhile, the situation is rather different in the case of specialists. In many specialties, the number of physicians (per capita) in Poland is significantly below the median for the EU-15. There are also those within which there are relatively higher numbers of specialists in Poland. The following charts show the rare specialisations (upper chart), the measure is the relationship to the analogous median number of doctors in the EU-15 and the 'surplus' ones (lower chart).

Chart 16. Specialties with number of doctors per capita, lower (upper chart) and higher (lower chart) than the median in the EU



Source: Own calculations based on Eurostat data.

It is worth noting that some relatively rare medical specialisations are those in which, according to NHF reports, the queues for health services are significant. These include, for example, surgeons or urologists (and also by individual evidence, anesthesiologists). This is not a rule, so it is difficult to assess, without a deeper analysis, to what extent such a structure of medical specialties may contribute to long patient waiting times for some health benefits.

In light of the information presented in Chapter 2 regarding the considerable variation of waiting times between institutions, it can be assumed that the problem may be the mismatching in territorial demand and supply of health services, determined by the uneven geographical location of health infrastructure. A comparison of territorial differentiation of available hospital beds per capita in Poland and Spain (countries of comparable population and number of regions), shows that it is much higher in Poland, having twice as many beds per capita. In Spain, this figure varies between regions from 75% of the average number of beds to 130% of the average, whereas in Poland, the figure varies from 79% in Pomorskie to 164% in Zachodniopomorskie. It must be noted that the review of the Spanish health system in the 'Health In Transition' (EO) series highlighted the high diversity of access, quality and efficiency of health care between the regions.

It is worth adding that one of the reasons why the increase in the number of people buying additional health insurance policy does not necessarily translate into a reduction in waiting times a possible increase in the overall demand for health services. The growing role of private insurance in financing health expenditures does not necessarily shift the burden of financing from the public sector to the private, as it simultaneously raises the total demand for services. As pointed out by the OECD (2004), it is unclear as to what extent the increase in demand is due to structural reasons, such as the aging population, and to what extent to over-consumption of medical services.

Box 11. Proposals for regulation of additional health insurance in Poland

In March 2011, the Ministry of Health presented a new draft law on supplementary health insurance (the previous parliamentary one by Platforma Obywatelska of 2008 did not live to go through the third

reading of the Parliamentary Committee on Health). The main aims declared in the project bill were to ensure the beneficiaries a proper implementation of their rights arising from a system of universal health insurance system and to provide a framework for further development of supplementary health insurance in Poland. Furthermore, in accordance with the objectives, these solutions were designed to improve the availability of health services, increase the level of funding for health care and improve benefits. Its authors also point out that the proposed regulations would allow health care providers a more rational management of (freed) resources.

The Act clarifies the definition of supplementary health insurance and the nature of the benefits offered. However, it does not introduce any significant systemic regulations. For example, insurance contracts may be agreed upon for either a fixed term or an undetermined period. The proposed act allows for indexation of contributions, while requiring that the terms of their indexation be declared in the general conditions of insurance. The proposal also demands a number of information requirements in terms of conditions for the provision of benefits and in terms of determining their standards.

The draft law regulates the provision of health services under health insurance by those service providers who have signed contracts for the provision of publicly funded benefits. The main condition is the minimum contract fulfillment level with the NHF at 90% (rising), to allow the provision of health benefits under a contract with a private insurer. Providers are required to notify the appropriate branch of NHF on the conclusion (or termination) of a contract with a private insurer. They should also provide detailed information on the benefits that it covers and on waiting lists for their services (to be funded from both public and private insurance). Furthermore, the Act awards penalties (including financial sanctions) to units providing services under private insurance contracts, for the improper use of an NHF contract.

The bill also provides tax relief for expenditure on private health insurance (deductible from income) and the possibility of financing them by company-held social funds.

5.5. Summary and conclusions

The review of experiences of other countries in the functioning of additional voluntary supplementary insurance shows that some OECD countries can be used as reference points for the situation in Poland. In the Southern European countries (such as Italy, Spain, Portugal or Greece) and the UK supplementary insurance developed next to the solutions (and problems, especially long waiting lists for certain benefits) operating in the basic system of health protection⁴¹, increasing the range of services provided to patients and allowing faster access to health services. Based on the experiences of these countries, we try to draw conclusions for the potential development of the 'double' insurance system in Poland.

In the countries of interest, 10-15% of the population have supplementary insurance and this proportion has remained relatively stable over the last decade. In Poland, the interest in acquiring additional health insurance in 2007 was declared by 19% of households, which corresponds to approximately 21% of the total population (nearly 6 million adults in private households). This interest indicates a substantial potential for additional insurance in Poland. However, the question surrounding the causes of such a large gap between declarations and the real demand for additional insurance (and health subscriptions, which in the Polish conditions largely reflects the demand for additional insurance) remains. Coincidentally, in 2010 it was estimated that 2-2.5m policies and subscriptions were purchased (i.e. 7-9% of the adult population). Analysing the profile of supplementary insurance purchasers in the described EU countries and extrapolating the results on Poland, one can assume that approximately 5-8% of people (educated, higher incomes, living in larger towns) would take out insurance, which corresponds to the current size of the insurance market. It is difficult, therefore, to clearly indicate the quantitative potential for further development of this market. Also, from a financial perspective, the value of the current market for subscriptions and health insurance policies, estimated at 2-2.5 billion PLN in total, corresponds in terms of share in total expenditure on health to the sizes observed in most EU countries where the voluntary supplementary insurance dominates. Thus, it appears that the primary factor in the growth of the value of the market for additional health insurance would be the increase in GDP and household income. One factor increasing the chances for the development of a health insurance market in Poland is the relatively high share of private, out of pocket' expenditure in total expenditure on health. The experiences of OECD countries do not indicate a relationship between the out-of-own-pocket spending and expenditure on private

health insurance. However, the relatively equal distribution of the risk of incurring the expenditure of several hundred PLN within 3 months (the amount representing a significant part of the budgets for most households) suggests a great potential of the insurance market in Poland. From an economic point of view, it can be said that households are likely to be interested in insurance against such risks, minimizing the need to incur high private spending on health. Economic arguments, however, may not necessarily prevail, as experience of countries such as Greece demonstrates, where habits are important for patients, for example, being able to make payments directly to the doctors providing treatment (including informal payments) and not third parties (under the insurance contract). It should be considered that such habits may also play an important role in Poland, limiting the possibility of replacing private insurance spending.

In the presented draft law on supplementary health insurance in Poland, a tax relief to allow the deduction of expenditure on health insurance from taxable income of individuals has been proposed. Aside the impossibility of its introduction in the current budgetary situation and its coverage under the EU's excessive deficit procedure, it is difficult to predict how the introduction of such incentive would help to increase demand for insurance or whether it would be a cost-effective solution for public finances. Arguments for the introduction of tax relief are based on the assumption that such reductions increase the demand for voluntary insurance and, in turn, reduce pressure on public expenditure on health. Unfortunately, there is no convincing support for either of them. Tax relief might not significantly increase demand and instead become only a 'reward' for the existing customers, resulting in a deadweight loss in terms of efficiency, whilst marking a tangible loss to the public finances. Moreover, the studies mentioned and the experiences of other countries indicate that supplementary insurance does not necessarily reduce the financial demand for services from public funds. Further arguments against tax relief on voluntary private health insurance policies relate primarily to the associated administrative costs, as well as the fact that it distorts price signals in the market. Furthermore, due to the characteristics of people buying insurance, this tax relief would primarily benefit the those on higher incomes, which could further increase inequality (an individual on a low income may wish to purchase private insurance, yet may not be paying the tax from which relief could be deducted). The presented experiences of other countries suggest that insurance policies purchased by employers seem to be more successful in widening the range of the population covered. Lower costs of policies offered to employees, resulting from lower administrative costs (economies of scale) and frequent risk assessments for groups of employees rather

than individuals, support their popularity and the potentially greater effectiveness of this kind of support. The demand for policies by employers is less dependent on the perceived quality of public services and changes to those. The option of spending money from company welfare funds, as proposed in the draft law, is a move in this direction. However, this is arguably limited solely to support medium-sized and larger companies (with least sensitivity to financial incentives, according to the study mentioned).

The market for supplementary insurance raises concerns about the risk of 'cream-skimming'. For example, the selection of those with the lowest health risks. Insurers may seek this both with their marketing activities and pricing strategies such as consideration regarding information about the health of the applicant or its approximation. However, should regulations prevent an individual assessment of rates based on risks, those with higher risks will be likely to prevail among the insured population, provoking an increase in premiums, or creating a spiral of insolvency for the insurer. Solutions limiting positive selection only function in markets where additional insurance is a substitution and/or where it covers a significant portion of the population. In countries where the predominant insurance is supplementary, it is rarely subjected to regulation. Interestingly, the proposed draft act for the health insurance in Poland appears to be heading this way, by allowing insurers the freedom to determine the contracts and preclusion of risks, etc. From a regulatory perspective, it seems that it will be important to monitor the enforcement of the requirements necessary for transparency and clarity of insurance offer and general insurance conditions.

Studies indicate that the development of the private insurance market may entail the risk of subsidising the private sector in the case of provision of services to those insured by public providers. Avoiding it requires a fair valuation of services and benefits. Another indicated risk is the increase in public spending, resulting from more frequent use of (expensive) services, 'induced' by visits within the private insurance. There is no possibility of *ex ante* evaluation, whether the risk actually occurs in Poland and how big it is, it seems that the evaluation of the developments and the assessment of their advantages and disadvantages will be crucial. The most significant risk is associated with the often raised argument on the increase in inequalities in access to health services between those who do and do not use additional insurance policies. It can be assumed that these concerns may be smaller in Poland for two reasons. First, any increase in funding in the system is likely to increase the total supply of health services, improving the situation of the uninsured⁴². The analysis of

infrastructural resources presented above, suggest that they should not be a barrier to the accessibility of health services, pointing to the role of financial constraints. In addition, a wide range of benefits guaranteed in the basic basket also reduces concerns about issues of equality in access to benefits.

The potential for further development of the voluntary insurance sector in Poland will depend primarily on the regulatory changes (e.g. changes in the availability of guaranteed services, competition in the base system), quality of service in the public system and the wealth of society. It is possible that from the perspective of its size, the current institutional conditions (wide range of benefits provided under the public health, the risk of selecting policies by insurers, as well as the supposed reluctance of society to use the insurance) will cause no significant possibilities to increase the role of additional health insurance policies in total spending on health. However, the consequences of demographic change (such as expenses related to long-term care) and technological developments in the field of healthcare, can be difficult to be met by the public sector and its funding through taxes and contributions. Therefore, individual financing / co-financing by private insurance may need to be revised in the future.

The latest proposal of legislative changes in private supplementary health insurance in Poland (March 2011) does not introduce significant changes to the system (the previous, 2008, had a much more 'revolutionary' character). However, it should allow for the establishment of a legal framework for the functioning of private insurance whilst adhering to the arrangement of the present system. The scope of the proposed regulation seems to capture the direction in which the health security system, and additional health insurance in Poland, are to develop. This would entail universal access to a relatively wide range of health services in the general system and the developed supplementary insurance system, allowing for faster access to medical services. Simultaneously, some provisions of the proposal may raise concerns with regard to excessive regulation (e.g. whether the National Health Fund should be given access to information on the supplier contracts with private insurers).

In conclusion, we recommend the adoption of the current project submitted by the Ministry of Health, with the relevant amendments (excessive powers NHF). This step must, however, be complemented by the following measures to:

- ▶ explicitly allow health care providers (SPZOZ and IHCU run by public entities) to negotiate contracts with payers other than NHF⁴³ and

provide appropriate regulation of these opportunities, protecting the public patients. This problem was undertaken in the draft law on supplementary health insurance from March 2011,

- ▶ monitor the effects of the law with regard to the impact on demand for health services and the problem of negative and positive selection,
- ▶ emphasise measures to promote and raise awareness of the insurance as a financial product,
- ▶ take steps to ensure the most transparent and comprehensive information and comparability of different insurance offers is available.

Moreover, the introduction of tax relief on additional health insurance is not recommended. This is because of the uncertain consequences of such a solution for the insurance market and public finances.

It is possible that in the short term, the consequence of the introduction of the proposed Act on additional health insurance would be a partial transformation of the currently operating subscriptions to medical insurance policies (which would mean little real change in the healthcare system). Nevertheless, in the long term, the implementation of such recommendations would increase the chances of further development of supplementary insurance for the benefit of the Polish system of health protection.

Recommendations

6. Scenario three - competition in the base system

6.1. Introduction

In discussions on the possible directions change in Poland could take, a total modification of the current system of health protection and the introduction of a wide range of competition, similar to arrangements operating in the Netherlands, was often proposed⁴⁴. In this section, we will attempt to explain what this solution consists of. We will also summarize briefly the possibility of transferring it into the Polish reality, showing the associated opportunities and risks.

The health insurance system in the Netherlands, in its structure, resembles the solutions adopted in the USA and Germany⁴⁵. In these countries, private health insurance plays a significant role in providing basic health insurance which, under the public system, is either only offered to certain groups of people, as in the USA and Netherlands, or it is non-compulsory and permits people to opt out (as in Germany, for people on higher incomes). Therefore, PHI in these countries does not fit the typical division presented in the introduction to the study and instead combines features of substitutive, complementary and supplementary insurance. It is worth adding that, despite these similarities in the construction of the health insurance system between the Netherlands and the U.S., the results and evaluation of their operation are radically different (OECD, 2004). In particular, in the Netherlands there are virtually no people without basic health insurance, while in the U.S. their share reached 15% of the population in 2008.

6.2. Health insurance system in the Netherlands

The Dutch insurance system consists of three pillars (dutch: *compartimenten*):

- 1) AWBZ, compulsory state insurance for long-term care, providing care for the insured in the event of chronic diseases associated with significant financial cost. This insurance is financed mainly by contributions dependent on income, and use of services within the AWBZ associated with co-payments for them,

2) Zvw, Compulsory basic insurance with a private insurer.

The insurance premium is composed of two elements: (a) the linear contribution, paid directly to a specific insurer, independent of individual risk, (b) income-dependent premiums, paid by the employer and sent to the National Insurance Fund⁴⁶,

3) complementary voluntary health insurance with private insurers, for additional services not covered under AWBZ and Zvw, insurers enjoy great freedom in determining premiums.

Those with the lowest income can receive support in the form of 'health benefits', aimed at partially offsetting the costs of compulsory insurance (AWBZ and Zvw). The budget also funds research, prevention and part of the health premiums for children.

The first and second pillar of insurance are subject to strict regulations. First of all, the premium on AWBZ depends on risk factors and the 'intensity of care', estimated individually for each patient. Under the second pillar, the National Insurance Fund distributes premiums collected between insurers while taking into consideration a risk equalization scheme (*ex-ante* and *ex post* compensation). Family doctors are paid using a complex system of both a fee-for-service charges and capitation.

The government also establishes the basic package of services within the Zvw and AWBZ insurance. For all services, apart from family doctors (and some exceptions, such as maternal care) there is a form of co-payment which is known as *deductible* (excess deduction, i.e. the need to cover a certain fixed amount out of one's own pocket). Insurers are required to offer a basic package of benefits (cannot exclude any of the applicants), and can compete only in quality and price of the services.

There are also regulations regarding the contracting of services by private insurers. They are based on a system of DBC (*Diagnosis Behandeling Combinaties*), reminiscent of the concept of homogeneous groups of patients (though more complex). Some of the prices of services defined by the DBC are determined by the state, while part of them is negotiated with insurers by the service providers (their share is gradually increased)⁴⁷. Insurers also have the right (from 2009) to selective contracting. There are also 'tariffs' for patients receiving a service not previously committed with a provider. At the primary care level, negotiations are conducted by committees of primary care providers with the largest insurer in the region (in order to facilitate

negotiations). There are other rules of contracting, which apply to long-term care (AWBZ insurance) and these are based on tenders.

6.3. System performance evaluation

The health security system in the Netherlands is highly rated in the literature. For many years, it has occupied a prominent place in the Euro-Canadian Health Consumer Index (Ben and Björnberg, 2010)⁴⁸ where primarily, patient rights, access to information, the overall (health) results of the system and the availability of drugs are highly rated. The waiting time for services is rated less highly, although its assessment is still relatively high⁴⁹. An EO overview (*Health In Transition 2010*) emphasised the strong position of well organised primary care (which prevents unnecessary spending on expensive specialist care level, and coordinates coherent patient care very well) with extensive rights for patients.

Simultaneously, the authors of the EO review assessed the quality of services in the Dutch healthcare system and its effectiveness⁵⁰ as average, compared to other rich countries (spending a similar percentage of GDP on health care, i.e. 8-10%). However, they also stressed that it is too early for final evaluation and that time will tell whether the introduction of regulated competition has improved the overall performance of the healthcare system in the Netherlands. This will depend on the role played by the insurers of the new system (their task being to acquire the best services and through their choice of suppliers to affect the quality of services on the market) and patients (whose selection of insurers influences the selection of suppliers). Więckowska (2010) appreciates the Dutch system of competition while pointing to some of its drawbacks. These mainly include the threat of selective risk selection by insurers and reduced incentives to substitute outpatient care with hospitalisation.

6.4. The possibility of introducing competition in the base system in Poland

Więckowska (2010) examines the extent to which the Polish system of health protection complies with the conditions that would allow (based on the experiences of the Netherlands) the improvement of system efficiency through the introduction of regulated competition. She lists the many areas that require special intervention and regulation, including proper care to ensure non-discrimination and the building of a risk equalisation system (with which Poland

has no experience). However, this requires further research into the determinants of the use of health services (mainly chronic diseases). Only partially fulfilled, are the conditions regarding the freedom of contract (of payers and service providers) and the transparency of the system. The author also lists the barriers in accessing information to enable Polish patients to assess the quality of the system. The task of the authorities, responsible for regulation, would also require both institutional and technical support.

Reflecting on the possibility of transferring the experience from the Netherlands to Poland, it should not be underestimated that the system of regulated competition was *de facto* built over many years (even decades), with its institutions developed over a gradual period of time⁵¹. The very reform of 2006, establishing the present order, did not have to create new entities (or virtually any new institution) as they had already been in place for decades. They simply began to function in a different way. Moreover, improvements to the system continue as does seeking streamlining solutions (Schut and Van de Ven, 2011). Opinions as to the success of the changes made are divided (Maarse and Paulus, 2011, Schut and van de Ven, 2011). For example, the reform of 2009 modified the long-term care payment system, introducing an excess deduction while introducing financial compensation for the chronically ill and disabled. Reform in the DBC system has also been planned for 2011.

6.5. Summary and conclusions

The Dutch system of health protection is one of the most 'original' ones. It combines the universality of insurance with a strong involvement of private entities and as such, is and will likely to continue to be an interesting topic in health economics. From the standpoint of the present report, however, the most important question would be how to use the experience of the Netherlands in Poland?

The answer to this question is complex. To begin with, in light of the few existing studies, it is too early to decide whether the introduction of competition in the base system in Poland would be a good idea. The opportunities would include the possible development of the supplementary insurance market and increased efficiency of expenditure. Patients would also gain the real possibility of choosing their insurance and healthcare profiles.

There are also obvious risks associated with such a scenario, such as the challenges of regulation and supervision for public administration

and the low public support for such change. Here, an important reference might be the 1999 retirement system reform. This lesson clearly demonstrates the importance of comprehensive reform, where no elements are left to be introduced later⁵². Such an 'incomplete' shift in the system causes 'malfunctions', which in turn prove a political risk for the entire reform. Indeed, in 2011 the reform was partially withdrawn. Therefore, when introducing competition in the base system, Poland ought to make sure the reform is implemented so that all elements of the new system are in place. These include the means for balancing risks and supervision over insurance companies. The example of the Open Retirement Funds demonstrates that there is little support in the society for solutions engaging private entities in the sphere of social policy.

The Dutch system itself is still undergoing changes and has not yet stabilised. It may yet point to new institutional challenges and cause potential doubts. The final decision regarding the introduction of competition in the base system should, therefore, be made after taking into account the evaluation of the functioning of the Dutch system. This will be possible in a few years. During this time, further analysis and observations of the system of competition in the base system in the Netherlands should be performed and the recommended changes introduced.

Regardless of whether Poland will at some point introduce regulated competition in the base system of insurance, modelled on the Dutch system or not, the requirement for transparency and flexibility of the medical services in this country should certainly be modelled on the Dutch system. Therefore, we recommend that:

Recommendations

- ▶ (as in the previous chapter) Health care providers (IHCU and IPHCU operated by public entities) should contract with payers other than the NHF⁵³ and appropriate regulation of these opportunities should be created,
- ▶ the system of service valuation ought to be stabilised - the Act on the Agency of Tariffication dated July 2011, which transfers the powers in this area from the NHF to another (newly-created) institution, is an essential step in this direction. However, it would be equally important to ensure that the process of valuation itself would be fair and independent,
- ▶ better information for the patient about medical service-providers and insurers should be available. Following the Dutch model we recommend: (i) the creation of a website to provide information

to help in the selection of providers and insurers. This should include prices of services, waiting times and their quality (the starting point may be the present page of the NHF) and (ii) the establishment of information points for people unable to access the Internet.

The regulatory powers on the Ministry of Health - NHF axis should be clearly defined (for example, the postulated MoH responsibility for health policy and for the NHF funding benefits only; the exemption of the NHF from the valuation of benefits), which would end the 'dualism' of power. Simultaneously, substantive and financial support for both institutions in fulfilling their functions should be given.

A common feature of these instruments is that they would improve the functioning of the Polish system in its current structure, whilst significantly facilitating the implementation of competition in the base system in the future, should it be decided. The final element would be the introduction of the risk balancing measures⁵⁴.

As part of work on the introduction of competition in the base system, we recommend that pilot tests be carried out⁵⁵. Such tests could be carried out on a selected group of people, for example in a chosen region. This would help identify potential problems and adapt the Dutch-modelled solutions to Polish realities.

7. Summary and recommendations

In this report, three scenarios of institutional changes to the financing of health care in Poland have been examined. These include the introduction of co-payment for medical services in the base system, regulation and support for the development and implementation of supplementary insurance, and competition in the base system modelled on the Netherlands.

Based on an international review and the analysis of available data for Poland, it has been found that each of the directions for change represents an opportunity to improve the functioning of the Polish healthcare system. In the case of co-payment, it consists in increasing the patient's individual responsibility for medical expenses and, to some extent, shortening queues and generating additional resources in the base system. Organising and supporting the supplementary insurance market, in turn, would provide an inflow of funds into the system and reduce the pressure on the public system. Finally, the Dutch system, compared to the Polish, is characterised by high transparency and efficiency of health services. In this respect, this model should be followed. However, the issue of competition in the base system is left open.

It should be emphasised that among the scenarios analysed, only co-payment can be accomplished with relative ease. The others require a series of solutions, some of which would indeed reorganise the Polish healthcare system, and be desirable regardless of the direction of further reforms.

The recommendations arising from the study are as follows:

1. The introduction of limited co-payment for medical services in the base system, involving the introduction of fees for professional services and hospital stay, with a relatively small range of subjective relief.

Reason: Such a solution should slightly shorten the queues that occur in the healthcare system in Poland, as well as generate additional revenues. In determining the rate and scope of co-payment, account should be taken of two objectives which can be difficult to reconcile: To preserve the purpose of co-payment (which would be rendered meaningless by too broad exemptions) and yet not cause social resistance. Given the low public support for co-payment and

recent cases of failed reforms of this kind in Hungary and Slovakia, the recommended solution is moderate (no co-payment for primary health care, a mild co-payment rate). The proposed reform would increase the patient's individual financial responsibility for their choice of treatment, and yet could become socially acceptable. It would not prevent possible future changes, such as the introduction of co-payment for primary care physicians, without the change of the rule of remuneration to fee-for-service (this is essential in implementing the reform of co-payment for PHC). The co-payment revenues should flow directly to the NHF and not stay at the service providers, so as not to create new interest groups around this mechanism. At least in the initial period of co-payment, it should not be possible to insure against risks of this type of cost, so as not to impair the influence of this reform on the demand.

2. Explicitly allowing health care providers (IPHCU and IHCU run by public entities) to contract with payers other than the NHF. Appropriate regulation of these opportunities should be put in place to protect the ,public patients'.

Reason: Increasing the service providers operational capacity would improve their financial situation and increase the flexibility of the medical service market. It would also be a factor in the development of supplementary insurance. Freedom of contract between providers and insurers is also a prerequisite for the proper functioning of competition in the base system, should it prevail in a few years time (Więckowska 2010).

3. Stabilise the system of valuation of benefits through the implementation of the Act on the Agency of Tariffication and fair practice of valuation.

Reason: This solution would reduce the scale of waste in the base system. An efficient system for the valuation of services would also help prevent the negative effects of supplementary insurance (subsidising the private sector by the public sector). Should competition in the base system be implemented in Poland, then this would reduce transaction costs for insurers and service providers.

4. Establishing a system of information on healthcare services and insurance options, both online and using traditional methods.

Reason: The current information system (the NHF website and the NHF offices) needs to be improved. In the current institutional system, this would increase patient comfort and allow for better allocation

External contracting
for HCUs

Valuation

Information system

MH vs. NHF

of benefits. An appropriate information system would strengthen the position of the patient on the supplementary insurance market and would be essential for the introduction of competition in the base system (Więckowska 2010).

5. To clearly specify the division of regulatory powers in the system between the Ministry of Health and National Health Fund, and the substantial and financial support of both institutions in fulfilling their functions.

Reason: The current legal situation is unclear and the development of a private insurance market without a proper regulatory and supervisory system would either be impossible or detrimental to the healthcare system (the risk of market failure).

Act on supplementary health insurance

6. The adoption of the (amended) Act on supplementary health insurance and monitoring its effects.

Reason: Work on the Act to regulate the area of health insurance has been going on for more than 3 years. Meanwhile, there were two major bills (January 2008 and March 2011), the first of which (parliamentary, by Platforma Obywatelska) did not go beyond the parliamentary Commission of Health (where for a long time it had the status of 'before the third reading'). The second was announced by the Ministry of Health in March 2011 and public consultations were held and completed in June. The project has not been submitted to Parliament yet. In the absence of law regulating the additional health insurance market, it developed and is still working without proper regulations. It is necessary to determine its framework, primarily the definition of the additional health insurance, and safeguard the interests of 'private' patients. Simultaneously, we do not recommend the introduction of tax relief on additional health insurance. This is due to uncertainty surrounding the effects of such solutions on the insurance market and the situation in public finances.

Raising awareness on insurance

7. Placing emphasis on campaigns to raise awareness of the importance of insurance as an alternative to and the protection against out-of-own-pocket expenses.

Reason: Financial awareness of the society remains low and there is still a reluctance to use insurance, as a financial product, This can be seen in both the analysis of private health expenditure presented in the report, as well as in information about the scale of uninsured homes and households presented, for example, after damages caused by weather phenomena. The cooperation of all stakeholders, including government,

local government organisations and insurance companies, is important to spread knowledge of insurance, the possibility of matching the best offer, simplification of products and the provision of contracts, etc.

8. Creating electronic queue management in the base system.

Reason: SAO reports indicate a huge inefficiency in the system of queue management in Poland. Patients, contrary to applicable laws, are not assigned to the appropriate medical category and their benefits often tend to be awarded in breach of the order of applications on the waiting list. Furthermore, collected data is defective (for example, lacking a date of registration, which negates the idea of waiting lists). Information about the very procedure with regard to waiting lists is rarely available for the general public. The limited scope of computerisation and database inconsistency heighten all of these problems, to the detriment of the patient.

The experience of other countries suggests that there are opportunities to improve the functioning of the Polish healthcare system by introducing new arrangements for co-payment, insurance and perhaps additional competition in the base system of health protection. However, it appears that the way to significant institutional changes (except for co-payments) requires numerous improvements to the system. These improvements must be adhered to first, each of which may seem small, but which collectively have a huge impact on the functioning and, in fact, determine the success of major reform.

Electronic queue
management system

Endnotes

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2. In the same survey participants generally responded positively when evaluating the availability of primary care physicians, 2/3 believe that the terms of the treatment in the NHF insurance are good. The most critical views of health professionals were expressed by respondents using only private healthcare.
3. Reports available at www.nik.gov.pl.
4. This is a consumer ranking of healthcare systems based on the Swedish consumer index (of healthcare systems), published since 2004. Currently, it includes an assessment of 34 countries, including all 27 EU countries. It takes into account five areas: consumer's rights and access to information, waiting time for provisions, treatment outcomes, availability of healthcare, and availability of drugs.
5. The impact of demographic change on increased spending on health care is a complex issue. Many analyses clearly indicate that with the lengthening of life the expenses are shifted in time (with the vast majority of those falling in the last year of life). The increasing unit cost of treatment is a greater healthcare spending growth factor than just the aging of the population (Breyer et al. 2010, Polder et al. 2006, Steinman et al. 2007, Zweifel et al. 2009).
6. The draft law on voluntary supplementary health insurance from 2008 (print 293; introducing an insurance market covering, for example, co-payment and paying for services outside the basket of guaranteed health care benefits), the draft law on additional health insurance from 2011 (presented in Chapter 5), or the proposal of the Polish Chamber of Insurance (2009, on the introduction of regulated competition between third party payers in the health protection base system).
7. See: Więckowska (2010).
8. The state budget funds primarily health policy programs, highly specialized services, medical emergency. LGUs finance for example preventive programs.
9. From the justification for the draft law on additional health insurance from March 2011.
10. It is also the highest measured as the amount of expenditure in USD per capita.
11. It is worth noting that these figures do not include expenditure under healthcare subscriptions.

12. Aside from the issue of debt - and further indebtedness of medical service providers and the unresolved problems of restructuring of many of them.
13. Excluding declared unmet needs for dental prosthetics, rehabilitation and sanatoriums stays.
14. Detailed results are available from the authors.
15. In addition to the ex-post moral hazard phenomenon, the ex-ante moral hazard is also distinguished, which means that a person with health insurance takes fewer preventive measures that could prevent him or her from becoming ill (cf. e.g. Zweifel, Manning 2000). The remainder of this report only deals with ex-post moral hazard.
16. An interesting result of the model is that the number of variants in equilibrium is higher than optimal.
17. Another effect may be a simple transfer of costs from public to private sector without changing the total health costs. However, this does not qualify as an advantage.
18. Assuming that there are no changes on the supply side of medical services - more on this in Box 5.
19. On co-payment see also Sowada (2004).
20. Although less (as to module) than earlier studies about Korea indicated.
21. Woch (2009) found no relationship between the co-payment regime and the aggregated expenditure on prescription drugs, but his study is based on international comparison and not the micro study which, as argued in Box 5, may affect the outcome.
22. In 2003 among the EU countries, only in Sweden, there was an ER co-payment (Thomson i in 2003).
23. Two works by Vardy et al. (2006, 2008) have taken on the implications of the introduction by the largest insurer in Israel in 1998 co-payments for visits to primary care physicians and specialists. Comparison of the number of beneficiaries in 1998 and 1999 revealed significant decreases (4-6% in case of subsequent visits 20%). The authors suggest that this effect could be short-term - the results of their second study (2006), a survey conducted in 2000-2001 suggest that the impact of decisions on co-payments for the use of medical services has been assessed as low. Unfortunately, both works are not comparable in terms of methodology, so it is difficult to verify this conclusion.
24. According to the „Survey of Income and Living Conditions“ (EU-SILC).
25. In Portugal, there are also a lot entitlements to the exemptions from fees. Unfortunately, the HiT report does not specifically mention them, stating only that in 2006 as many as 55% of the citizens were authorised to benefit from an exemption.
26. The intensity of accepting co-payment for medical services or hospital visits is strongly regionally differentiated - most people declare their acceptance of such in Lubelskie (over 30%), the least - in the western Polish regions (Silesia, Lower Silesia, Lubuskie and Wielkopolskie), which

- does not exceed 20%. It is difficult to explain the regional distribution of attitudes to co-payments.
27. At the same time, if the use of hospital care in the previous year significantly and adversely affects the acceptance of co-payments, reporting unmet needs was irrelevant.
 28. Referred to as 'benefits contracted separately' in the NHF report (2010).
 29. It would be best to exclude only addiction treatment from co-payments, but because it is always included in the statistics for psychiatric care, this would prevent us from estimating the fiscal effects of reform.
 30. As with psychiatric care and treatment of addiction, here it would be better to exclude obstetrics and leave other types of gynecological care - unfortunately, data does not allow for this.
 31. In Europe, insurance against co-payment also plays a (much smaller) role in Austria and Italy.
 32. The Irish system is described in more detail in Box 8.
 33. Source: HiT report for France (2004), Slovenia (2009) and Colombo & Tapay (2004).
 34. A somewhat similar solution is used in Austria.
 35. For example, in the UK, group insurance is much cheaper than individual. Furthermore, the price growth is lower (Mossialos and Thomson 2004).
 36. The explanation of this approach may be to avoid differentiation of access to health services and fear of subsidising the private sector with public resources (Flood and Archibald 2001, after EO HIT Canada 2005).
 37. Third Directive on insurance other than life insurance.
 38. Such a solution exists, for example in Belgium, but refers to the substitutive insurance. It was also introduced in Slovenia, where practically the whole population has a complementary insurance (according to Eurostat nomenclature, i.e the cost of insurance covering co-payments for health services). Moreover, regulatory measures aimed at balancing the risks between insurers operate primarily where insurance is substitutive, and include basic health services.
 39. In Poland, these correspond to a large extent to the system of subscriptions.
 40. This information is part of the experience of some countries, such as Ireland, Spain, Italy, Portugal and the United Kingdom, which show that people in good health are more likely to purchase additional voluntary health insurance. This is maybe a result of the relationship between better education and the acquisition of PHI (see: OECD, 2004).
 41. Relatively similar to the Polish system: the differences relate primarily to the financing structure - in these countries, public health services are financed primarily with taxes.
 42. Therefore, the possible negative effects of supplementary insurance outlined in the theoretical chapter do not seem to be a real threat in Poland.

43. Commercial services are also already offered by public IHCU, but the legal situation is not clear.
44. One of the proposals which are part of this scheme is the concept of PII (2009).
45. With the provision that the health care system in the U.S. is not based on the principle of universality and solidarity.
46. Revenues from both sources have a similar proportion (i.e about 50%) in total revenues from contributions.
47. According to the EO Netherlands (2010), the DBC system is still unstable, which has led, among other things, to an over-financing of hospitals. A large number of categories of DBC complicates negotiations - work is underway for a tenfold reduction in their numbers.
48. See comment 3.
49. Here, such countries as Austria, Belgium, Cyprus, France, Germany, Iceland, Switzerland fare better.
50. Measured by indicators such as mortality (e.g in-hospital mortality or the avoidable death rate).
51. In the years 1988-1994 there was discussion on the main principles of the reform, and the first pro-market changes in legislation were introduced. In the years 1994-2000 work took a slower pace, but there was lot of technical and institutional solutions for regulated competition. In the period 2000-2006, the work gained momentum again, leading to the reform in 2006 (Helderman et al. 2005).
52. In the retirement system reform, several important aspects were to be introduced gradually. As a result, some professions were not included in the universal system, early retirement has not been properly regulated and the system of supervision over the Open Retirement Funds was not properly implemented.
53. See comment 42.
54. First and third points come directly from Więckowska's (2010) study. The implementation of the second point is essential if the system of negotiations between payers and providers is to be efficient. The fourth point is a condition for the state's role as regulator and controller of health insurance and medical services market.
55. Such experiments are a popular way of designing optimal solutions in the Healthcare system (see the RAND experiment in the US, described above).

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Authors

Iga Magda

Iga Magda is an assistant professor at the Department of Economics I, Warsaw School of Economics and Director of the Research and Social Innovation Program at the Institute for Structural Research. She is an author of numerous publications in the field of labour economics, human capital, labour market policies and social policies. In the past she has worked at the Ministry of Labour and Social Policy, where she was responsible for labour market analysis. Her research interests include labour economics, economics of health and social inequalities.

[iga.magda@sgh.waw.pl]

Krzysztof Szczygielski

Krzysztof Szczygielski is an assistant professor at the Department of Economics of the Łazarski University in Warsaw and a CASE - Center for Social and Economic Research collaborator. He has participated in many projects under the EU Framework Programmes. His research interests include market organization, economics of innovation and research, political economy and economic policy. He has been awarded the Ministry of Science and Higher Education scholarship for outstanding young scientists.

[krzysztof.szczygielski@case-research.eu]



SPRAWNE PAŃSTWO
PROGRAM *ERNST & YOUNG*

Better Government Programme
Ernst & Young Poland
Rondo ONZ 1
00-124 Warszawa
tel. +48 (22) 557 70 00
fax +48 (22) 557 70 01
www.bettergovernment.pl