



Competition between payers in the base health care system



SPRAWNE PAŃSTWO
PROGRAM *ERNST & YOUNG*

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Warsaw 2010

Graphic designer:

kotbury.pl

Report developed under the Better Government Programme for Ernst & Young Polska spółka z ograniczoną odpowiedzialnością sp. k.

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Health care systems meet similar challenges all over the world and constitute one of the most important subjects of political discussions, as well as considered or implemented reforms. Extension of life expectancy, increase in frequency of diseases of civilization, development increasing costs of applied technologies and methods of treatment are only some of the factors having impact on the

rapid increase of health care costs. Increasing costs, i.e. expenditure on health care are part of the discussion on the level of public debt, necessity to limit deficit and what follows budgetary expenses with risk related to increase of taxes and impact thereof on economic situation.

Governments of many countries, regardless of the existing health care system structures and social prosperity, speculate how to provide the society with the best possible results of system operation with the socially and economically justified investment into health care.

One of the considered and implemented solutions in search of highest efficiency in use of limited resources and improvement of quality of services for patients is competition on the payer market through introduction of private health care insurance on the market.

In Poland, as well, the problem of necessary health care system reform constitutes an important matter. One of the most crucial aspects of the discussion is the area of the payer and possibility to introduce competition through opening the market to health care insurance. Still, Poland is suffering from insufficient experience, lack of system analyses and substantive debate on possible solutions.

The author's report, prepared within the framework of *Better Government Program* of Ernst & Young, presents the analysis of various solutions used in order to introduce competition on the payer market. Experiences related to the youngest European reform of 2006 from the Netherlands are of particular interest.

The Netherlands introduced competitive market of health care insurance maintaining equal and common availability of benefits following the principles of non-discrimination and social solidarity.

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Acknowledgements

The study was conducted as a part of the project “Competition between payers in the base health care system” commissioned by the Ernst & Young within the framework of the Better Government Programme. The author of the study would like to express her gratitude to the Management Board of the Ernst & Young for enabling her to conduct the research work, vital for the health care system.

The materials concerning the Netherlands, as well as risk and loss ratio equalization factors which were used in the study, were obtained as a result of the cooperation with Prof. Wynand P.M.M. van de Ven, whose critical comments made a tremendous premium to the preparation of this report. The professor is also the author of the Section 4 to this report, which contains the analysis of the competition on the market of payers in the Dutch base health care system.

The author would also like to thank Piotr Ciżkowicz, Agnieszka Chłoń-Domińczak, Cezary Świerszcz, Anna Wójcik and Łukasz Zalicki for their valuable comments during the research process.

I would also like to thank Magdalena Osak, Jolanta Perek-Białas and A. Abramowska-Kmon for their valuable comments and methodological guidelines with regard to selected parts of the study.

Furthermore, the project would not have progressed so smoothly had it not been for the invaluable assistance of B. Osieka in work coordination.

Abstract

With increasing frequency, the progressive aging of the population with the significant growth in the cost of medical benefits are giving rise to efforts aimed at improvement of the health care system efficiency, with particular focus on cost rationalization. One method being suggested calls for the introduction of competition between third party payers, with the resulting incentive to reduce the prices and improve quality of the provided medical services as well as to rationalize patient behavior.

The objective of this research is to indicate (1) which payer characteristics determine the existence of the competition between them; (2) what are the potential areas of competition between payers; (3) which conditions should be fulfilled in order to limit unreliability of the competitive mechanism in health care; (4) based on other countries' experiences, what recommendations and conclusions are vital for Poland; in particular, to what extent is Polish system prepared for the introduction of competition between payers.

The first section sets out the objectives of the research and also the background of the analysis. In the second section, a typology of the payer system is established, focusing on characteristics determining the existence of competition and its strength. Moreover, the health care system model without third-party payers functioning in Singapore is described. Additionally, the section contains an overview of various methods of health care system financing and their impact on the competition potential between third-party payers.

The third section presents a categorization of the payer systems functioning in the 29 countries covered by the study (27 EU member states, with addition of Switzerland and Israel). Only seven of the analyzed countries fulfill the conditions for the emergence of the competition between payers, i.e.: (1) a multiplicity of payers, and (2) the ability of patients to choose their payer. Those are the following countries: Belgium, the Czech Republic, the Netherlands, Israel, Germany, Slovakia and Switzerland. The second part of the third section contains a description of health care systems of the countries fulfilling those two criteria. In the third part of the section, a competition index is defined, being a measure of conditions for the operation of competition among payers. The index consists of eight components, describing characteristics such as: market position of the largest payer, existence of risk-equalization mechanisms, potential to differentiate provided range of benefits and the levels of cofinancing, potential for price differentiation between payers, potential for integration between payers and benefit providers, and also featuring complementary products in

the payer's offer. The highest-ranked country in terms of this index is the Netherlands (7 out of 8 possible points).

The fourth section contains an evaluation of the reform of the Dutch health care system, as well as nine conditions allowing for complete use of the benefits arising from competition on the health care market to be fully utilized. These are: (1) the ability to choose the payer; (2) an effective system of risk/loss ratio equalization; (3) freedom in contracting with benefit providers; (4) system transparency; (5) patient's access to information; (6) financial incentives for efficiency; (7) limiting the "free rider" problem; (8) conditions enabling market contestability; (9) effective regulatory supervision of the system. It turns out that even in the Dutch system, which is frequently considered to be a benchmark, not all of these conditions are totally fulfilled.

The last section presents the degree to which Poland fulfills nine conditions described above. Only two of them are completely fulfilled: (1) freedom of the payer in contracting and (2) lack of potential market participants who knowingly fail to purchase health insurance (the "free rider" problem). The remaining conditions are not fulfilled by Poland. Poland has no experience with regard to an extended risk-equalization system; nor does any system exist for the transfer of reliable, comprehensible information to patients and external institutions; nor are there incentives to find ways to increase efficiency, either on the part of the payer, the benefit provider or the patient.

For the above reasons, the introduction of other (non-NFZ) third party payers to the health insurance system should be combined with changes in others areas of thereof. Therefore, the following proposals might be submitted:

- the introduction of solutions contributing to the rationalization of decisions on the behalf of the service provider (e.g. selective performance-based contracting) and the patient (e.g. differentiated levels of co-payment);
- the introduction of multiple competing payers in a portion of the base range of benefits, with the simultaneous offer of such a product by the NFZ (operating as a benchmark);
- the introduction of multiple competing payers in the area of complementary supplementary social insurance, with the simultaneous offering of such a product by the NFZ (operating as a benchmark).

Abstract

It is difficult to unequivocally assume which of the recommendations presented above might lead to improvement of the results achieved by the health care system and patient satisfaction with the provided services. All of them, or any combination of two, such as the division of the base range of benefits, together with complementary supplementary social insurance, may be introduced simultaneously. The introduction of each of the above reforms requires a strategic approach, political will and social approval.

1. Introduction

1.1 Research objective

The objective of the research is to present the impact of the organization of a third-party payer system in the base health insurance system on competition between payers, and impact exerted by such competition on the achievement of specific results (impacts) on the health insurance system. At the same time, the concept of the base health insurance system is understood as a portion of the health insurance system (constituting a part of the health care system) in which household (family) members participate on the basis of an obligation or affiliation (for more detail, see: Szumlicz (2007), pp. 68-70). However, the concept of competition between payers is understood as competition for system participants, whose decision to select a given payer results in a financial benefit for the payer in question, in the form of a defined financial premium (premium, tax, subsidy).

On the basis of the objective defined above, 3 fundamental objectives may be formed: (1) specification of third-party payer's characteristics determining presence of competition between payers, (2) determination of the possible areas of competition, and (3) definition of the conditions necessary to reduce unreliability of the competition mechanism (market mechanism unreliability) in health care. However, it is not the objective of the research to find answers to the question as to whether a system with competing third-party payers is better than a system with a monopolist.

Apart from this *Introduction*, the project consists of four parts. The first part sets out the characteristics differentiating payers in the health care system, and also indicates how the potential for competition between payers is affected by the value of each of those characteristics. The second part contains a classification of the payer systems (the research covered the 27 EU member states, plus Israel and Switzerland), according to the competition potential, together with a description of those systems in which competition exists between payers. The part also includes an evaluation of the payer systems from the perspective of characteristics having impact on competition. The final section of the study concerns an evaluation of the Dutch health care system as an example of a system with regulated competition between third-party payers. The paper is completed with *Conclusions and Recommendations* section, summing up the results of the analysis and setting out conclusions derived therefrom being the most important for the Polish health insurance system.

Research objective

Structure of report

1.2 Background of the analysis

The process of the extending average (further) life expectancy is a phenomenon which has been observed almost everywhere in the world currently. However, in comparison, the growth rate of measures of human life expectancy such as DALE (disability-free life expectancy) and HALE (healthy life expectancy) is significantly lower¹, which means that the number of potential years in disease is increasing, as is the expected total spending on per capita treatment.² Simultaneously, not only the quality, but also the variety of health care benefits, as well as, once again, their costs, are increasing with progress of medical technologies³.

As a result, even in highly developed countries, pressure is arising to introduce more effective cost management in health care systems (Smith et al. (2009), p. 507-672), including stronger mechanisms for rationing public spending on health care (Włodarczyk (1996), p. 351-371). One of the proposed methods of contributing to cost reduction is the introduction of competition among payers, as a result of which they would attempt not only to influence the price and quality of medical services, but also the patient's behavior.⁴

The subject of competition is even discussed in countries where the base health care system is most strongly developed, such as, for instance Switzerland (Schneider (2009)) and Germany (Leienbach (2009)). Likewise voices are being raised in Poland that the introduction of competition in the area of payers in the health care system is a necessary element for improving the effectiveness of the system (e.g. Polish Chamber of Insurance (2009), Reform of the Polish health care system (2008), Polish Private Hospitals Association (2003)).

There are at least three types of benefits related to competition: it encourages the producer to respond to the consumer's choice; it exerts pressure to reduce costs and improve quality of goods and services provided. However, the producer's response to the consumer's expectations is not related to the improvement in the prosperity of the latter, since he is not informed appropriately to make a rational choice (Barr (2001)). Similarly, the ability to buy a lower quality product at lower prices will only be an improvement in prosperity if the choice is made consciously (based on sufficient information)⁵. In the case of the health care system, the patient needs to undergo transformation from a passive recipient of the services into an active one (Włodarczyk (1998), p. 95), with information of an appropriate quality. Therefore, the following question arise: (1) what characteristics of the third-party payer system will be decisive in presence of competition between

payers; (2) what are the possible areas of competition and (3) what conditions shall be fulfilled to reduce unreliability of competition mechanism (unreliability of market mechanism) in health care? The study presented below is an attempt to answer those questions.

2. The payer in the health care system

This section presents the characteristics of third-party payers in the healthcare system (sub-section 1). The classification emphasizes the features which affect competition between payers. The second subsection applies to the relations between the characteristics of the payer and the method of financing the system. The author has attempted to demonstrate that there is no strict relationship between the type of payer and the method of financing the healthcare system (procurement system, insurance system). The section ends with considerations regarding the set of characteristics of payers determining competition.

2.1 Typology of third-party payers

2.1.1 *Classification by number of payers*

The reference literature uses a binary typology of institutional payers referring to their number. The distinction is made between countries with a single-payer system and a multiple-payer system. It should be remembered that the presence of multiple payers alone does not forejudge the presence of competition between them.⁶ This is only a condition necessary for its occurrence. Possibility of competition may be discussed only when, apart from multiple payers, the system enables the patient to periodically select the payer without necessity to incur high financial costs or face operational barriers related to such a choice.⁷ An additional element which affects competition between payers, besides their number, is the market share of the largest payer; the higher it is (high concentration) the weaker are the incentives to maximize effectiveness (van de Ven et al. (2003), p. 81).

2.1.2 *Classification by forms of ownership*

Taking into account the criterion of ownership, the payer may be of a public nature (public entity) or of a private nature (private entity). The private payers may be divided into non-profit and for-profit payers. There is a universal conviction that a for-profit payer is more competitive than a public payer or a non-profit payer. However, it should be remembered that the ownership of the payer alone does not forejudge the power of competition. This applies particularly to a healthcare system in which there are a number of mechanisms reducing the financial risk of business entities because of the

constitutional right of citizens to health benefits and the resulting responsibility of the state.⁸

Competition can exist in three dimensions in terms of the ownership criterion:

- public payer vs. public payer (in systems which have multiple public payers);
- public payer vs. private payer (in systems in which various payers coexist in terms of ownership structure);
- private payer - private payer (in systems with private payers only).

In the case of systems in which only public payers or only private payers exist, the competitive position of the entities is the same. Differences can appear in the case in which two forms of payers exist in the system - public and private payers, which most frequently operate on the basis of various legal grounds and similarly are able to use various instruments which affect their competitiveness. The above statement does not necessarily support the argument that private entities are privileged in such a situation. A good example of the possibility of introducing such differences can be Austria, in which only public funds use the loss adjustment fund (see: Koettl 2008).

2.1.3 *Classification by coverage*

It is possible for the payer to cover the whole country or only selected regions. In the case of several payers, and if there is an obligation to operate in all regions of the given country, it is not possible to make a selection by socio-epidemiological features of the inhabitants of individual regions⁹, while in a way, the payers are forced to compete for all patients.

Otherwise, it is possible, that payers will only actively compete in regions of the most beneficial structure: financial base vs. health needs. In the most extreme case, the payers will make a regional split of the country in terms of coverage with respect to their activities, as a result of which, despite the multiplicity of payers and the patient's ability to choose the payer, competition will not exist at all. Such a situation can also take place in the event that the assignment to a region is a legislative decision (e.g. lack of competition between regional sickness funds in Germany).

2.1.4 *Classification by subject of coverage*

This classification applies to two aspects: (1) the range of benefits, (2) co-financing of the benefits.¹⁰ In case of a strictly defined, uniform range of benefits in the base system, without the payer's ability to interfere with its content, the competition will apply, if possible, to the prices and quality of the contracted benefits. Even if the scope of benefits (as well as the standard price and quality) is identical, the competition between the payers may apply to additional benefits. The larger the scope of the base health care system, the greater the significance will products (insurance, subscriptions, loyalty systems) offered outside the base system have to the patient in the selection of a given payer.¹¹ However, if the base scope of benefits differs (e.g. ability to offer various products), competition between payers is stronger. Similarly, quality of information provided to the client and, in particular, a transparent description of the product through the classification system is important – an example here may be the Netherlands (see: Section 4).

The subject of coverage is also defined by the level of financing of health benefits. Apart from the institution of the GP, so-called gate keeper, co-payment is the most frequent tool for rationing the use of benefits. If the system has the possibility of offering various levels of co-payment, in exchange for a discount / surcharge on the premium, payers are able to use this instrument as an element of competition. A good example here can be Israel (see: 3.2.4). Simultaneously, as in the case of a uniform benefit range, if the level of co-payment is uniform for all patients, competition between payers is transferred to the area of additional products. This is a unique problem of the systems in which there is an obligation to conclude both types of agreement (basic and supplementary) with a single payer e.g. Belgium (see 3.2.1).

In the case of additional insurance products, there is a unique classification by the scope of cover guaranteed in the base health insurance system (Szumlicz, Więckowska (2005))¹²:

- substitutionary (the relationship of "instead of"), if it is possible to withdraw from the base health insurance, most frequently on condition of having a sufficiently high income, but it is then obligatory to buy substitutive insurance; complementary (relationship of "in excess of"), if the insurance has the purpose of increasing the standard scope of cover assured within the framework of the base health cover (e.g. insurance of the costs of specialist procedures, insurance of the need for co-payment for health benefits);

- supplementary (relationship of “as well as”), if the insurance constitutes an increase in the standard scope of cover, but without the ability to withdraw from this system; insurance described as “double protection” appears in connection with the reduction of access to health benefits or their low quality in the base system; however, it is worth pointing out that the lack of use of publicly financed health care does not then release anyone from paying the charges to the public system - financing it.

The above classification, albeit used for supplementary insurance, may be extended to cover all non-base forms of health insurance.¹³ In turn, in analyzing the possibility of third party payers offering extra-base products, it can be stated that competition between payers in the base health care system will primarily apply to complementary products (offered by the third-party payer or the third-party payer is related through equity or organizationally to the offering institution) and less to substitutive or supplementary products (only in the case that the third-party payer is related through equity or organizationally to the offering institution).

2.1.5 Classification by entity of cover

Payers can be also divided by entity of cover. And, once again, in the event that the assignment to a given payer is defined systemically, e.g. by occupational group or place of residence, there is no possibility to discuss competition between payers. An example of such a country is France. However, if several payers are dedicated to a single group of patients, or there is no conditional split of patients among individual payers, competition between payers is possible.

2.1.6 Classification by risk valuation

The method of valuing risk, i.e. a formula specifying the fee for the right to use health benefits, is not insignificant for competition. In 2000, the World Bank introduced the following typology of specifying the level of risk charges for insurance systems (Wassem (2000), p. 4-9, Szumlicz (2004)):

- the time dimension which applies to the periods of settling premiums and benefits:
 - the current model of financing benefits - based on the assumption that the premiums paid by the insured in the given year are used for financing benefits in the same period (since the costs of healthcare increase with the age of patients, this model assumes that some of the premiums paid by younger individuals finance the costs of treatment for older individuals);

- the current model of financing benefits in age groups - based on the assumption that the premiums paid by the insured in a given age group in the given year are used for financing benefits precisely of that age group (since the costs of health care increase with the age of patients, the premiums increase with the age of the insured);
- a model of equity financing - involving the spreading of the financial settlement over time, is based on the assumption that premiums paid by young individuals are used to finance benefits granted to them on an ongoing basis but simultaneously - they provide certain „savings“ which will be assigned for financing the higher costs of benefits granted to them later;
- the risk dimension which applies to the bases for calculating the premium:
 - a model of calculating the premium on income - consideration is given to the income (salary) of the insured (the premium is specified as linearly defined - percentage of the basis of its level), which in the event of a lack of relationship with individual health risk and an identical standard range of benefits for everyone - leads, in a way, to a “dual” solidarity of consumers of services, taking into account the differentiation of both their financial standing and the risk of disease;
 - a model of calculation of a flat rate premium - based on the assumption that every insured person pays the same premium for the same standard package of benefits, estimated on the basis of the health condition and health needs of a given community. This model satisfies the principle of solidarity in terms of disease risk, since it leads to the redistribution of the costs of insurance cover among those who take advantage of the benefits to a lesser and greater extent;
 - a model of calculation of premiums on the basis of a one-off risk assessment - based on the assumption that every person pays a premium which reflects his risk of disease (individuals with a potentially higher risk pay a higher premium, while individuals with a lower risk pay a lower premium), whereby the risk assessment is only made once during the validity of the agreement without the ability to change (increase) the level of the premium later;
 - a model of calculation of the premium on the basis of multiple risk assessments - based on the assumption that every person pays a premium which reflects their current disease risk, and therefore the risk assessment is performed many times, in regular time intervals during the validity of the agreement, with

the possibility of increasing the level of the premium in a situation of an increased risk.

Taking into account the above classification, it can be stated that, in the event of a model of current financing of benefits and the premium for them calculated on income or being a flat rate premium - such a charge can also be called a hypothecated tax (see: 2.2).

The system which provides the best conditions for competition is the system based on the multiple risk assessment, which is only possible in the insurance model. The payers can then estimate the price on the basis of the determinants of health i.e. the lifestyle, contracted diseases, genetic background (more: Włodarczyk (1996), p. 159-166). The author does not forejudge in this study whether this should be a model of current financing in age groups or financing through equity. The first of the types mentioned appears more competitive, since it is typical of short-term insurance and therefore, those in which the choice of payer can be made in specified time intervals (e.g. every year), but which would involve an increase in the premium together with the ageing of the patient. In the case of equity financing, the patient takes advantage of the standardization of the premium with respect to the period of cover, as a result of which a comparison of competitive offerings of payers is difficult¹⁴, but does not eliminate the possibility of changing the payer at any time (even before the anniversary of cover).

Risk assessment

However, the classic insurance models, i.e. those based on a risk assessment are not used in the base health insurance systems. Most frequently, they are models of current financing of benefits with a charge which depends on income. With such a form of payment, price competition between payers is not possible. However, it is possible with a flat rate charge, e.g. in the form of a premium based on the community rating or a payment in the form of a health voucher (Szumlicz 2007).

2.1.7 *Classification by equalization of risk /loss ratio*

Assuming that the payers were obliged to accept every "risk" (patient applying for insurance) to the community, in order to maintain financial stability, they would need to have the ability to differentiate the premiums, depending on the risk.¹⁵ The differentiation would cause that healthy individuals, with a lower risk of incurring costs of medical benefits, would pay a lower premium than higher risk individuals, which, in turn, would reduce the availability of benefits for the most needy. Therefore, most frequently, the legislator, as mentioned earlier, decides

to introduce a system with an average premium with respect to the risk, which is uniform for all patients in terms of its amount.

However, such a solution carries the risk of selective actions on behalf of the payer, e.g., the use of incentives for healthy individuals to join with the simultaneous negligence for quality of services (e.g. treatment of chronic diseases) in order to ensure that individuals in a poor health condition withdraw (indirect selection). In such a situation, payers who have a large portfolio of high risk individuals are forced to increase the charges to cover the expected costs of health benefits.¹⁶ Healthy individuals would depart as a result of the increase in the premium, which would lead to a further increase and, finally, even to the withdrawal of high risk individuals (it should be remembered that acceptance into the community frequently cannot be denied) and the payer's bankruptcy. Such a mechanism could lead to the disappearance of competition from the sector of payers.¹⁷ The principle of risk equalization between payers is introduced precisely in order to restrict those actions.¹⁸

Aligning risk

There are two types of risk equalization between payers: *ex-ante* equalization and *ex-post* equalization. In the former case, the equalization of the portfolio structure between payers takes place at the beginning of the policy year and therefore the structure of risk is equalized. For that reason, such co-funding is frequently described as a risk-adjustment premium.

Payers who have relatively more individuals being subject to an increased risk of incurring the costs of health benefits (e.g. individuals with chronic diseases, the disabled and the elderly) receive a higher risk-adjustment premium than payers with the lower proportion of higher risk individuals. If the risk equalization mechanism operates properly, a payer with a "worse" risk profile receives a premium which is equal to the surplus of the costs of health benefits of higher risk individuals over the costs of health benefits incurred in the case of standard risks. In such a case, the payer will not attempt to remove higher risk individuals from its portfolio.

If it were to be assumed that the costs of medical benefits are completely covered in a correctly operating risk equalization mechanism, the payers would only be able to maximize the profit / balance sheet surplus through optimizing activities, e.g. by reducing administrative costs or by negotiating discounts for health benefits. Therefore, the mechanism for risk equalization provides with ability to generate a profit / balance sheet surplus regardless of the structure of the portfolio. Payers, whose contract costs (of health benefits) are

below average, will be able to generate surpluses, which will enable them to reduce the premium in the next period (if it is possible to specify its level). Such a reduction will be an incentive encouraging new members of the community to purchase coverage and existing members to remain in the community. Therefore, paradoxically, because of the risk equalization mechanism, a large payer with a relatively larger higher risk sub-portfolio can generate a higher profit than a small company with a portfolio of standard risks, while the competition between the payers shifts from the area of competition for better health risks (structure of the portfolio) to the area of competition in terms of the size of the portfolio.

The risk factors which are most frequently taken into consideration when specifying the level of the risk-adjustment premium are the patient's age and sex.¹⁹ Additionally, some systems also take into consideration the source of income, the place of residence, the Pharmacy Cost Groups (PCGs) and the Diagnostic Cost Groups (DCGs). All of these factors are assessed for every patient, while the risk-adjustment premium is the total of the "surcharges" and "discounts" for the individual factors.²⁰

Risk factors

The objective of *ex-post* equalization, namely the equalization of loss at the end of the policy year is the compensation of expenses for those payers with the structure of portfolios changed during the year. The purpose of that is for the payers whose structure has changed (inflow of high risk individuals, outflow of low risk individuals) not to take steps to reduce access to benefits, their quantity or their quality. In other words, since the *ex-ante* premium is only a certain and frequently imprecise (van de Ven et al. (2003), p. 78), approximation of the spending on health benefits, without the *ex-post* model, there would be risk that the payers would return to the strategy of indirect risk selection.

However, the question arises: to what extent should be *ex-post* expenses compensated? The higher the level of compensation, the lower the payer's financial risk and the lower the payer's liability for economic ineffectiveness (van Barneveld et al. (2001)). Therefore, models of *ex-post* equalization should not be a simple coverage of unfunded expenses, but should, in their form, resemble reinsurance agreements used on the traditional insurance market. Solutions such as the following are possible (see van de Ven et al. (2003), p. 80, *own terminology*):

- proportional agreements - *ex-post* coverage of a specified share of all costs;

- individual agreement on the excess of loss - *ex-post* coverage of the costs related to those patients for whom the annual costs of treatment exceeded a specified limit (may be with the payer's own premium in the excess);
- an agreement on the transfer of costs of the insured group - coverage of all or some of the *ex-post* costs of a specified insured group considered as high risk and specified at the beginning of the policy year (*ex-ante*);
- agreement on the transfer of costs with a trigger - *ex-post* coverage of specified costs (completely or partially), but after the emergence of health problems defined *ex-ante* (i.e. trigger).

2.1.8 Classification by relations with other entities

Three participants are most frequently distinguished in healthcare systems: patients, as the beneficiaries²¹, doctors with the other providers of the benefits and the payer (the entity contracting / financing the benefits). Since each of these participants is treated as a party in mutual relations, the entity holding the public funds is frequently referred to as the "third-party payer" (Włodarczyk, Poździejch (2001), p. 47). However, more frequently, additional link is included in the analyses - a sponsor - the party (e.g. employer, state budget), from which the payer²² receives funding (Kornai, Eggleston (2001) in: Mucha (2007)). Such an approach enables the introduction of competition between payers, even in a system financed with taxes (see: 2.2).

Various levels of integration can be observed between the participants of the system (Chart 1). Only in the case of full integration, meaning the furthest reaching interference of the state, it is not possible to introduce multiple payers and resulting competition between them. In the remaining cases, despite partial integration, competition is possible. An example of partial integration of the first type are HMO institutions (Health Maintenance Organizations)²³, while the second type of partial integration can be found in classic Bismarck's solutions²⁴. Even so, if the sponsor and the payer are public entities, despite the multiple payers (e.g. in the form of numerous branches), but with the lack of existence of competition in the meaning of this study, they will be treated as a single entity representing the type two integration. However, the situation can arise in which the sponsor is both the payer (e.g. the state budget responsible for covering the costs of the medical rescue service) and the sponsor (e.g. the entity paying the health insurance for certain socio-economic groups). In such a case, 2 interoperating views of the model (partial type II integration and

separation) should be included in the system and similarly the existence of two payers should be acknowledged.

Chart 1. Types of integration between participants in the healthcare system

Full integration	Partial integration		Separation
	type I	type II	
Sponsor	Sponsor	Sponsor	Sponsor
Payer	Payer	Payer	Payer
Service Provider	Service Provider	Service Provider	Service Provider

Source: own analysis based on Kornai, Eggleston (2001) in: Mucha (2007), see Getzen (2000) p. 248.

2.1.9 *Classification by freedom to conclude agreements with service providers*

Third-party payers and service providers should have freedom to conclude agreements and negotiate their content (e.g. price, quality and benefits), as well as to vertically integrate. However, freedom to conclude agreements does not always support competition in the manner intended by the legislator. In the case of an inappropriate (or lack of) system of risk equalization, payers may decide to offer a low level of protection for the chronically sick (namely those related to the highest costs) by failing to sign contracts with these service providers who are seen to be the best in terms of the provision of services to the individuals representing the “worse risk”. In turn, this can result in the service providers deliberately not attempting to obtain the status of the best service providers in this respect (van de Ven et al. (2007), p.173). Therefore, the introduction of the possibility to selectively contract for services albeit with an intention which supports competition, may lead to discrimination of the chronically sick. For this reason, the efficient operation of anti-cartel and pro-consumer organizations, a good example of which is the Netherlands, is especially important (more: Appendix).

Freedom to contract

As for price negotiations, the legislator usually restricts their substantive range (e.g. only negotiating prices of outpatient benefits). Simultaneously, in those countries in which there are no such restrictions, price negotiations are held at the level of a union of payers and a union of service providers.²⁵

2.1.10 Characteristics of the payer system – directions of impact on competition

The specific characteristics of a payer will either contribute to improvement of competition in the base health care system or to its limitation. The table below presents the summary of the above analysis.

Table 1. Characteristics of a payer system with respect to competition in the base health care system

Characteristics of a system	Attributes supporting competition	Attributes reducing competition
quantity	many	one
ownership	--	the simultaneous appearance of public and private entities operating on the basis of various jurisdictions
coverage	national	one payer per region
entity covered by the coverage	all citizens / the insured	separability of entities with respect to the payers
subject of coverage	ability to differentiate the range of benefits and co-financing thereof	inability to differentiate the range of benefits and co-financing thereof
valuation of risk	model with (one-off or multiple) risk assessment	model with an income-dependent payment
risk equalization	application of an <i>ex-ante</i> and <i>ex-post</i> equalization model	lack of any equalization model
relations with other entities	--	complete integration
freedom to conclude agreements	ability to select service providers, negotiate prices, as well as the quantity and type of services	necessity to contract for a specific number and type of benefits with all service providers at a specified price

Source: Own study.

2.2 Characteristics of the payer system- where is competition possible?

The classifications presented above are only models, strictly related to each other, e.g. it would be difficult to imagine a healthcare system without any institutional payer or a system with multiple institutional payers where the flat rate charge is not complemented with any risk equalization system.

The question may be asked which configuration of payer characteristics determines occurrence of competition and supports it. As it was already mentioned, the necessary condition for the presence of competition is multiple payers combined with the patient's ability to make a selection.

However, even with this condition being satisfied, there will not be any competition without the existence of the following (not intended by the legislator):

- territorial separation of the payers, or
- objective separation of the payers, or
- subjective separation of the payers.

As already stated, competition between payers is possible even if it is not possible to differentiate the range of benefits or the scope of its cover. Theoretically, then, competition should move to the area of quality of the benefits and the effectiveness of the payers²⁶. However, a situation in which the system encompasses 100% of all benefits with a 100% level of their financing without the ability to offer additional products appears to be purely theoretical. Healthcare system reforms are heading in the direction of specifying the scope of coverage (e.g. through negative packages or the exclusion of specified procedures from contracting), as well as the gradual introduction of co-payment for certain health benefits.

Benefits basket

With a uniform benefit range and the inability to differentiate co-financing, competition may be determined by the ability of payers in the base health care service to offer additional, supplementary insurance of treatment costs - complementary insurance or other products (e.g. subscribers) or the possibility of the existence of financial and organizational connections with entities offering such products (e.g. through a common capital group). However, it should be remembered that the ability to offer products does not always increase competition among payers. The mechanisms for risk reduction, such as lack of coverage of previously contracted diseases for the first two years of the policy are important elements restricting competition. In other words, the situation may arise in which the scope of the choice for individuals from the high risk group in the base insurance market is significantly narrowed because of the conditions for obtaining (continuation) of insurance coverage with additional insurance.

Simultaneously, even if it were admissible for payers operating in the base system to offer substitutive or supplementary insurance, competition would rather be negligible but not impossible.

In systems in which the payment for "health care" depends on income, it is impossible to introduce price competition. In the case of a system based on a flat rate payment, the legislator may admit the differentiation of premiums between payers and similarly, price

competition. Price competition is a part of the model of payments with a one-off or regular risk assessment.

As already mentioned, in the event that payers are unable to specify the price for protection on the basis of the expected costs of health benefits specified for a given patient, the mechanisms of risk equalization are exceptionally important for reduction of the selection on behalf of the payers and for stimulation of competition.

The possibility of interference between the payer and the service provider is another element supporting competition. However, as discussed in point 2.1.9, in order for the required competition for patients not to transform into a negative selection on behalf of the payer, which is negative for patients, efficient operation of the institutions focused on control and prevention of selective actions is crucial.

2.3 Healthcare system without a third-party payer

It should be remembered that a healthcare system can also exist without a third-party payer e.g. based on Health Saving Accounts. The payment for the benefits provided is then financed directly at the time of use, without previously contracting for the services, as is the case, for instance in Medisave in Singapore.²⁷ The financing of the Medisave programme is 6% - 8% (depending on age) financed from the employee's salary, which is transferred to the health saving account (4% interest per annum), which is then supplemented with the employer's premium (Choon et al. (2008), p. 7)²⁸. The premiums are limited in advance, both in monthly periods and throughout the individual's life. All funds above the specified limit are transferred to other obligatory saving accounts, They only be withdrawn after the person reaches the age of 55. In the event of the individual's death, the funds on the account are provided to the beneficiaries and are not included in the inheritance estate.

The costs of hospitalization of the account holder and his closest family (including the financing of care for older individuals by their children) are covered by the funds collected within the Medisave programme, whereby, in order to reduce excessive use limits of costs were introduced which may be used during a year; base health care may not be financed from Mediasave account. Due to risk that funds on the account may be exhausted, i.e. occurrence of "costly" disease, all citizens are obliged to purchase Medishield (catastrophic illness insurance scheme). At the same time, in order to protect health care for vulnerable consumers (10% of the population). Medifund program was established (more: Choon et al. (2008) p. 7 and the following).

System without
payer

Studies also exist which prove that individual health saving accounts may constitute a significant supplement to or even replacement of the classic insurance coverage (e.g. Cardon (2010)).

2.4 Methods of financing the healthcare system vs. the type of payer

This sub-section presents the relationships between the method of financing the health care system and the ability to introduce competition among payers in the base healthcare system. The reference literature indicates three fundamental instruments of financing the social insurance system: tax, premium or grant, which is very frequently confused (more: Szumlicz (2005), p. 83-85). In the event that the health care system is of a procurement nature, it is financed with taxes, while the rights to the benefits arise from the citizen's / resident's rights. While, in the case of the insurance system, financing is obtained from premiums, while the rights to the benefits arise from belonging to the risk community (the premium has been paid for the insured). In connection with the view of model healthcare financing systems (see: 1.2.6), it can be stated that all combinations of the models of current financing of benefits in age groups, equity financing and the calculation of the charges on the basis of a one-off risk assessment and the calculation of the charges for on the basis of multiple risk assessments, will bear the hallmarks of insurance financing.

In the opinion of the author, the method of financing the system does not determine the ability to introduce competition among payers. It is possible to imagine both an insurance system with multiple payers and a tax system (even with a general tax) with multiple payers obtaining funds from the sponsor.²⁹ Simultaneously, there are both insurance and procurement systems in which only one payer operates. Furthermore, competition between payers may be introduced into both types of system, for additional social health insurance (more: Szumlicz (2007), 72-78). Therefore, in view of the inference above - the fact that insurance and procurement financing overlap - it can be stated that the method of financing the base health insurance system does not unambiguously forejudge the direction of competition among the payers.

3. Scope of competition between third party payers - empirical identification

The section presents a classification of payer systems by potential for the existence of competition; subsequently those countries are presented in which multiple payers are present in combination with the ability of the patient to select the payer. The final part of the section consists of a description of the competition index, presenting an evaluation of the areas of competition in the studied systems.

3.1 Categorization of payer systems

For the purpose of categorizing third-party payer systems according to the characteristics necessary for the occurrence of competition, the 27 EU states plus Switzerland and Israel were studied. The health care system of the United States was excluded from the study. Despite the fact that it is considered to be the most competitive system in the world, it cannot be the subject of this study since the study relates to base systems, while in the US the base system is limited to a minimum (the Medicaid and Medicare systems, which do not compete with each other), with the result that it is considered, alongside the Bismarck and Beveridge models, as an example of a market model³⁰ (Włodarczyk, Poździuch (2001), p. 82), where the base function has been taken over by the voluntary insuring of medical costs - a relation of the primacy of private insurance in the health care system (Więckowska, Osak (2010)).

The competition-preventing characteristics of a system of third-party payers functioning in a base system of health insurance are: the existence of a single payer, or lack of ability to select a payer within a multi-payer system. As is set out in Diagram 2, a considerable majority of the analyzed countries (17) feature a single-payer base system of health insurance. The reminding are multi-payer systems. Not all of these countries can be considered from the point of view of competition between third-party payers. In Finland, Lithuania, Poland and Romania, there is an objective separation between the coverage provided by payers. Meanwhile, in Austria, France and Greece, a subjective separation occurs, i.e. patients are allocated to a payer in accordance with specified characteristics (e.g. place of residence, profession).

Only 7 countries: Belgium, the Czech Republic, the Netherlands, Israel, Germany, Slovakia and Switzerland, have a base health insurance system with a multiple payers, together with the insured person having the ability to choose (without objective and subjective divisions). Only those countries were the subject of an analysis of characteristics supporting competition, which will be presented in a later in this section. For those countries, a competition index was created.

Diagram 2. Country categorization by payer system indicating the potential for competition

Single-payer system	Multi-payer system		
	Objective separation	Subjective separation	Ability to choose
Bulgaria, Cyprus, Denmark, Estonia, Spain, Ireland, Luxembourg, Latvia, Malta, Portugal, Slovenia, Sweden, Hungary, Great Britain, Italy	Finland, Lithuania, Poland, Romania	Austria, France, Greece	Belgium, Czech Republic, Netherlands, Israel, Germany, Slovakia, Switzerland

System features

Source: Own analysis, based on: Austria: Hofmacher, Rack (2006), Bulgaria: Georgieva et al. (2007), Cyprus: Golna et al. (2004), Denmark: Strandberg-Larsen et al. (2007), Estonia: Jesse et al. (2004), Finland: Vuorenkoski et al. (2008), France: Sandier et al. (2004), Greece: Tanner (2008), Spain: Durán et al. (2006), Ireland: McDaid (2009), Lithuania: Bagdonas, Jovarauskiene (2009), Luxembourg: Paris (2010), Latvia: Tragakes et al. (2008), Malta: MISSOC (2009), Poland: Sobiech (2008), Portugal: Bentes et al. (2004), Romania: Vldescu et al. (2008), Slovenia: Albreht et al. (2009), Sweden: Glenngard (2005), Hungary: Gaal (2004), Great Britain: Tanner (2008), Italy: Lo Scalzo et al. (2009).

3.2. Base systems of health insurance with competing third-party payers

Seven health care systems are presented in this sub-section with the potential of competition for patients between third-party payers. The author has focused primarily on description of the characteristics of the payer system.

3.2.1 Belgium

The health care system of Belgium has characteristics of a Bismarck system, in which each of the insured has to join a Health Fund of their own choice. The Funds are non-profit institutions. There are 7

associations of Health Funds operating within Belgium, including the Health Fund for employees of the State Railways³¹ and also the Public Auxiliary Fund for Sickness and Disability Insurance, plus regional branches.³² The associations are based on religious or political affiliations. The largest of these are the National Alliance of Christian Mutualities - covers 45% of the insured, followed by the National Union of Socialist Mutualities, with 29% of the insured, while the remaining 23.5% is accounted for two associations: the National Union of Neutral Mutualities, the National Union of Liberal Mutualities) (Corens (2007), p. 40).

As has already been mentioned, the Belgian system is financed on the basis of income-based premiums, which constitute a portion of benefits provided by the social insurance system, with the premium rate, depending on income, of either 19.65% or 14.16% (Corens (2007), p. 61). There is also a risk-equalization system in Belgium. The *ex-ante* premium is adjusted on the basis of an econometric model, incorporating such variables as: socioeconomic status (senior citizens, widow/widower, and the disabled), age, gender, mortality rate, chronic disease, household structure, income, unemployment rate, urbanization level. At the same time, the system includes a high level of *ex-post* risk equalization (van de Ven et al. (2007), p. 164).

The combined budget is established annually by the General Council of the National Institute for Health and Disability Insurance, and is based on the anticipated needs of society with regard to health care benefits. The prices of the benefits are set in the course of joint negotiations between the benefit providers and the Health Funds.

The list of benefits available is strictly defined, and is not subject to differentiation. The manner of reimbursement³³ depends on the type of benefit: in the case of outpatient care, reimbursement is provided in cash, while for inpatient care and for medicines used, it has a form of material restitution.³⁴ Benefit co-payment is the same for all the insured, the only exception are those covered by preferential co-payment levels (with specified income levels, or belonging to specific social groups, e.g. senior citizens).

In Belgium, the Health Funds are authorized to offer additional insurance for treatment costs. The patients, if they choose, have the opportunity to purchase the product only from the Fund in which they have the basic insurance (van de Ven et al. (2003), p. 92). This complementary insurance constitutes a significant tool in competing for patients.³⁵ Its power is increased by the fact that the

premiums for complementary insurance are subject to tax preferences (Corens (2007), p. 67).

3.2.2 *The Czech Republic*

The base health care system operates on the basis of Health Insurance Funds.³⁶ In 2009, there were 10 self-governing, quasi-public Health Funds (Bryndova et al. (2009), p. 42),³⁷ of which the largest, VZP, had over 60% of the market (Paris et al. (2010), p. 14).³⁸ The system does not provide a choice of substitutive insurance of treatment costs, although the patient does have the right, once a year, to switch Insurance Funds.

Insurance premiums are paid to the respective Insurance Funds, next, using a risk-equalization formula, transferred between the Funds via a special fund, managed by the largest Health Fund. Currently, the risk-equalization premium (the capitation rate) is dependent on age (with 5-year age groups) and gender - 36 groups altogether. Furthermore, the system contains an *ex-post* equalization system - which covers 80% of costs exceeding the limit for each insured person for whom treatment costs were at least 25 times higher than the average patient treatment cost in the entire health insurance system (Bryndova et al. (2009), p. 44).

As has already been stated, the Funds are not-for-profit institutions. In the event of profit being made, the purpose of it is to support health care benefits or to be transferred to the special risk-equalization fund. The state guarantees solvency only to a minor degree (with the exception of the largest Health Fund). In the event of the bankruptcy of a Fund, its members are taken over by the largest Fund.

The scope of coverage is, in the majority of cases, defined on the basis of a negative package, although certain benefits (e.g. pharmaceuticals) are defined using a positive package.³⁹ There is no potential to differentiate premiums, nor for co-payment for the package of base benefits. Nor do the Health Funds have the capability to negotiate prices with benefit providers. Price negotiations take place once a year, and are supervised by the Ministry of Health (Bryndova et al. (2009), p. 36). The Ministry of Health each year specifies the list of benefits to be financed by the Health Funds, together with co-payment levels.⁴⁰ However, the Funds do have the right to freely contract for unlimited amounts and types of benefits from the benefit providers selected by them.

Czech Republic

3.2.3 *The Netherlands*⁴¹

Since 1 January 2006, on the basis of the Health Insurance Act, each person legally living or working in the Netherlands must purchase individual private health insurance covering the package of benefits specified by law (e.g. medical care, prescription medicines and hospitalization). Insurers are however legally obliged to cover each applicant with a basic insurance policy, for a premium in line with the principle of setting uniform insurance premiums for all the insured and without excluding anyone on the basis of their medical history. Insurers having fewer than 850,000 insurance applicants may limit their activities to one or several of the twelve provinces. Pursuant to the Act, consumers may, at least once a year (on 1 January) change their insurer, or choose another product from the group of basic health insurances being offered by their current insurer.

All individuals are obliged to pay income-based premiums (7.05% of the first €33,189 of annual income during 2010)⁴² to the tax office which passes on these premiums to the Risk Equalization Fund - REF. Employers are legally obliged to provide compensation for their employees in respect of these premiums. In addition, all adults pay a premium direct to their chosen insurer. Each insurer sets its own premium level, in accordance with the principle of setting uniform insurance premiums for all the insured. In respect of the insured from the high-risk group, insurers receive large risk-equalization payments from REF. Children (under 18 years of age) do not pay premiums. The government provides REF with compensation for the costs of their care. Pursuant to the Health Insurance Act, the total premiums being income-dependent should amount to 50% of the insurer's total revenues in respect of compulsory basic insurance. The single payment in respect of risk equalization is equal to the forecast health care costs, based on individual risk factors and on the equalization formula, reduced by a fixed amount which for each adult amounts to 50% of the forecast average national per capita health care costs. Negative amounts due in respect of risk equalization are paid by the insurer to REF. In 2008, the average annual premium for adults amounted to €1,105, and ranged between €936 and €1,164.

About two-thirds of households in the Netherlands receive a government subsidy based on income ("carer's allowance"), amounting to a maximum of €1,536 (in 2010) annually per household.⁴³ Since this allowance is independent of the choice of insurer, patients are very sensitive to the price of insurance cover.

Optional additional health insurance of a scope not included in the compulsory basic insurance may be obtained freely, e.g. dental care

for adults, physiotherapy, glasses, alternative medicine and cosmetic surgery. In the area covered by optional health insurance, the insurer has the freedom to adjust premiums in line with the risk, and to refuse cover to those applying for insurance. In 2010, about 87% of the population purchased additional health insurance, almost always from the insurer providing them with basic cover. Such a situation is a strong incentive to compete in the field of complementary insurance.

The Health Insurance Act specifies which rights (i.e. benefits⁴⁴ and scope of care) must be offered and when these apply (medical indications). The insurance contract must specify who is to provide care, where and on what conditions (e.g. consents required, referrals or prescriptions). Moreover, the Health Insurance Act covers the health care costs related to accidents at work and occupational illness.

Insurers have the freedom to selectively terminate contracts with benefit suppliers, and to apply financial incentives motivating patients to make use of preferred suppliers.

The Health Insurance Act allows for "group discounts". Insurers are allowed to give discounts not exceeding 10% to insured persons belonging to a "group" which is a legal entity. In 2009, about 60% of the population received such a discount; the average discount amounted to 7%.⁴⁵ Two-thirds of them obtained the discount via their employer. However, many other groups exist, e.g. patient organizations, sports associations, trade unions, cooperative banks (for clients/members) and also independent entrepreneurs, who form "groups" (e.g. over the internet).

Pursuant to the Health Insurance Act, each adult (over 18) has an annual deductible, which amounts to €165 (in 2010) (with exception of general practitioner visits and care offered during pregnancy and maternity). The Dutch are able to obtain reductions in premium if they voluntarily choose a higher co-payment (up to €665 annually). In 2008, the average annual premium for a policy with a co-payment of €665 amounted to €899 (and ranged between €684 and €1,020).

The risk-equalization system constitutes a significant element of the Netherlands health care system. Until 2002, risk-equalization payments were primarily based on age, gender and disability indicators, and also socioeconomic status. Since 2002, the following risk factors have been added: Pharmacy-based Cost Groups - PCG) in 2002, Diagnostic Cost Groups - DCG) and self-employment (yes/no) in 2004 (Van de Ven et al., 2004). PCG and DCG are health condition indicators, derived from previously prescribed medicines and prior-hospitalization

diagnosis. On the basis of these risk correctors, all individuals are assigned to insurance subgroups, which are to a greater or lesser extent homogenous with regard to anticipated health care costs.⁴⁶

Insurers have also received certain *ex-post* compensation based on actual costs. As a result, the average financial risk of the insurer in the area of medical costs in 1992 was limited to 3% of profits and losses. Insurers received after-the-fact compensation of 97% of profits and losses. Together with improvements in the equalization formula, the Dutch government has gradually raised the financial risk for insurers, to 75% in 2010.

3.2.4 Israel

The health care system in Israel is based on a system of multiple payers and the ability for the patient to choose between them. Four non-for-profit organizations - Health Plans - function within this system: Clalit - covering 53% of the population, Maccabi - 24%, Meuhedet - 13%, and Leumit - 10% (Rosen, Samuel (2009), p. 20).

The system is financed mostly from public funds - the health tax and general taxation. The health tax is an income-based tax, amounting to 3.1% of earnings up to one-half of average earnings, and 4.8% of earnings over that level. The upper level of the health tax assessment basis is 5 times average earnings. Each year the government determines the funding level for the health care system. The funding derived from general taxation amounts to the difference between this level and the amounts raised by the health tax (Rosen, Samuel (2009), p. 43).

The cash collected is then redistributed to the organizations - 95% of the money in accordance with a capitation formula, taking account of the number of members and their age profile, while 5% is set aside for those suffering from five rare and very costly diseases (AIDS, hemophilia, kidney failure requiring dialysis, thalassemia, Gaucher's disease). However, the system does not have loss ratio equalization system (Rosen, Samuel (2009), p. 54-55).

Each of the organizations must offer a range of benefits equal to the base scope. In this system partial integration - Type 1 - exists, since the organizations are at the same time benefit providers and operate on the principles of an HMO (health maintenance organization).

This system also has a co-payment mechanism. The organizations have the right to submit proposals regarding the level of payments,

which must be accepted by the government, resulting in “co-payment competition” (van de Venn et al. (2003), p. 83). Currently, the patient own-premium proportion is the same for all the organizations, while certain payments - such as those for medicines - differ. The three smaller organizations charge 15% of the purchase price, with a minimum of 13 NIS (€2.5) per dose.⁴⁷ However Clalit, for medicines on the 1998 reimbursement list, charges just 12 NIS (€2.3) per dose, and for medicines added since that date, 10% of the price, with a minimum of 12 NIS (€2.3) per dose (Rosen, Samuel (2009), p. 51).

The organizations have the right to offer additional - complementary and supplementary (!) insurance of treatment costs - although the scope and price of these (dependent only on age, not state of health) are subject to acceptance by the Ministry of Health, and no one applying for cover may be rejected (Rosen, Samuel (2009), p. 47). Competition between the organisations is limited since there is no potential for direct contact with members - all contact must be by mail (van de Ven et al. (2003), p. 88).

3.2.5 Germany

The German health care system is an insurance system with multiple payers and the ability for patients to select their payer. In 2006, a total of 275 Health Funds were operating on the German market⁴⁸ (van de Ven et al. (2007), p. 168).

In 2007, Germany carried out an important health care system reform, which came into force in 2009. Currently, the Health Funds charge premiums proportional to the earnings or income of the person insured; these are then passed on to the central fund. Premiums do not include, as previously, payments for children, which are now financed from the state budget (Cheng, Reinhardt (2008), p. 206-207).

This fund, after receiving subsidies from the state budget paying subsidies for children, carries out a cash redistribution using a capitation formula adjusted according to age, gender and also 80 chronic diseases.

Furthermore, the Funds have greater freedom in setting benefits within the limits of the cover provided by them. Then, Funds are able to broaden the scope of benefits in exchange for a higher co-payment, or else submitting to additional requirements, e.g. limiting the number of benefit providers, or a specific benefits-provision procedure. The Funds may also offer products with reduced premiums and higher co-payments, or with the “bonus-malus” no claims rebate system

Germany

operating in civil liability insurance. Additional benefits or discounts may only be offered by those Funds achieving a budget surplus. The Funds with a deficit are obliged to charge additional premiums, limited in advance to 1% of the gross earnings of the insured (Paris (2010), p. 11).

The Health Funds also have the right to offer complementary insurance, which constitutes an additional area of competition (van de Ven et al. (2007), p. 169).

3.2.6 *Slovakia*

Slovak health care system is one in which several payers operate, and patients may choose the payer. When the system was introduced in 1995, there were 10 payers; the maximum number of payers was recorded in 1996 (13). Now there are 5: General Health Insurance Company (GHIC) - covering 65.2% of insured individuals, Common Health Insurance Company (CHIC) - 12.9%, Apollo - 8.5%, Sideria - 7.2% and VZP-Dovera - 6.2%. GHIC and CHIC are state-owned, the other 3 are private, meaning that their solvency is not guaranteed by the state (Havlaka et al. (2004), p. 36).

Each of the 5 collects a health insurance premium⁴⁹ in respect of insured individuals, and then reports to a special branch of GHIC, which distributes the funds between the payers - 85% of premiums are taken into the risk-equalization system, which adjusts for age (17 age groups) and gender (Havlaka et al. (2004), p. 40, 42). There is no claims-equalization mechanism in the system.

The payers do not have the right to differentiate in terms of scope of cover, premiums or co-payment. They may however offer additional, complementary insurance covering preventive care, medical advisory costs, improved standard of hospital room, and also co-payment costs. However, interest in such products is insignificant. (Schneider (2009), p. 10).

Slovakia

3.2.7 *Switzerland*

Since 1996, all residents of Switzerland have had the obligation to purchase private medical insurance from one of 62 private insurance companies.⁵⁰ These companies must be non-for-profit institutions and must accept every applicant. They may operate (selectively) in each of the 26 cantons. They may also differentiate premiums by age (three age groups: 0-18, 19-25, 26+) and by canton. At the same time, the insured may apply for a higher co-payment level⁵¹, resulting in reduction of the premium (Leu et al. (2009), p. 1-2).

The system also includes 10% co-payment of benefits costs and, moreover, it is forbidden by law to cover this co-payment using additional, private medical insurance (Schneider (2009), p. 9).

Residents of Switzerland may also apply for premium subsidies. These are financed from income taxes. In 2007, such subsidies were received by 40% of households, amounting to about one-third of the insured population (Leu et al. (2009), p. 4).

The system also has a risk-equalization mechanism, based on age (15 groups) and gender. The *ex-ante* equalization is carried out at the cantonal level. There is not, however, any loss ratio equalization mechanism, and so the financial risk remains entirely with the companies.

All the companies are obliged to offer the same base scope of cover, but they may offer complementary insurance covering benefits provided outside the canton, private rooms in hospital, the choice of doctor in charge at the hospital, and also, for example, dental care. In order to make a profit on these additional products, the companies frequently operate as two separate entities - one dedicated to basic insurance, the other to complementary insurance. This gives rise to concerns regarding distribution of information e.g. regarding the insured person's state of health, thereby influencing the level and availability of insurance cover (Leu et al. (2009), p. 8-10).

The companies may also operate as HMOs. Since this has turned out to be highly effective, since 2005 there has been increase in the companies' interest in offering HMO-based products (van de Ven et al. (2007), p. 173).

3.3 Third-party payer system competition index

The following characteristics of the payer system that support the existence of competition were analyzed for Belgium, the Czech Republic, Israel, Holland, Germany, Slovakia and Switzerland:

- less than 50% market share of the largest payer,
- potential for differentiating prices (between payers) in the base health insurance,
- potential for differentiating the range of benefits for base health insurance,
- potential for differentiating co-payment levels in the base health insurance,

- potential for integration of payers and service providers (HMOs) in the base health insurance,
- the payer's ability to offer additional products complementing the "health protection" level,
- existence of a risk-equalisation mechanism including characteristics such as:
 - age,
 - gender,
 - health condition,
 - others (e.g. place of residence, unemployment rate),
- existence of a loss ratio equalization mechanism.

Each of the above-mentioned characteristics had zero-one variable assigned; if the given characteristic exists in the system in question, this assumes the value 1 (with the exception of the factors being used for *ex-ante* equalization, where in the event of all the factors occurring the value is 1, and for each of the factors 0.25), and in the event of the given characteristic not being present in the system in question, the value is 0. Due to this definition of the variable, it is possible to construct a competition index corresponding to the sum of the individual constituent values. The greater the value of the index, the greater the potential for competition between payers in the base system of health insurance in the country in question. The lower the value of the index, the less it can be said that competition exists in the given system, despite it fulfilling the conditions necessary for the existence of competition.

It should be emphasized that it is not possible to specify the strength of completion, since each characteristic carries equal weight. The author has not differentiated their influence on the payers' competitive potential. One of the reasons for this is the fact that even if a given characteristic exists in any two systems, then its significance with regard to the remaining characteristics may be completely different, due to the existence of additional factors - often ones being difficult to quantify - influencing the impact that those characteristics have upon competition. A good example of this might be the selective activity obtained with the help of additional insurance products, in combination with the operational effectiveness of the competition authorities.

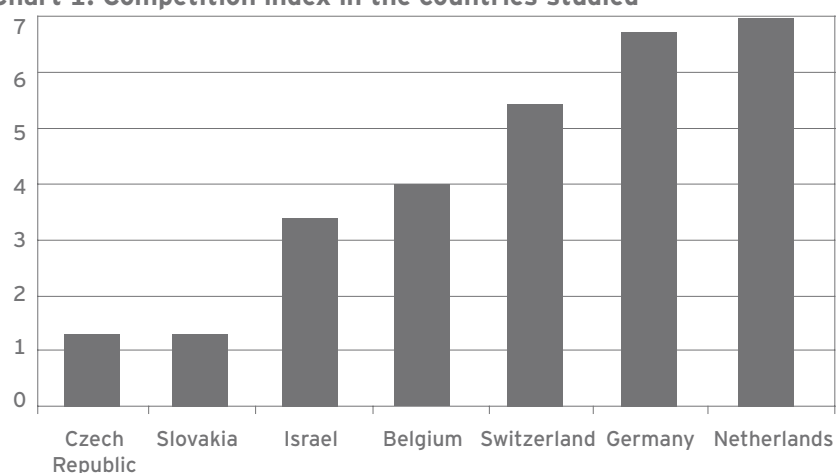
The values of the binary variables for the characteristics analyzed are set out in Table 2. On this basis it can be stated that all 7 countries apply an *ex-ante* risk-equalization mechanism, and that the variables most frequently applied therein are age and gender. Four countries also take into account information regarding health condition, i.e. chronic

diseases, or information regarding disabilities. Only two countries: the Netherlands and Belgium, also take other factors into account.

In all countries, with the exception of the Czech Republic, payers can offer additional, complementary medical insurance, but only in Germany there are certain deviations from the base range of benefits permissible. An analysis of such characteristics as: largest payer share below 50%, potential for co-payment differentiation, and also existence of an *ex-post* risk-equalization system, shows that these occur in four of the systems analyzed, and that all occur together in both the Netherlands and Germany. The two remaining characteristics - potential for payer-provider integration and for premium differentiation - are observed in three of the investigated countries.

The greatest number of characteristics promoting competition between payers (i.e. the highest competition index value) can be found in the Netherlands (Chart 1).⁵² Out of a possible 8 points, the Netherlands health care system achieves 7. An only slightly lower index value - 6.75 - can be found in Germany. The third position in terms of potential for active competition between payers in the base system of health insurance, with an index of 5.5, belongs to Switzerland. Exactly one-half of the possible points score was achieved by Israel's health care system. The Czech Republic and Slovakia each had the same competitive potential, in terms of the investigated characteristics. For those countries, the competition index amounted to 1.5.

Chart 1. Competition index in the countries studied



Source: Own compilation.

Competition index

Table 2. Competition index in the studied countries

	Largest payer has less than 50% share	Additional products offered	Co-payment differentiation	Potential for integration with service providers	Differentiation of premiums	Differentiation of range of benefits	Ex-ante equalisation					Ex-post equalisation	Competition index
							ex-ante (total)	age	gender	health condition	others		
Netherlands	1	1	1	1	1	0	1	0,25	0,25	0,25	0,25	1	7,00
Germany	1	1	1	0	1	1	0,75	0,25	0,25	0,25	0	1	6,75
Switzerland	1	1	1	1	1	0	0,5	0,25	0,25	0	0	0	5,50
Belgium	1	1	0	0	0	0	1	0,25	0,25	0,25	0,25	1	4,00
Israel	0	1	1	1	0	0	0,5	0,25	0	0,25	0	0	3,50
Czech Rep.	0	0	0	0	0	0	0,5	0,25	0,25	0	0	1	1,50
Slovakia	0	1	0	0	0	0	0,5	0,25	0,25	0	0	0	1,50
Total	4	6	4	3	3	1	4,75	1,75	1,5	1	0,50	4	

Source: own analysis

4. Regulated competition - a case study of the Dutch health insurance system

The analysis already performed points to the Netherlands base system of health insurance as being the one with the greatest competition between third party payers. Moreover, this system is the only one of those covered by the European Health Consumer⁵³ Index which, since the index was first calculated in 2005, has occupied one of the first three places in the ranking and, since 2008, the top position (Eisen, Bjönberg (2010), p. 22). This is supported by other indicators related to the results of the system, e.g.: Healthy Life Expectancy⁵⁴ (HALE)⁵² - the number of years the average Dutch person lives in good health amounts to 73, and is only 2 years less than the highest healthy life expectancy in Europe (Switzerland - 75 years); or infant survival rate - of every 1,000 children born, 996 survive their first year (for more information, see: WHO World Health Statistic 2010).

This section, written by Professor Wynand P.M.M. van de Ven, contains a short outline of the Dutch health care system. It presents 9 necessary conditions for complete use of benefits brought about by regulated competition on the health care market, the level to which these conditions were fulfilled during the years 1990/2010, and also the results of the first evaluation of the Dutch health care system reforms. At the end, the conclusions of the analysis are presented.

4.1 The Dutch health care system

Historically the Dutch health care system has been characterized by much private initiative both in funding and provision of care. Most health care in the Netherlands is delivered by private providers (e.g. physicians, physiotherapists, dentists who work in their own practice) and private not-for-profit hospitals. In 1941 a mandatory health insurance scheme for the low and middle income groups was introduced. Self-employed individuals and individuals with an income above a certain threshold (in 2005 in total about 33% of the population) were excluded. Most of them voluntarily bought health insurance from a private insurance company. In 1968 the *Exceptional Medical Expenses Act* was passed and constituted a mandatory national health insurance scheme with an income-related premium, covering long-term care, care for the mentally and physically disabled and hospitalization for longer than one year.

By the end of the 1960s the Dutch government became worried about the seemingly uncontrollable growth of health care expenditure.⁵⁵ The growing pressure to contain medical spending led to increasing supply and price regulation since the mid-1970s. In 1983 the government decided to replace the open-ended hospital reimbursement system by a budgeting system, which in 1984 was expanded to all other inpatient care institutions. The Health Care Prices Act (1982) enabled government to control the physicians' fees, and in a later stage also their total revenues. By the mid-90s the fee-for-service system was largely replaced by a 'lump-sum payment' per hospital for all specialists working in that hospital. Subsequently, further steps have been taken towards partnership and integration of hospitals and medical specialists.

However, from the mid 1980s top-down rationing policies were subjected to growing criticism. The criticism focused particularly on the lack of incentives for efficiency and innovation within the prevailing system of health care finance and delivery. This led to broad support for incentive-based reforms and a reconsideration of the role of competition in health care. In 1987 the government-appointed Dekker-Committee advised a market-oriented health care reform and a national health insurance system. The Health Insurance Act (2006) and the current regulatory regime are based on these proposals.

Since 2006 everyone in the Netherlands must buy individual private health insurance from one of the competing insurers. This insurance must cover the following types of care: general practitioner care, specialist care, prescribed pharmaceuticals, hospitalization, maternity care, dental care for children, some paramedical care, some medical devices, and transport of patients. This *mandatory private* health insurance (100% population) replaced the previous mixture of *mandatory public* health insurance (67% population) and *voluntary private* health insurance (33% population). Consumers have at least once per year a free choice of insurer and insurance contract. Insurers must accept every applicant for a community-rated premium (set by themselves), and receive risk-adjusted equalization payments for covering the elderly and chronically ill individuals. The insurers are assumed to be (come) the prudent buyers of care on behalf of their insured consumers. Insurers are allowed to selectively contract or integrate with health care providers and to provide care in their own facilities using their own staff (e.g. primary care centers, pharmacies). Details of the Dutch Health Insurance Act are given in the Appendix.

Although the supply-side is still quite heavily regulated by the government, insurers and health care providers gradually get more freedom to negotiate about prices, service and quality of care.

Since 2005 prices for physiotherapy are no longer regulated. Insurers and hospitals are allowed to freely negotiate prices and selectively contract for an increasing range of products (Diagnostic-Treatment-Combinations) accounting for about (10% in 2005 and) 34% in 2010 of hospital revenues. Government intends to further reduce the current price regulation and to further liberalize hospital prices. Consequently, providers will get more freedom to set their price or to agree with insurers about the price and quality of care provided to their insured. Insurers and providers are free to choose the tools (if any) for managing the care they apply, e.g. protocols, disease management, utilization management, referral cards or other forms of preauthorization of care, etc.

4.2 Necessary preconditions for regulated competition

At least nine complicated necessary preconditions have to be fulfilled in order to reap the benefits of *regulated competition* in health care: i.e., competition combined with universal access to affordable good-quality care and with the appropriate incentives for consumers, providers and insurers. These preconditions are:

- I. Consumer choice of insurer
- II. Subsidies in the form of *ex-ante* risk equalization
- III. Freedom to contract
- IV. Transparency
- V. Consumer information
- VI. Financial incentives for efficiency
- VII. No free riders
- VIII. Contestable markets: insurers and providers
- IX. Market regulation

As few were fulfilled in 1990 (Schut and Van de Ven, 2005), the original timescales for realizing such 'radical' reform within a few years, was unrealistically optimistic. We now outline these nine preconditions, the extent to which they were/are fulfilled in 1990/2010 (to be summarized in Table 1) and what still needs to be done (Van de Ven et al., 2009).

4.2.1 Consumer choice of insurer

Each individual consumer ought periodically (e.g. annually) have a free choice of insurer without facing high transaction costs (search costs, filling out forms). This requires insurers to accept each applicant for each basic health insurance ('open enrolment') and not to reject high-risk applicants.

Condition I

In 1990, consumers had virtually no choice of sickness fund or insurance product. From 2006, they have choice of both and insurers are required to practice open enrolment. There are, however, some obstacles when consumers want to switch insurer.

Since most consumers prefer to buy basic and supplementary health insurance as a joint product, supplementary health insurance can be an obstacle to switch insurer for the basic insurance. New insurers may reject high-risk applicants for the supplementary insurance and the old insurer may increase the premium of the supplementary insurance with 50 or 100 per cent if the consumer no longer buys the basic health insurance from this insurer. During the first two years after the introduction of the Health Insurance Act this was not an issue because under public pressure insurers collectively guaranteed not to refuse applicants for supplementary insurance. Roos and Schut (2009) found that also in subsequent years only a minority of health insurers were using health questionnaires and selective underwriting practices when individuals apply for supplementary coverage. Nevertheless, they also found that an increasing proportion of the population (from 4% in 2006 to 7% in 2009) does not contemplate switching to another insurer because they believe not to be accepted when they would apply for supplementary health insurance because of their age or health status. This implies that the choice for high-risk individuals in the basic insurance market is substantially reduced by the presence of supplementary insurance. This reduces the incentives for health insurers to offer attractive basic health insurance contracts for high-risk individuals (e.g. by contracting the best providers or to organize integrated care for specific chronic diseases).

Another obstacle for a free consumer choice of insurer is that subsidies from employers or 'social security payment' offices can be conditional upon the purchase of a certain health insurance product.

So in 2010 the precondition "consumer choice of insurer" is to a large extent, but not fully fulfilled.

4.2.2 Subsidies in the form of ex-ante risk equalization

A competitive health insurance market with free consumer choice provides health insurers with incentives for efficiency, but also with incentives for risk rating, risk segmentation and/or risk selection. Since universal access is a major goal of social health insurance schemes, a key question is: *How can we guarantee access to affordable coverage for the high risks in a competitive market for individual health insurance?*

In an earlier paper we concluded that a system of *risk-adjusted equalization payments* is the preferred form of subsidy to do so (Van de Ven et al., 2000). Under this approach insurers are free to ask risk-rated premiums. The preferred way of organizing the payment flows of risk-adjusted subsidies depends on political, economic and pragmatic arguments. In practice, all countries that apply risk-adjusted subsidies, give the subsidy to the insurer who reduces the consumers' premium with the per capita subsidy they receive for this consumer. We refer to this way of organizing the risk-adjusted subsidies as *ex-ante risk equalization*. Risk equalization should not only be based on age and gender, but also on health adjusters. In practice this appears to be quite complicated.

To the extent that some high-risk consumers are insufficiently subsidized, the risk-adjusted subsidies or equalization payments can be complemented by one or more of the following strategies: premium-based subsidies, *ex-post* cost-based compensations to the insurers, and implicit cross-subsidies enforced by premium rate restrictions for a specified insurance coverage (Van de Ven and Schut, 2007). However, these complementary strategies imply trade-offs: premium-based subsidies to the consumer and *ex-post* cost-based compensations to the insurers improve the affordability of health insurance, but reduce the incentives for efficiency; and premium rate restrictions may improve the affordability of health insurance, but create incentives for risk selection.

The adverse effects of risk selection can be quite substantial. First, insurers have a disincentive to respond to the preferences of high-risk consumers. Consequently the chronically ill might not receive the best quality of care or the best service. Secondly, to the extent that some insurers are successful in attracting the low-risk consumers, these selection activities result in market segmentation whereby the high risks pay a high premium and the low risks pay a low premium. That is, selection may threaten the affordability of health insurance for the high-risk individuals. Thirdly, at least in the short run, selection will be more profitable than improving efficiency. In sum, the premium rate restrictions that are intended to increase affordability instead provide incentives for selection that may threaten affordability, quality of care, and efficiency.

So the choice among these complementary strategies in case of inadequate risk equalization confronts policy makers with a complicated trade-off between affordability, efficiency and the negative effects of selection, notably low quality care for the chronically ill. The better the premium subsidies are adjusted for relevant risk factors, the less these

complementary strategies are needed, and the less severe is the trade-off (Van de Ven et al., 2000).

The Dutch government has decided to complement the inadequate (see below) risk equalisation system with "community rating per product", i.e. each insurer must quote the same out-of-pocket premium (i.e. taking into account the equalisation payments) to all enrollees who choose the same insurance product. However, with open enrolment and community rating and without adequate risk equalisation the insurers have incentives for selection that can have serious negative effects, particularly as a result of the insurers' disincentive to provide good quality care to the chronically ill.

In 2008 the risk equalisation payments were based on age, gender, indicators of disability and socio-economic, employment status and health status information derived from prior utilisation of prescription drugs (Pharmacy-based Cost Group - PCGs) and of prior hospitalization (Diagnostic Cost Groups - DCGs) (Van de Ven et al., 2004; Prinsze and Van Vliet, 2007). Based on these risk adjusters all individuals are classified into homogeneous subgroups of insured in terms of their predicted health expenses.

Evaluation of the Dutch risk-equalisation-2007

We have made an evaluation of the Dutch risk equalisation formula-2007. The results indicate that the Dutch risk equalisation formula-2007, which currently is one of the most sophisticated in the world, provides insufficient compensation to groups defined on health status, prior utilization and prior expenses. For many groups of chronically ill, who can be easily identified by the insurers, insurers are confronted with substantial predictable losses. The size of these groups ranges from less than 1% to 40% of the population. The average predictable losses per adult are in the order of hundreds to thousands of euros per person per year. For example, the average predictable loss per adult for the 21% of the population who report their health status as fair/poor, equals €541. Because for the whole population the average predictable loss per adult is zero, the other 79% of the population have an average predictable profit of €144 per adult.

Further improvements of the risk equalisation system, as announced by the Dutch government, will certainly further reduce the incentives for risk selection. In addition, it is important to emphasize that the prevention of selection does not require that the predictable profits and losses, which induce the incentives for selection, should be reduced to zero. One should take into account an insurer's costs of selection. A bad reputation resulting from selection activities such as keeping

patients from the highest-quality care, can be a high cost to an insurer. In addition, the information that is necessary for risk selection is not for free. If the predictable losses and profits after risk equalisation are sufficiently small, this may not be a problem, because an insurer has to take into account the costs of selection and the (statistical) uncertainty about the net benefit of selection. Simulation results indicate that the extent to which the size of the potential selection problem is overestimated by not ignoring small predictable losses and profits, increases the better the risk equalisation formula is (Van Barneveld et al., 2000). So a 'perfect' risk equalisation formula is not necessary. The risk equalisation formula should be refined to such an extent that insurers expect the costs of selection to outweigh its benefits. By making the risk groups in the equalisation more homogeneous, the costs of selection increase while on average the profits fall. Government or patient advocacy groups could raise the cost of a bad reputation by frequently monitoring insurers' behaviour and publishing relevant consumer information. But still an unanswered question is how much 'imperfection' is acceptable.

Further improvements of the equalisation formula

Because risk selection activities targeted at certain high-risk groups could be profitable⁵⁶, further improvements of the risk equalisation method are necessary to prevent insurers from engaging in risk selection, which currently occurs e.g. in Germany and Switzerland (Van de Ven et al., 2007). The Dutch government intends to further improve the risk equalisation formula⁵⁷ by adding new risk adjusters such Diagnostic Cost Groups (DCGs) based on outpatient care, indicators of mental illness and indicators of disability and functional restrictions, by multiyear DCGs rather than one-year DCGs (Lamers and Van Vliet, 1996) and by more effective forms of *ex-post* risk sharing (Van Barneveld et al., 2001) that in particular compensate insurers for high-risks, who have a rare chronic disease with high expenses.

The more government succeeds in improving the risk equalisation formula, the more will chronically ill individuals be the preferred clients for efficient insurers, because the potential efficiency gains per person are higher for the chronically ill than for healthy persons. Advertisements by insurers such as "Chronically ill, please come with us. We have contracted the best doctors specialized in your disease" are an indication that the risk equalisation formula is ok.

The conclusion is that in 2010 the precondition 'adequate risk equalisation' is to a large extent, but not fully fulfilled.

Condition III

4.2.3 Freedom to contract

Insurers and providers ought to be free selectively to contract and negotiate the content of contracts (e.g., prices, quality, and services) and to integrate vertically.

In 1990, sickness funds had to contract with any willing provider (hospitals and physicians), were not allowed to integrate vertically with providers, and prices were fully regulated by government. From 2006, insurers are allowed to contract selectively or vertically integrate with (all) providers; and prices are negotiable for range of services. E.g., the percentage of the hospital turnover for which the insurers and hospitals can freely negotiate the price, increased from 10 per cent in 2005, to 20 per cent in 2008, and to 34 per cent in 2009.

So in 2010 the precondition "freedom to contract" is partly fulfilled.

4.2.4 Transparency

Effective competition requires transparency in:

- insurance with a manageable number of homogenous categories for a standardized benefits package (for consumer choice of insurance option), and
- medical products through a classification system (for contracting between insurers and providers).

In 1990, there was only one uniform benefits package for mandatory basic insurance, so this condition was then fulfilled. For voluntary supplementary insurance the precondition of transparency was largely unfulfilled. Hospitals then received a global budget and specialists were paid on a fee-for-service basis, so for medical products there was no transparency.

Condition IV

To enable contracting for specific hospital services, a product classification system was developed based on combinations of a patient's diagnosis and an average treatment pattern. This resulted in a categorization of about 30,000 different Diagnosis Treatment Combinations (DTCs). In 2005 hospital per diem rates (derived from a negotiated budget) were replaced by prices per DTC. So in 2010 the precondition of transparency for medical products is largely fulfilled.

The choice among different options for mandatory basic insurance has reduced the transparency somewhat. The increased number of voluntary supplementary insurances since 2006 further reduced transparency.

4.2.5 *Consumer information*

Consumers ought to be well informed about their right periodically to choose a health insurance option and their entitlements. There ought also to be relevant, reliable, objective and easily understandable information on the quality and services of providers and insurers to enable consumers and insurers to make informed choices.

In 1990, there was hardly any relevant information to enable consumers and insurers to choose providers; and there was no consumer choice of sickness fund. In 2003 the Dutch government took the initiative to set up a website where consumers can get information about insurers and providers of care (www.kiesbeter.nl). In addition there are some competing (private) websites with consumer information. Consumers who visit these websites can compare all insurers with respect to price, services, consumer satisfaction and supplementary insurance (premiums and benefits).

In 2003 the Health Care Inspectorate (IGZ) started to develop a basic set of hospital performance indicators about quality (including structure, process and outcome indicators), safety, efficiency and accessibility, in cooperation with the hospitals and medical specialists (IGZ 2005). Since 2005 the IGZ annually publishes a report on the performance of Dutch hospitals during the previous year based on an analysis of 20 quality indicators that are provided by the individual hospitals. To support its members, the Netherlands Health Insurers Association since 2006 annually publishes a guide with hospital performance indicators about hospital services provided in the free segment. Finally, since 2006 a national standard of measuring consumer experiences with health insurers and health care providers is being developed, known as the Consumer Quality (CQ) index. Results are published on the government sponsored website www.kiesbeter.nl. For a limited number of diseases hospitals are rated using a three star system to indicate less than average, average and above average performance for a number of diseases (e.g. about percentage readmissions or mortality rates after myocard infarct for patients in specific age groups).

Although now much more information is available on providers and insurers than in 1990, there is still a lack of detailed timely accessible comparative information on quality of different types of care.

4.2.6 *Financial incentives for efficiency*

There ought to be effective financial incentives for: insurers to seek efficiency in managing insurance and in the delivery of care through

integration or contracting with competing providers or both; for providers to be efficient in delivering care; and for consumers to be price-sensitive purchasers of health insurance. Financial incentives ought to be designed to discourage risk selection by insurers and providers, and to discourage providers delivering more care than is beneficial for the patient or skimping on quality of care; and subsidies to consumers ought to be designed so that the differences in costs between the different insurers and the different insurance products are fully reflected in consumer's out-of-pocket premiums.

Condition VI

In 1990, sickness funds did not bear any financial risk, specialists received a fee for each item of service, hospitals received a global budget, and consumers had no financial incentives for efficiency. So in 1990 none of these preconditions were fulfilled. In 2009, insurers are risk-bearing (to a large extent)⁵⁸ and pay for 34% of the medical products a lump sum payment per episode of illness to the hospital for both hospital and physician services for each DTC, which generates incentives for efficiency. However, for the other two thirds of the hospital products there still exists a global budget. Consumers are fully price-sensitive at the margin when purchasing health insurance, and have a modest mandatory co-payment.

So although in 2010 consumers, insurers and providers have more financial incentives for efficiency than in 1990, this precondition is not yet sufficiently fulfilled.

4.2.7 No free riders

Condition VII

There ought to be no free riders, i.e. individuals who purposely do not buy health insurance, because they expect that others (with altruistic preferences) will pay the health expenses if they need medical care. In 1990 this precondition was fulfilled. In 2010 a small minority of the population refuses to buy health insurance (about one per cent) or to pay premiums (about two per cent).

4.2.8 Contestable markets: insurers and providers

Condition VIII

The provider and insurer market ought to be sufficient contestable, otherwise providers and insurers enjoy dominant positions in the market which limits effective competition.

Because of the supply regulation by government this precondition was not satisfied in 1990. In 2010 this condition is fulfilled for the insurer market, and partly for the provider market.

4.2.9 Market regulation

Market regulation ought ideally be by several authorities at arm's length from government:

- A quality authority to protect consumers against substandard quality of care.
- A solvency authority to require insurers to have sufficient financial reserves to fulfil their financial obligations.
- A competition authority to prevent the development of cartels and to prevent abuse of dominant position.
- A consumer protection authority to safeguard consumer interests. This includes, e.g., actively managing the market; supervising insurers and providers; examining whether the information that insurers provide to their potential enrollees is complete and truthful; examining whether the offered insurance products are in accordance with the law; and taking responsibility for sufficient transparency and consumer information in the market.

In the early 1990s, only the first was in place; as the sickness funds did not bear financial risk and there was no competition. Indeed strong cartels and dominant positions were deeply rooted in the Dutch health care system. This was a result of the longstanding tradition of anticompetitive self-regulation and of collective bargaining by government that protected cartels of providers and insurers.⁵⁹

The other three regulatory authorities were introduced over time:

- For solvency of sickness funds from 1992.
- For competition from 1998, with a new powerful Competition Act supplemented with European regulation. A regulator covers all sectors and ensuring competition in health care now accounts for about a third of this regulator's time. In 1998, under new legislation (the Mededingingswet), about 300 requests for exemption from enforcement of the new Competition Act were submitted by the health care sector to the newly established Dutch Competition Authority (Nederlandse Mededingingsautoriteit; NMa). As most of these requests were dismissed by the NMa, from the early 2000s this meant most of the old agreements on horizontal price fixing, market sharing and entry restrictions became illegal.⁶⁰
- For consumer protection from 2006, by the Dutch Health Care Authority (the Nederlandse Zorgautoriteit; NZa).

In 2010 the precondition of market regulation is (largely) fulfilled.

Table 3. The extent to which eight necessary preconditions for regulated competition are fulfilled in the Netherlands (1990 and 2010)

Precondition	1990 Sickness Fund (65 percent population)	2010 Health Insurance Act (100 percent population)
1. Consumer choice of insurer	--	+
2. Subsidies in the form of <i>ex-ante</i> risk equalisation	--	- / +
3. Freedom to contract	--	- / +
4. Transparency:		
* insurance products	++	+
-- Mandatory basic insurance	--	--
-- Voluntary supplementary insurance	--	--
* medical products	--	- / +
5. Consumer information	--	- / +
6. Financial incentives for efficiency:		
* consumers	--	+
* insurers	--	- / +
* providers	--	- / +
7. No free riders	++	+
8 Contestable market:		
* insurers	--	++
* providers	--	- / +
9. Market regulation:		
* Competition Authority	-	++
* Quality Authority	+	+
* Solvency Authority	ND	++
* Consumer Protection Authority	ND	+

Source: Van de Ven et al., 2009 (page 197).

Legend: -- = not fulfilled at all; - = largely unfulfilled; - / + = partly fulfilled;
+ = largely fulfilled; ++ = fully fulfilled. ND = Not applicable.

Table 3 outlines progress in the Netherlands from 1990 to 2010. As the third column of Table 3 shows, several preconditions are still not completely fulfilled. Indeed, the Dutch health care reform is still work-in-progress.

4.3 First evaluation

Although it is much too early for a full evaluation of the Dutch competitive model, some preliminary conclusions can be drawn from the first evaluation of the Health Insurance Act-2006. This evaluation

is nicely summarized as 'on balance positive, despite some serious problems' (van de Ven et al., 2009).

A key indicator of the success of the Health Insurance Act-2006 is that no political party or interest group has argued for a return to the former system with its distinction between sickness funds and private health insurers. The positive outcomes are: a good system of cross-subsidies ('solidarity'); a standard benefits package available for everyone, without health-related premium; an annual choice of insurer/contract; strong price competition among the health insurers; increasing information about price and quality of insurers and providers of care; increasing insurers' activities in purchasing care; and that the quality of care is now at the top of the agenda.

A major achievement of the reforms so far is that in choosing an insurer and a specific insurance arrangement each consumer receives the full savings of choosing an efficient insurance package. This provides the insurers with a strong incentive for efficiency.

Gradually the insurers have started to develop their new role. Some insurers have set up their own pharmacies, some have set up their own primary care centres and others experiment with bonus payments for general practitioners. For physical therapy, prices have been made freely negotiable since 2005. Since then variation in contract prices and other conditions increased as well as the average price level (which was quite low at the start). Freely negotiable prices were introduced for a number of routine hospital procedures (e.g. hip, knee, cataract and inguinal hernia operations), which accounted for about 10 per cent of total hospital expenditure in 2005, 20 per cent in 2008 and about 34 per cent in 2009. In 2008, 9 small insurers set up a purchasing cooperative to purchase care for their 2 million insured. Since 2008 one insurer offers a preferred provider plan with financial incentives to use preferred GPs, a preferred internet pharmacy and 13 preferred hospitals. From 2009 several health insurers are waiving the mandatory co-payment (€155 per year) for hospital treatment of a number of common diseases if their enrollees choose one of the preferred hospital that have the best performance in treating that disease. So far, the strongest effect of purchaser competition has been the downward effect on generic drug prices (Boonen et al. 2010). In June 2008 four out of the then five biggest health insurers in the Netherlands started to experiment with preferred drug formularies for lowest priced generics within the same therapeutic class. The individual bidding strategies had a dramatic effect on the prices of generics. For the ten biggest-selling generics, list prices were reduced by 76 percent to 93 percent (Boonen et al. 2010). The aggregate savings as a result of these

Evolution of the system

price reductions were estimated at €348 million (69 percent) per year. These successful purchasing activities by insurers are the more remarkable as, in the last decade, government made many unsuccessful attempts to lower the prices of these drugs.

In 2009 the use of preferred drug formularies was expanded to more generic drugs (some of which went off-patent in 2009) and adopted by more health insurers, resulting in additional cost savings.

In addition, health insurers are increasingly involved in supporting disease management programs for chronic diseases such as diabetes, COPD, stroke and chronic heart failure.

However, the evaluation also found that not all preconditions are yet fulfilled (see Table 1) and identified some serious problems.

Even though insurers are increasingly behaving as critical purchasers of care, they have been quite reluctant to selectively contract with health care providers and to offer preferred provider contracts to their customers. There are several reasons for this.

Current level
of regulation

First, supply and prices of health services are still heavily regulated, leaving limited room for health insurers to manage care. For example, in the hospital sector, most prices are still derived from a fixed global budget and are the same for all insurers. Gradually, however, the government is expanding the room for contractual negotiations between health insurers and health care providers.

A second reason for the reluctance of health insurers to engage in selective contracting and managing care is the limited availability of high quality information. Insurers often do not have sufficient information to selectively contract with good quality providers.

A third reason why insurers hesitate to offer preferred provider plans is the fear of a loss of reputation if they restrict consumer choice to a limited network of preferred providers. Annual surveys among the Dutch population show that an increasing proportion of the insured does not believe that health insurers are committed to contract good quality care (Boonen 2009). Health insurers are keen to avoid reputation damage as a result of being blamed to reduce the doctor's autonomy. Without better performance indicators it may be difficult for health insurers to overcome this credible commitment problem.

A fourth obstacle for an active purchasing role of health insurers is that they run only limited financial risk on hospital care, since most of the

deficits on hospital expenses are retrospectively reimbursed.

This is partly because hospital prices are still heavily regulated, and partly because of the deficiencies in the DTC-system and the imperfections in the method of the risk equalisation (Van de Ven and Schut 2008). Parallel to the ongoing improvements of both the DTC-system and the method of risk equalisation as well as the further deregulation of hospital prices, the insurers' financial risk on hospital expenses has been substantially increased in 2009.

Despite the continuous improvements of the risk-equalisation system, health insurers still can easily identify unprofitable subgroups (Van de Ven and Schut 2008). This may become a problem because the Health Insurance Act provided health insurers with incentives (e.g. strong price competition) and tools (e.g. selective contracting and targeted purchasing strategies) to select risks. Although clear evidence of risk selection is limited, it may be difficult to detect. Particularly when insurers do not invest in better care for unprofitable subgroups, this may be largely unobservable since all health insurers face the same incentives and the counterfactual is unknown (i.e. what would have happened if insurers had appropriate incentives?).

The negative incentives generated by imperfect risk equalisation are substantially mitigated by various *ex-post* compensations. In turn, however, these *ex-post* compensations reduce the incentives for effective purchasing. First, incentives for efficiency are moderated because part of the losses is retrospectively reimbursed. Second, since in the Netherlands *ex-post* compensations are primarily used for reducing losses on hospital care, health insurers have limited incentives to substitute outpatient for more expensive inpatient care (NZa 2009).

In sum, as discussed above, not all preconditions for regulated competition are yet sufficiently fulfilled. If one or more of these preconditions were to remain unfulfilled then this could put at risk the successful implementation of the Dutch reforms. However, the Dutch government realizes that the reform process is still work-in-progress and intends to consistently further implement the regulated competition model. In particular, for the next few years we expect substantial progress to be made by the Dutch government by:

- Further improvement of the risk equalisation system. This will allow a further de-crease of the *ex-post* compensations to the insurers, and thereby increase their financial incentive for efficiency.
- New legislation to further strengthen the position and legal rights of consumers in health care.

Disadvantages

Next steps

- Further improvements of the DTC-classification system for defining medical products and of the transparency of health insurance products.
- Further improvements in the public availability of good consumer information about the quality of care and about the panel of contracted providers per insurance product.
- Further increases in the number of DTCs for which the price is freely negotiable. In addition government intends also to give hospitals full financial responsibility for capital investments (buildings, medical equipment).

A crucial question is whether and how health insurers are picking-up their role as purchasers of health services on behalf of their enrollees. Do health insurers effectively compete for customers and do they effectively negotiate with health care providers about the price, quality and coordination of health services? So far, the jury is still out.

Conclusions and recommendations

The existence of competition between third-party payers in the base health care system requires two preliminary conditions to be satisfied: presence of multiple payers and the patient's ability to choose a payer. These conditions are only satisfied by 7 of the 29 countries which were covered by the study: Belgium, the Czech Republic, the Netherlands, Israel, Germany, Slovakia and Switzerland. The competition index created for this group of countries indicated the Netherlands as an example of the system, which meets the competition criteria between third party payers in the base healthcare system most satisfactorily.

It is crucial to add, that competition between third-party payers is only a tool for obtaining the goal of higher efficiency of a given system and convincing the patient to use benefits in a rational way. Not all of the investigated countries that introduced the competition between payers meet all of the competition criteria; e.g. risk equalization system in Israel mostly age-based or price negotiations with the providers organized at the level of the Ministry of Health in the Czech Republic. This might be a reason for other unintended consequences of such system introduction. One of the most difficult ones is the selection on behalf of the payer.

The complete introduction of regulated competition in the Dutch health care system required the fulfilment of many complex conditions required for creation of appropriate incentives for patients, service providers and third-party payers. On the basis of the Dutch experience, it might be stated that the scale of improvement of efficiency of health care system depends on the degree to which the following conditions are met:

- I. Consumer choice of insurer;
- II. Subsidies in the form of *ex-ante* risk equalisation;
- III. Freedom to contract;
- IV. Transparency;
- V. Consumer information;
- VI. Financial incentives for efficiency;
- VII. No free riders;
- VIII. Contestable market;
- IX. Market regulation.

In the current Polish health care system, because of the monopoly of the payer, it is not possible for *the patient to choose the insurer*. It should be remembered that Poland already has some experience in

Necessary conditions

Condition I

the free selection of the third-party payers. However, that choice was practically unenforceable – because there were 16 regional sickness funds (one per voivodship) and one sectoral sickness fund for the uniformed services. Hope for effective competition between the funds was provided by the provisions of Article 4a⁶¹, which was deleted from the later version of the Act.

At present, there are two advanced concepts of proposals for system changes. The first of these, the Act on voluntary additional health insurance and the supervision of health insurance prepared by the team headed by the Minister of Health, Ewa Kopacz, assumes the introduction of complementary insurance – creation of an insurance market for covering the costs of co-payment and benefits from outside the range of guaranteed benefits (for a description and commentary to the proposed act, see Więckowska (2008)). However, the second one, the proposition of the Polish Chamber of Insurance (PIU), assumes the introduction of regulated competition between third-party payers in the base health care system by enabling the patient to choose the payer from among Private Health Funds and the provision of a capitation contribution to these funds which depend on the age and sex of the insured. In addition to this contribution, the patient would be obliged to pay a so-called additional premium to cover the expected costs of benefits from outside the base range of benefits (more: Polish Chamber of Insurance (2009)).

The changes proposed by the Polish Chamber of Insurance (PIU) to the health care system also include a guarantee that the insurance company accepts all risks, regardless of the health condition. The non-discrimination guarantee is the fundamental condition for satisfying the principle of social solidarity defined by Article 68 (1) and (2) of the Constitution of the Republic of Poland of 2 April 1997⁶² and Article 65 of the Act on Health care Benefits Financed with Public Funds of 27 August 2004 (Journal of Laws of 2008, No. 164, item 1027 as amended)⁶³; hereinafter: Usosoz.

Such a guarantee must be introduced into the system with exceptional diligence. A good example of a “manipulation” of the guarantee in this case may be the obligatory third party liability insurance of motor vehicle owners – an insurance company is obliged to accept every risk, but, by freely setting the insurance fee, it can calculate it at such a level that the consumer may himself withdraw from applying for it.

According to the Dutch experience, in order to reduce the selection on the part of the insurance companies, and simultaneously shift the burden of competition from competition for the low risk patient

to competition for the size of the risk community, it is exceptionally important to have an efficiently operating *risk equalization system*. Poland does not have any experience of developed risk equalisation systems. Similarly, the proposed changes do not contain proposals for the creation of an appropriately complex system - let us remember that age and sex only account for 30% of the variability of spending on health benefits. Equally, at the level of the sickness funds and in the PIU's proposal, the equalisation factors are limited to a minimum - in the case of the sickness funds, this was purely the age of a patient (Sowada (2001)), whereas, in the case of PIU, it was age and sex (Polish Chamber of Insurance (2009)). It has to be remembered that age and sex explain only 30% of differences in the level of expenditure for the health care benefits.

In order to introduce an effective risk equalization system, it is necessary to precisely analyse the statistical data on consumption of health services and specify the other risk equalisation factors (primarily, the presence of chronic diseases). Therefore, an electronic medical data gathering platform should operate correctly. External institutions need to have access to it to perform analyses on the use of the benefits (including the specification of the optimum structure of benefits and resources), as well as the effectiveness of payers. State should play an important role, having to reconcile the reporting obligation (procedures, standards and deadlines) and personal data protection with the provision of access to this data for external assessment.

In the currently operating health insurance system, the National Health Fund (Narodowy Fundusz Zdrowia - NFZ) has *freedom to conclude agreements*, i.e. it can define the network of service providers, the scope of contracted services and their prices. The NFZ purchases benefits through tenders or negotiations (Article 149 of the Usosoz).⁶⁴ In both cases, the Fund has the right to negotiate the price per point in the given group of benefits. In practice, in securing benefits on the given territory, the Fund takes advantage of the position of a monopolist, dictating both the price per point and the size of the contract. Therefore, despite the fact that the service provider formally is free to conclude agreements, the lack of contract with the NFZ, as the only third-party payer, has a material impact on the service provider's position on the health benefit market.

Vertical integration between the payer and the service provider is not possible in the Polish health care system. Therefore, the condition regarding freedom to conclude agreements is only partially satisfied.

Condition II

Condition III

Condition IV

The condition of *transparency* requires specification of homogeneous categories for the standard package of benefits, which the insured selects and the additional specification of the system for classifying medical products purchased by the payers. The legislator is responsible for defining the scope of cover in the Polish healthcare system. The range of benefits is specified in Article 15 (2) of the *Usozoz*, while the list of health care benefits not financed with public funds is included in the Annex to the *Usozoz*.

The Agency for Health Technology Assessment (Agencja Oceny Technologii Medycznych - AOTM) handles the proceedings on the qualification of guaranteed health care benefits. The decisions made by it are preceded by the opinions of national medical consultants, the President of the National Health Fund and the Consultative Council. It is only after the receipt of all recommendations, that the Minister of Health decides which benefits will be guaranteed, to what extent and on which conditions. The tasks of AOTM also include (www.aotm.gov.pl):

- preparation of health care benefit assessment reports;
- issuance of recommendations regarding:
 - the removal of benefits from the list of guaranteed benefits;
 - a change in the level, the method of fulfilment or financing benefits;
- preparation of positions on qualification of medicinal products or medical devices as guaranteed benefits, as well as preparation of assessments of reports on these benefits;
- the issuance of opinions on drafts of health programmes.

However, in general, the statutory definition of the range of benefits and establishment of the AOTM is insufficient to state that the condition of transparency is fulfilled by the Polish health care system. This constitutes only one of the steps towards fulfilment of the condition - the list of benefits is specified in the annexes to the respective regulations of the Minister of Health, which still require additional details.

Condition V

The next condition for the effective introduction of regulated competition is *patient's access to reliable, comprehensible information*. As already mentioned, the provider's response to the consumer's expectations is not related to improvement in the prosperity of the latter, since he is not sufficiently well informed to make a rational choice (Barr (2001)). Similarly, the ability to purchase a lower quality product at lower prices will only be an improvement in prosperity if the choice is made consciously (based on sufficient information). Therefore, the problem of information is not only related to lack thereof (which cannot be easily resolved), but also to the ability to analyse the information. This is difficult, especially since the information required

for making a decision is known, but is so extensive that decision makers are unable to make rational decisions on its basis. A good example in the area of insurance covering the risk of disease is the difficulty in choosing insurance offer in the event of contracting a serious disease, where there are significant differences in the individual disease units (Więckowska 2006).

Comparing the range of information available in the Netherlands to the range of information provided to the Polish patient, it can be stated that this area has significant gaps; patients have almost no information on quality of the benefits offered by the service providers, there is no publicly available list of quality indicators (equally in hospital treatment and in outpatient treatment), i.e. safety, efficiency or availability. There is also no appropriate system for managed care, facilitating the management of the available resources. According to the Usosoz, service providers are obliged to report at least monthly on the length of the queue of patients waiting for benefits - even though the NFZ presents the status as of, for instance 31 July 2010, some of the data from the service providers can be derived, for instance from April 2010. Therefore, as already mentioned, it is so critically important to create a digital information exchange platform.

Therefore, this condition is not met by the Polish system. It is worth considering the introduction of a national standard - a consumer quality index - using the example of the Dutch system, which measures satisfaction level of patients from the contacts with service providers, while, later, in the event of the introduction of competition into the base healthcare system or in the form of additional social health insurance, also with "health insurance" companies. A simplification would also be the introduction of a hospital care assessment system using stars; i.e. simple point-based scale.

The Polish health insurance system has practically no financial incentives for improvement of efficiency. The monopolist payer has information on contracted and utilised benefits, whereas access to this by external institutions which might like to conduct an assessment is significantly limited. Simultaneously, in contrast with the classic insurance solutions operating in Poland based on the provisions of Articles 805 - 834 of the Civil Code of 23 April 1964 (Journal of Laws of 1964 No. 16 item 93, as amended), it is not obliged to fulfill the insurance benefit at a specified time and is not liable to the patient for the quality of the contracted benefits.

Similarly, patients have no *financial incentives to look for efficiency*, since they receive all benefits in the base health insurance system "free of charge"⁶⁵, even without any information on the price of the

benefits provided. This leads to the patient assuming a purely claim-based position partly resulting from lack of knowledge on the relations between the premium paid and the benefit received.

Such incentives - in the form of an additional profit - are only available for the service providers. Because of the deficiencies of the pricing and negotiation mechanism, they translate into actions aimed at maximising those procedures, the valuation of which by the payer enables the achievement of high margins with the simultaneous avoidance of those procedures which are priced excessively low. Settlement based on diagnosis related groups (DRG) does not lead to care for the effectiveness of the treatment process.

Condition VII

However, the Polish healthcare system meets the condition of the lack of free-rider problem. Practically everyone is covered by insurance because this does not only arise from the fact that the insurance premium is paid for (further departure from the principles of insurance), but also from the so-called joint insurance or entitlement.

Condition VIII

The introduction of regulated competition requires *markets to be contestable*. This means the creation of such conditions for entities operating on the market (in this case, third-party payers and service providers) to behave in the same way as in conditions of competition. That can be achieved through low entry barriers (sunk costs), which means that entities operating on a given market are under pressure from potential entrances. In Poland, because of the monopoly, the market of third-party payers does not satisfy the condition of contestability. PIU's proposition assumes the ability of every insurance company to operate as a payer - a private health fund - having a licence to conduct business. Contestability on the part of the payer would then be satisfied to a certain extent. However, for the service providers, the barriers of entry appear to have been set at the lowest acceptable level.

Condition IX

The last condition for introduction of regulated competition is the existence of *appropriate regulatory authorities*: a competition protection authority, a quality authority, a liquidity authority and a consumer rights protection authority. There are authorities in Poland which perform or could perform these tasks: the Office of Competition and Consumer Protection, the Health Technology Assessment Agency, the Insurance Ombudsman and the Financial Supervisory Authority. However, it cannot be said that the condition for the functioning of the respective authorities is fully satisfied, since, at present, apart from AOTM, the existing institutions have no experience in health care issues.

Based on the above analysis of the extent to which the conditions required for regulated competition developed on the basis of the Dutch experience are satisfied, it can be stated that the extent to which they are satisfied in the Polish health care system is limited in most cases. In a way the Polish system very much reflects the Dutch situation in 1990 (see: 4.2.9). To a certain extent, only two conditions are met: there is freedom for the payer to conclude agreements and there is no free-rider problem (Table 4). However, three elements, which appear to be the most difficult to introduce, are not satisfied, even at the minimum acceptable level: Poland has no experience in a developed risk equalisation system; there is no system for providing reliable, understandable information to patients and to external institutions for making periodic assessments and there are inadequate incentives for searching for efficiency on the part of the payer, the service provider and the patient.

Table 4. Extent to which the conditions required for regulated competition are satisfied in Poland

Necessary condition	2010
	Act on health care benefits financed with public funds
1. Consumer choice of insurer	--
2. Subsidies in the form of <i>ex-ante</i> risk equalisation	N.A.
3. Freedom to contract	+
4. Transparency	- / +
5. Consumer information	-
6. Financial incentives for efficiency:	
* patients	--
* payers	-
* service providers	- / +
7. No free riders	+
8. Contestable market:	
* payers	N.A.
* service providers	+
9. Market regulation:	
* competition protection authority	+
* quality authority	- / +
* liquidity authority	+
* consumer rights protection authority	+

Source: own study.

Legend: -- = not satisfied at all; - = not satisfied to a large extent; - / + = partially satisfied; + = satisfied to a large extent; ++ = fully satisfied. N.A. = not applicable.

For the above reasons, the introduction of other (non-NFZ) third-party payers to the health insurance system should be combined with changes in other areas of the system. Therefore, the following proposals may be formulated:

- the introduction of solutions contributing to the rationalisation of decisions on the part of the service provider (e.g. selective performance-based contracting) and on the part of the patient (e.g. differentiated levels of co-payment);
- the introduction of multiple competing payers in a portion of the base range of benefits, with the simultaneous offering of such a product by the NFZ (operating as a benchmark);
- the introduction of multiple competing payers in the area of complementary additional social insurance, with the simultaneous offering of such a product by the NFZ (operating as a benchmark).

The first of the potential actions would be introduction of solutions, which have impact on rationalisation of decision-making both on the part of the service provider and that of the patient, thanks to which the principal-agent problem would be reduced. In analyses, the doctor is most frequently considered to be the agent of the patient. Meanwhile, as in Poland, the system covers all costs, then health care appears as “free” to the patient, which in turn means that the doctor does not feel limited by the patient’s ability to pay. Both the patient and the doctor, not perceiving any private costs of health care (the marginal private cost is zero), at the same time fail to notice the social costs, which are after all positive, often high. They, therefore, both have the incentive to order/consume all health care provisions giving any private benefits - which leads to overproduction of health care benefits on behalf of the doctor-agent, with associated overconsumption on behalf of the patient. Moreover, often the doctor is considered the agent of two principals - the patient and the insurer. This leads to double information asymmetry: the doctor is better informed than the patient or the insurer (for more information see: Barr 2001). Therefore, in order to eliminate this problem, mechanisms may be introduced strengthening conscious selection of the individual entities within the system.

Enhancement of the function of third-party payer as an active player in the health care sector in the form of performance-based contracting and strict definition of the scope of available benefits in relation to the held resources will allow for conscious decision making on behalf of the providers.

At the same time, partial management of financial resources by service providers may be introduced, e.g. following the example of Great

Britain, where the contracting of diagnostic service provision is given over to “GP fundholders” (for further information see: Bevan, van de Ven (2010)).

In case of the patient, a potential rationalising activity would be to differentiate co-payment levels by procedure (e.g. reduced co-payments in return for making use of intermediation by GPs, or having annual preventive tests), or simply introducing risk-related premiums, financed wholly or in part to the poorest (compare: World Bank 2010). This activity should be based on an appropriate system of patient information e.g. previously mentioned star-type classification.

The solution for Poland could also be the gradual introduction of competition in the base health care system (second recommendation). The range of benefits which is guaranteed within the framework of the base health care system could be split into two parts, such that other payers (e.g. health insurance companies especially established for this purpose) would be able to offer identical benefits to those from one part of the package (“package subject to competition”). Such a product could operate on similar principles to the obligatory third party liability insurance of motor vehicle owners - the scope of cover defined by law, while the companies independently specify the level of the premium⁶⁶ and use the *bonus-malus* system. The second part of the benefits financed within the framework of the base package would remain within the domain of the National Health Fund. It is simultaneously being postulated that the NFZ offers a product dedicated to the package which is to be subject to competition, so that patients have a reference point. This solution would give opportunity to exercise significant control over the product which is subject to competition and a fast response to unintended actions (e.g. selection on the part of the payers). At the same time, it has to be remembered that they have to be introduced carefully because occurrence of additional payers may disturb coordination of benefit provision in the system and may have adverse impact on its efficiency. After the system becomes well-grounded, with the existence of the awareness of the ability to improve its efficiency and to largely satisfy the necessary conditions for regulated competition described above, it would be possible to gradually increase the basket which is subject to competition and similarly to reach a base healthcare system with many competing third party payers.

Once the system had become established, and on the basis of belief in its potential to improve efficiency and fulfil to a significant degree the above-mentioned conditions for regulated competition, it would be possible to gradually broaden the package being subject to competition,

and thereby arrive at a base system for health insurance with many competing third-party payers.

Consideration can also be given to the introduction of competition in the area of additional social health insurance, i.e. private insurance with state preferences.⁶⁷ By introducing a positive package of health benefits, the legislator may define the area of competition in the form of complementary insurance of the costs of treatment. Such actions would not increase the funds in the health care system (more: Więckowska, Osak 2010), but would give the ability to control the activities of the grey economy and the bypassing of queues for benefits, which is against the law.

It is difficult to unequivocally state which of the recommendations presented above would provide an improvement in the results achieved by the system and an increase in social satisfaction in Poland. Some of them, for instance the split in the base package of benefits and the introduction of complementary additional social insurance, could be implemented simultaneously. However, political will and social acceptance would be required.

Endnotes

- 1 Health Expectancy. Living longer, more years in poor health (2010), UK National Statistic Webside, http://www.statistics.gov.uk/cci/nugget_print.asp?ID=934.
- 2 The measure used here is QALY - quality adjusted years of life (see: Getzen (2000):74-81).
- 3 Hence the development of the HTA methods (health technology assessment), see: Kawalec (2006), p.137:148.
- 4 An example here may be the bonus-malus system operating in Germany or the "no-claim rebate rule" operating in the Netherlands until 2008.
- 5 The advantages of competition depend on quality of information. Whenever individuals are informed, the advantages of competition are real and significant. Whenever problems with information are relatively small and/or consumer tastes are differentiated, the consumer's choice, albeit imperfect, will usually be more effective than decisions made on his behalf by a person acting in the role of an agent. However, serious problems with information in health care make the advantages of competition questionable (Barr (2001)).
- 6 The most frequent reservation in the base health care system is division of payers similarly to cartels.
- 7 The ability to choose is obviously related to the transfer of funds directly to the payer (who is simultaneously a sponsor), or through a sponsor (see: 2.1.8). Therefore, in the latter case, the patient or the sponsor himself may choose, e.g. through the tender proceedings to manage the health fund in a given region.
- 8 This most frequently acquires the form of the liability of the state treasury or other entities from the sector in the event of the poor financial condition of the payer, but with the simultaneous lack of need to share the profits (in the form of a transfer of some of the profits to the state budget or to other payers not demonstrating that they are in a poor financial condition) in the case of a good financial condition of a given payer.
- 9 This obviously does not forejudge the lack of other forms of selection affecting the target structure of individuals assigned to a given payer.
- 10 Technical descriptions, such as: breadth of coverage / protection (regarding (1)) and depth of cover-age / protection (regarding (2)) are frequently used here.
- 11 Under the assumption that payers operating in the base health care system are entitled to offer additional products or equity and/or organisational connections between payers in the base and additional system are possible.
- 12 See Voluntary health insurance in the European Union 2004, p. 46.
- 13 I would like to thank Dr M. Osak for this valuable comment.
- 14 It would then be necessary to directly compare not the new insurance premium, but its adjustment by the value of the redemption entitlement from the previous payer.
- 15 This is a similar situation to the third party liability insurance of vehicle owners. There is an obligation to accept every applicant, but the insurance company sets the price of the given risk itself.

- 16 The reason for such actions is control of the technical risk by the health insurance institution, namely an attempt to obtain a portfolio which is close to the portfolio which was assumed when estimating the health premium.
- 17 This mechanism is described in the insurance sector named the "spiral of death".
- 18 The existence of the system of equalising risk / damage is not sufficient to eliminate the selection. An imperfect equalisation system leads to the disruption of social solidarity, effectiveness of the system and a reduction in the quality of health benefits (van de Ven et al., p. 76)
- 19 There is strong evidence that the level of medical spending increases with age (Risk adjustment... (2008), p.11).
- 20 The procedure for specifying the risk-adjustment premium is therefore similar to the debit and credit method used in personal insurance underwriting.
- 21 Perhaps it would be more precise to state that this is a potential patient, namely the entity which perhaps uses the health benefits, the entity covered by the "health protection" (similar to insurance cover). The patient will be analysed under such a meaning in the later part of this study.
- 22 The authors of the book refer to this party as the "insuring party" although the author believes this an over-statement - the introduction of a sponsor into the solutions is not a necessary condition for the emergence of premium financing.
- 23 Such a translation can be found in Getzen (2000), p. 252. Even so, the term "HMO institution" is used later in this book as a proper noun which is not translated.
- 24 In the reference literature, two main health care organisation systems stand out - the Bismarck system and the Beveridge system. The first of the above, in general terms, relates to financing via insurance premiums, and also to the private provision of benefits on the basis of contracts, while the second covers supply financing and also benefits provided to all citizens by public sector benefit providers (for more information, see: Włodarczyk, Poździuch (2001)).
- 25 This is a material difference with respect to commercial insurance for the costs of treatment.
- 26 In case of potentially high profits arising from the selection, it can be more profitable than an improvement in the payer's effectiveness. Especially in the short term, if the effects of the outlay made to reduce costs or improve results are not yet visible, payers may prefer to apply tools of selection leading to the less effective (or even ineffective) payers gain market share at the expense of the effective payers (van de Ven et al. (2003), p. 80).
- 27 Health insurance in this country is an integrated system consisting of 3 basic elements (Lim (2005), p. 462 et seq.):
- obligatory medical savings account (Medisave), introduced in 1984,
 - disaster medical savings account (Medishield), introduced in 1990,
 - an auxiliary system for securing medical expenditures (Medifund), introduced in 1992.
- This system is frequently called 3M because of the names of these elements. In addition, two programs have been introduced to provide care for the

- elderly, Eldersshield (2002) and Elderfund (2000), in turn referred to as 2E. The last source of financing the system is co-payments from the state budget, which constitute 25% of all of the system's funds.
- 28 Contributions to the Medisave scheme are part of the compulsory savings scheme, the employer and the employee contribute respectively 20% and 16% of salary, which is forwarded to the Central Provident Fund, and then to the health care system (Medisave), pension and mortgage.
- 29 After all, such a system was proposed for the reform of the health service in the USA during President Barak Obama's term of office.
- 30 Also termed the residual model, or even a "non-system".
- 31 Railway employees make up 1.4% of employed persons, and are obliged to be members of the Health Fund dedicated to them (Corens (2007), p.39).
- 32 Set up for those not wishing to identify themselves with any political or religious regime. It currently accounts for about 1.1% of the insured (Corens (2007), p. 40).
- 33 With regards to the benefits and drawbacks of cash versus in-kind reimbursement in health care costs insurance, see: Osak, Więckowska (2006).
- 34 Certain benefits require the prior agreement from the Health Funds (Corens (2007), p. 40).
- 35 There have even been allegation of over-aggressive advertising campaigns, having the goal of attracting healthy individuals (van de Ven et al. (2007), p. 168).
- 36 The premium, amounting to 13.5% of income, is paid partly by the employer (9%) and partly by the employee (4.5%). The annual limit of the basis for the basis for determining the premium amounts to 48 times the average salary from two years earlier. The self-employed pay at the rate of 13.5%, but on 50% of their earnings. Premiums are also - in the case of non-earners - paid out of the state budget. The premium level amounts to 13.5% - 25% of average earnings from two previous years, and is paid for: children, students, those on parental leave, the unemployed, senior citizens, prisoners, those with earnings below the poverty line and refugees (Bryndova et al. (2009), p.39).
- 37 Additionally, 7.4% of spending on health care came directly from the central budget, which is responsible for capital investment in public sector health care facilities (Bryndova et al. (2009), p.39).
- 38 Additionally, it manages the special central fund, used for collecting and redistributing health insurance premiums, in accordance with the risk-equalization system.
- 39 In 1990, the Health Funds competed with additional benefits: additional tourist insurance, or price reductions for visits to spas, but it turned out that there were insufficient funds to cover even the basic scope of benefits, and in 1997 the legislative authorities prohibited the differentiation of scope of benefits between Health Funds.
- 40 Despite this being a positive list, benefits not included in it but being medically essential are also financed by the Health Funds.
- 41 This point has been written on the basis of information prepared by Prof. Wynand P.M.M. van de Ven (see the Attachment for further information).

- 42 The self-employed and senior citizens pay 4.95%.
- 43 For a single-person household, the annual carer's allowance amounts to a maximum of €732 (in 2010). In 2006, 4.9 million households received the carer's allowance (data: CBS Webmagazine, 12 March 2007). The total number of households in the Netherlands amounts to 7.2 million (data: CBS Webmagazine, 18 April 2007). See.: <http://www.cbs.nl>.
- 44 The basic package of benefits was described from the point of view of the health care function, and not as hitherto from the point of view of the benefit provider. For example, the programs must decide upon "rehabilitation care" and not "care provided by a rehabilitation centre". Those facilitates market entry by other providers of rehabilitation care.
- 45 Nederlandse Zorgautoriteit, "Monitor Zorgverzekeringsmarkt. De Balans 2009", NZa, Utrecht, May 2009.
- 46 For detailed information regarding the Netherlands risk-equalisation formula, see: Prinsze and Van Vliet (2007).
- 47 If the medicine has a lower-price substitute, then the Plan covers just 50% of the price of the higher-priced drug.
- 48 This is the system with the greatest number of payers. The second-greatest number is in Switzerland - 62 payers (for more, see: 2.5.27).
- 49 Premiums amount to 14% of earnings, 10% is paid by the employer, 4% by the employee. For other residents (including an employee's children and family), it is financed from the state budget.
- 50 Some sources give the number as 87, but 25 of these are part of 4 conglomerates, operating throughout the country.
- 51 The minimum annual co-payment level is 300 Swiss francs (\$255), while the maximum is 2,500 Swiss francs (\$2,125).
- 52 It should be added that the Netherlands have for the past several years achieved first position in the European Health Consumer Index (Eisen B., Bjönberg A. (2010)), which fact may constitute evidence of (relatively) high levels of satisfaction among patients included in this health care system.
- 53 The aim of the index is to determine the system's performance from the patient's perspective. It consists of five categories:
- patient's rights and access to information,
 - waiting time for treatment,
 - results of treatment,
 - range of services available,
 - pharmaceuticals, which includes access to new drugs, drugs for anticancer therapy.
- 54 This measure specifies the number of years lived in full health, without limitations resulting from illness or invalidity. Its construction takes account of the information contained in longevity tables, and also in tables of disease incidence and invalidity, adjusted by information from interview studies regarding the limitations entailed by specific disease categories and invalidity states (for further information, see: Mathers, Murray, Salomon, (2003)).
- 55 The reason for this was twofold. First, rising health care expenditure could jeopardize the goal of universal access to basic care. Second, the government feared that rising health care costs would result in higher labour

costs, which would raise unemployment and would harm the Dutch open economy that heavily relies on exports.

- 56 The existence of incentives for selection is a necessary, but not a sufficient condition for the actual occurrence of selection with adverse effects.
- 57 Tweede kamer 2005-2006, 29689, nr. 99 (11-16); Tweede kamer 2006-2007, 29689, nr.129 (9); Tweede kamer 2007-2008, 29689, nr.164 (8) and nr. 165 (1-4).
- 58 The incremental character of the reforms is nicely illustrated by the level of the *ex-post* cost-based payments that sickness funds receive. In 1992 the sickness funds had no financial risk at all: retrospectively they received a 100 percent reimbursement of all their health expenses from the Central Fund (which was filled with the consumers' income-related premiums). After the implementation of the *ex-ante* risk equalisation their revenues consisted of a mixture of a flat rate premium (set by each individual sickness fund), *ex-ante* equalisation payments and *ex-post* cost-based payments. Gradually, together with improvements in the risk equalisation formula, the share of the *ex-post* based payments has been reduced from 97 percent in 1995 to 64 percent in 2000, to 47 percent in 2006 and to 25 percent in 2010. It is the government's intention to further reduce this percentage in the next years, and thereby further increase the insurers' incentive for efficiency.
- 59 For an overview of anticompetitive government and self-regulation in the Dutch health care system in the early 1990s, see Schut et al. (1991, Tables 1 and 2).
- 60 A path breaking decision is the NMa's decision against the association of general practitioners (Besluit dg NMa van 11 April 2001, zaak 537 (LHV).)
- 61 Article 4a. "The insured may perform the health insurance obligation in a health care institution other than the Sickness Fund, which operates on the basis of separate regulations on insurance activities, if this institution:
- provides a scope of health services of no less than that guaranteed by the Act;
 - insures every applicant regardless of the risk factors;
 - does not differentiate the level of the premium by risk factor;
 - operates throughout the whole of the territory of the Republic of Poland and does not differentiate the premium by region;
 - insures the family members of the person paying the premium;
 - has obtained consent from the Health Insurance Supervision Office for fulfilling the tasks of universal health insurance.
- The institution referred to in para. 1 is subject to the supervision and control of the Health Insurance Supervision Office with regard to the universal health care insurance tasks.
- The Health Insurance Supervision Office may withdraw the consent referred to in para. 1 (6) if the health care institution does not satisfy the provisions of para. 1 (1) - (5) and does not provide the benefits specified by the Act to the insured. In the event of the withdrawal of the consent, the provision of Article 69c (3) applies accordingly."
- 62 "1) Every citizen has the right to health care.

- 2) The public authorities shall assure equal access to health care services financed with public funds for the citizens, regardless of their financial situation.”
- 63 “Health insurance is based, in particular on the principles of:
- 1) equal treatment and social solidarity;
 - 2) the assurance of equal access to health care benefits for the insured and the choice of service providers from among the service providers who have concluded an agreement with the Fund, subject to Article 56b and Article 69b of the Act on the Universal Defence Obligation of the Republic of Poland of 21 November 1967, Article 153 (7a) of the Act on the Border Guards of 12 October 1990 and Article 115 § 1a of the Executive Penal Code.”
- 64 The exception is that of agreements concluded with service providers providing basic health care benefits or performing activities in the provision of auxiliary facilities and medical devices which are orthopaedic items (Article 159 of the Usosoz).
- 65 The exception is medicines and orthopaedic devices.
- 66 The premium would be financed for the poorest by the state budget.
- 67 For more on the concept of additional social health insurance see: Szumlicz (2007), p. 71 - 82)

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