Regulated performance-based financing

Cost containment vs. performance-based financing

Master thesis

Master Health Economics Policy & Law

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Preface

After five years of studying at the Erasmus University, the institute of Health Policy & Management, this thesis is the final piece of the master Health, Economics, Policy & Law. This master was a valuable addition to my previous master Health Care Management, which I completed in October 2011. I am very thankful that I got the opportunity to follow this second master. I have learned a lot during this additional year.

Writing this thesis was challenging, fun, and educational. However, completing this thesis was not possible without the collaboration of the different interviewees. I want to thank them for their time and effort. They provided me with very useful information.

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Emma van der Stel, Augustus 2012.

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Glossary

Abbreviation (Dutch)	Dutch	English
BKZ	Budgettair Kader Zorg	Health Care Budgetary Framework
BV	Besloten Vennootschap	Limited liability company
CPB	Centraal Planbureau	The Netherlands Bureau for Economic Policy Analysis
DBCs	Diagnose Behandel Combinaties	Diagnosis Treatment Combinations
DOT	DBC's op weg naar Transparantie	DBCs On their way to Transparency
IGZ	Inspectie voor de Gezondheidszorg	The Health Care Inspectorate
MBI	Macrobeheersinginstrument	Budget management tool
NFU	Nederlandse Federatie van Universitair Medische Centra	Dutch Association of University Hospitals
NMa	Nederlandse Mededingingsautoriteit	The Netherlands Competition Authority
NVZ	Nederlandse Vereniging van Ziekenhuizen	Dutch Association of Hospitals
NZa	Nederlandse Zorgautoriteit	Dutch Healthcare Authority
OMS	Orde van Medisch Specialisten	Dutch Order of Medical Specialists
WBMV	Wet Bijzondere Medische Verrichtingen	Law on special medical operations
WMG	Wet Marktordening Gezondheidszorg	Health Care Market Regulation Act
Wtg	Wet Tarieven Gezondheidszorg	Health Care Prices Act
WTZi	Wet Toelating Zorginstellingen	Health Care Institutions Admission Act
ZBCs	Zelfstandig behandelcentra	Independent treatment centres
ZKN	Zelfstandige Klinieken Nederland	Association of Independent Treatment Centres
ZN	Zorgverzekeraars Nederland	Association of Dutch Health Insurers
Zvw	Zorgverzekeringswet	Dutch Health Insurance Act
	Beheersmodel medisch specialisten	Income management model
	Bestuurlijk hoofdlijnenakkoord	Administrative outline agreement
	Boter-bij-de-vis principe	Cash-on-the-nail system
	Collectief	Group
	Maatschap	Partnership
	Medisch specialist in loondienst	Salaried medical specialist
	Prestatiebekostigingssysteem	Performance-based financing system
	Vrijgevestigde medisch specialist	Self-employed medical specialist
	Zorgverzekeringsfonds	Health insurance fund
ICD10		International Classification of Diseases

Summary

Health care expenditures in the Netherlands are rising. The Minister of Health has described that, to control the rising health care expenditures, health care needs to be improved and become safer and more efficient (Ministerie VWS 2011d:1). A way to achieve this is to introduce a performance-based financing system for hospitals and independent treatment centres (ZBCs, Zelfstandig behandelcentra). Some measures need to be taken to implement this system, for example; the abolition of the current budgeting system for hospitals, the introduction of the DOT financing system, the expansion of segment B, the enhancement of the risk-bearing character of health insurers, and the introduction of the budget management tool (MBI, macrobeheersingsinstrument) by changing the Health Care Market Regulation Act (WMG, Wet Marktordening Gezondheidszorg) (Ministerie VWS 2011a:3; NZa 2011c:11). The administrative outline agreement (bestuurlijk hoofdlijnenakkoord) is the basis of the changes in the financing system for hospitals and ZBCs (Ministerie VWS 2011e:1).

Besides the agreed changes in the financing system for hospitals and ZBCs, the Minister of Health also proposed changes in the financing system for self-employed medical specialists (vrijgevestigde medisch specialisten). According to the Minister of Health the current funding system for self-employed medical specialists is unsustainable due to major cost overruns (Ministerie VWS 2011b:1). The income management model (beheersmodel medisch specialisten) is created to control the cost of self-employed medical specialists but still guaranteeing health care of good quality. The administrative outline agreement and the agreement about controlling the cost of self-employed medical specialists are the basis of the transition from supply-side regulation towards demand-driven health care. However, there may be some contradictions within and between these two agreements and this is the focus of this research. This research has two main research questions:

1. What is an efficient way of financing hospitals and self-employed medical specialists under a performance-based financing system?

2. How to combine elements of regulated competition and cost containment in the financing of hospitals and self-employed medical specialists?

The data was collected in two ways; by a literature study and by conducting interviews. The literature study was conducted to get information about the history of hospital funding, the current financing system, and the effects of the changes in the funding of hospitals and self-employed medical specialists. Interviews were held with important stakeholders within the current financing system for hospitals and self-employed medical specialists.

The research showed that due to the performance-based financing system and the income management model hospitals and self-employed medical specialists have conflicting interests regarding the delivering of health care. Self-employed medical specialists will try to deliver as much care as possible below the revenue ceiling. They may stop delivering health care before the end of the year if the revenue ceiling is reached. This may be resolved if health insurers will make overall production agreements with both hospitals and self-employed medical specialists. However, the income management model is only a transition model for self-employed medical specialists. This model should be abolished in 2014. So, problems could occur when the transition model for hospitals is ending in 2013 and the income management model for self-employed medical specialists still

continues in 2014 (NZa 2011c:65). From 2015 onwards the income of self-employed medical specialists will be part of the integral prices within the performance-based financing system (NZa 2011c:17).

However it is uncertain if the fiscal status of self-employed medical specialists is still guaranteed while using these integral prices (Ministerie VWS 2010b:1; NZa 2011c:67). Therefore, self-employed medical specialists may have the incentive to go into salaried service of a hospital. They may also have the incentive to create other types of partnerships to make sure the fiscal status is maintained (OMS 2011a:20; OMS 2011b:24). If no other types of partnerships are created, medical specialists and hospital boards shall negotiate about the share of the fee for self-employed medical specialists within the integral prices (NZa 2011c:18). At the beginning of the year the fee of medical specialists will be determined. This will cause the fee of self-employed medical specialists to become a fixed income. Medical specialists may then not have an incentive to deliver more health care. However, both the performance-based financing system and the MBI will give hospital boards the incentive to deliver more health care. This could cause conflicts with medical specialists within a hospital.

Hospitals will become more aware of their performances and may try to distinguish themselves from others, by reducing their prices or by specializing. They need to become an interesting partner for health insurers. The constant threat of a budget cut via the MBI will make it much harder for hospitals to invest and innovate (Schut et al. 2011:296; Schut et al. 2010:375). To make health insurers more risk-bearing, the ex-post calculation of the risk equalization will be fully abolished in 2015 (Ministerie VWS 2011a:7-8; NZa 2011c:26). To have certainty about their expenditures, health insurers will have the incentive to create some control mechanisms for hospitals, to make overall production agreements with hospitals and medical specialists, and to monitor health care processes. They will also have the incentive to selectively purchase health care.

This research showed that the performance-based financing system may have effects on quality, accessibility, and affordability of health care. However, these effects are uncertain. The system may however, be appropriate, because since the 1940s the Dutch health care consists of public and private involvement. However, the system may only be suitable and appropriate if all actors pick up their intended roles. Health insurers should become prudent buyers of health care for their enrolees. Health care providers need to become more commercial and an interesting partner for health insurers (Ministerie VWS 2011a:2). Patients should become critical consumers. If the performance-based financing system will be implemented in 2015 depends on the political developments in the Netherlands.

This research showed that other models could replace the performance-based financing system . For example, instead of integral prices, direct agreements about the prices could be made between health insurers and medical specialists, without an intervention of the hospital board. It could also be appropriate to extend the financing system and base it on outcome indicators, for example quality rather than on the amount of treatments performed.

Finally, we conclude that the performance-based system may not be an efficient way to finance hospitals and self-employed medical specialists. An efficient financing system should reduce the unrest within hospitals, maintain the fiscal status of self-employed medical specialists, financially limit hospitals in the same way as self-employed medical specialists, guarantee health care of good quality, and prevent the possibility to manipulate the validation process of care products.

Also, cost containment within the health care setting is necessary, because of the expenditures' growth. This cost containment needs to be combined with the performance-based financing system for hospitals and self-employed medical specialists. Cost containment should be arranged by the actors within the market and health insurers should play an important role. By purchasing health care selectively health insurers should be responsible for monitoring and controlling the costs. They should make agreements with hospitals for health care that is included in the basic benefit package. In this way they may rule out exceedances of the BKZ and at the same time fulfil their duty of mandated care (Baarsma et al. 2012:7,8). If the BKZ is still exceeded health insurers will be responsible and need to take measures, for example by compensating the exceedances by their own resources or by raising their premiums. The MBI can also still be used to compensate the exceedances, however, only hospitals that caused the exceedances need to repay it (Baarsma et al. 2012:22).

1. Introduction

The first paragraph of this section describes the background of this research. The second paragraph presents the objectives and research questions. The third paragraph points out the relevance of the research. Finally, the fourth paragraph describes the methodology.

1.1. Background

The health care expenditures in the Netherlands are rising. According to predictions of the Netherlands Bureau for Economic Policy Analysis (CPB, Centraal Planbureau) the health care expenditures will rise from 61 billion in 2010 to 74 billion in 2015. The growth of 13 billion Euros can partly be ascribed to the aging of the Dutch population and a lack of health care personnel (CPB 2010:48-53).

In 2011 the Dutch Minister of Health, Welfare and Sports, Edith Schippers, has taken these developments into account when preparing the policy objectives for the government term. The Minister has described that, to control the rising health care expenditures, health care needs to be improved and become safer and more efficient (Ministerie VWS 2011d:1). A way to achieve this is to introduce a performance-based financing system for hospitals and independent treatment centres (ZBCs, Zelfstandig behandelcentra). According to the Minister of Health this system shall motivate hospitals and ZBCs to improve their health care and due to free prices hospitals and ZBCs will become more innovative. Health insurers will be stimulated to become prudent buyers of health care, and this may improve the quality of health care (Ministerie VWS 2011a:2; Ministerie VWS 2011d:5). However, to achieve these changes, the Minister of Health prepared some measures which need to be taken; the abolition of the current budgeting system for hospitals, the introduction of the DOT financing system, the expansion of segment B, the enhancement of the risk-bearing character of health insurers, and the introduction of the budget management tool (MBI, macrobeheersingsinstrument) by changing the Health Care Market Regulation Act (WMG, Wet Marktordening Gezondheidszorg) (Ministerie VWS 2011a:3; NZa 2011c:11).

To allow for these changes, support of different interest organisations was necessary. In 2011 the Minister of Health had lengthy negotiations with the Dutch Association of Hospitals (NVZ, Nederlandse Vereniging van Ziekenhuizen), the Dutch Association of University Hospitals (NFU, Nederlandse Federatie van Universitair Medische Centra), the Association of Independent Treatment Centres (ZKN, Zelfstandige Klinieken Nederland), and the Association of Dutch Health Insurers (ZN, Zorgverzekeraars Nederland). The negotiations resulted in the administrative outline agreement (bestuurlijk hoofdlijnenakkoord) which is the basis of all changes in the financing system for hospitals and ZBCs (Ministerie VWS 2011e:1).

Besides the agreed changes in the financing system for hospitals and ZBCs, the Minister of Health also proposed changes in the financing system for self-employed medical specialists. In the Netherlands medical specialists are either self-employed medical specialists organized in partnership per specialty (vrijgevestigde medisch specialisten) or medical specialists are salaried in a health care organisation (medisch specialisten in loondienst). According to the Minister of Health the current funding system for self-employed medical specialists is unsustainable due to major cost overruns (Ministerie VWS 2011b:1). After lengthy negotiations with the Dutch Order of Medical Specialists (OMS, Orde van Medisch Specialisten) and the NVZ an agreement was reached about controlling the

cost of self-employed medical specialists but still guaranteeing health care of good quality, safety and efficiency, and maintaining the fiscal status of self-employed medical specialists for the period 2012-2014. The income management model (beheersmodel medisch specialisten) is the result of these negotiations (Ministerie VWS 2011b:1; Ministerie VWS 2010b:1).

The administrative outline agreement and the agreement about controlling the cost of self-employed medical specialists are the basis of the transition from supply-side regulation towards demand-driven health care. This transition should result in a reduction of health care expenditures, a rise of health care quality and more efficiency (Ministerie VWS 2011a:2).

However, there may be some contradictions within and between these two agreements. One of these contradictions is the introduction of the MBI. The goal of this tool is to control health care expenditures. Yet, this may be incompatible with to introduction of free prices and performance-based financing. Another contradiction may be that the income management model for self-employed medical specialists is inconsistent with the performance-based financing system for hospitals and ZBCs (Schut et al. 2011:294-295). These possible contradictions will be the focus of this research.

1.2. Objectives & research questions

The *first objective* of this research is to gain insight into the financing system for hospitals and self-employed medical specialists in the historical perspective and in the period 2012 – 2015.

The *second objective* of this research is to gain insight into possible contradictions and difficulties within the financing system for hospitals and self-employed medical specialists in the period 2012 - 2015.

The *third objective* of this research is to gain insight in the ideal design of financing hospitals and self-employed medical specialists.

This research will have two main research questions:

1. What is an efficient way of financing hospitals and self-employed medical specialists under a performance-based financing system?
2. How to combine elements of regulated competition and cost containment in the financing of hospitals and self-employed medical specialists?

To be able to answer these research questions several sub questions are formulated:

Background/history

1. How was the financing of hospitals and self-employed medical specialists organized in the past and how is it organized in the period 2012 - 2015?

Performance-based financing

2. How will the system of performance-based financing be organized in 2015 and onwards and what are the main ideas/principles behind this system?
3. Will the quality, accessibility, and affordability of health care improve with the performance-based financing system?

4. What kind of incentives will medical specialists, hospitals, and health insurers have with performance-based financing? Are these incentives the same or will there be a conflict of interests?

Income management model

5. How will the income management model for self-employed medical specialists be organized in the period 2012 - 2014 and what are the main ideas/principles behind this model?
6. What kind of incentives will self-employed medical specialists have with the income management model?
7. Will the income management model for self-employed medical specialists be in conflict with the performance-based financing system for hospitals?

Conclusion

8. Is performance-based financing suitable and appropriate for hospital care in the Netherlands? Is the Dutch health care system ready to fully implement this system in 2015?
9. Could the medical specialists' funding be organised differently?

1.3. Relevance

This research contributes to the understanding of the development of health care financing. This is done by looking at the history and future of funding systems for hospitals and self-employed medical specialists. The performance-based financing system, as proposed by the Minister of Health, is new and innovative and this research will explain the different elements of this system. Also, this research is a first step to determine if the performance-based financing system is suitable and appropriate for the Dutch health care system. By answering the main research questions we aim to clarify how to finance medical specialist care within hospitals and ZBCs.

The income management model is a new and temporary financing system for self-employed medical specialists. This research looks at the appropriateness of this financing system. By answering the main research questions it may be possible to conclude if elements of regulated competition and cost containment of medical specialists can be combined, as proposed by the Minister of Health.

The scientific relevance is wide, because not much research has been done concerning the effects of the performance-based financing system and the income management model. This research is innovative, because it looks at the possible combination of elements of regulated competition and cost containment in the financing of self-employed medical specialists.

This research has also a political relevance, because of the governmental situation in the Netherlands. The new financing systems for hospitals and self-employed medical specialists are proposed and introduced by a liberal Minister of Health. Not all political parties in the Netherlands are positive about these financing systems. In April 2012 the Dutch government has fallen and new elections will be held in September 2012. After the elections a Minister of Health of another political party can be appointed and changes may then occur. This research will give a clear overview of the structure of the financing systems, the suitableness of the financing systems, and the advantages and disadvantages of these systems.

1.4. Methodology

This study is based on a qualitative research. The paragraph goes into the data collection and analysis used within this research and the validity and reliability of the research.

1.4.1. Data collection & analysis

A literature study is conducted to get information about the history and background of hospital funding and the financing of self-employed medical specialists. Literature about the history of hospital funding is searched, studied and analysed in detail. Only literature with full detailed description of the history of hospital funding was selected and analysed. The three waves of health care reforms in developed countries described by Cutler (2002) are used to present the changes in hospital funding in the Netherlands.

Literature about the current way of financing hospitals and self-employed medical specialists is studied to describe the changes towards a performance-based financing system for hospitals and self-employed medical specialists. Literature published by the Dutch Healthcare Authority (NZa, Nederlandse Zorgautoriteit) and the Dutch Ministry of Health is analysed in detail to get a good description of the proposed changes in hospital funding. Other literature is only selected if it had a full detailed description of the current financing system.

Finally, literature about the effects of the changes in the funding of hospitals and self-employed medical specialists is analysed to describe the possible consequences and contradictions of these changes. Literature is selected if it had a full detailed description of the possible incentives for the different actors and the effects on the quality, accessibility, and affordability of health care.

Interviews were held with stakeholders within the current financing system for hospitals and self-employed medical specialists. These actors play an important role in the proposed changes in the funding of hospitals and self-employed medical specialists. Interviews were taken with:

- An expert on health care funding at the NZa;
- An expert on performance-based financing at the Dutch Ministry of Health;
- A senior purchaser of hospital care at a health insurance;
- A member of the hospital board at a general hospital;
- A medical specialist at a general hospital;
- Two senior advisors at the OMS.

Interview questions were prepared for each interview. The questions were structured by topic. Each interviewee received in advance a list of topics to be discussed. The questions of the different interviews are shown in appendix 1. During the interview the interviewee had the possibility to address other topics besides the predetermined ones. The interviews were, after permission of the interviewee, recorded and transcribed for further analysis.

The interviews were analysed by encoding. The same topics within the different interviews got the same code. These codes were used to link the different interviews with each other and to answer the different research questions. Codes were for example used to encode interview sections that gave a description of the effects of the changes in financing on quality, accessibility, and affordability of health care. Another code is used to encode sections that gave a description of the possible incentives for the different actors within the financing system.

1.4.2. Validity & reliability

The internal validity represents the extent to which a research is well run and how confidently one can conclude that the observed effects are produced solely by the independent variable and not extraneous ones (Swanborn 2002:24). The internal validity of this research is enhanced by interviewing different stakeholders. This makes it possible to analyse the different perspectives within the financing system. However, the internal validity may be reduced by the fact that only one interview was taken per actor. For example, the internal validity could be enhanced if more medical specialists or several health insurers were interviewed. It can be concluded that the internal validity of this research is reasonable.

The external validity represents the extent to which the results of a research can be generalized or applied to other people or settings (Swanborn 2002:25). This research is about the financing systems for Dutch hospitals and self-employed medical specialists. The results of the research may therefore be relevant for university hospitals, general hospitals, ZBCs, and self-employed medical specialists in the Netherlands. However, it is not possible to apply the results of this research to medical specialists working in other health care settings, for example nursing home physicians or general practitioners, because they are financed in a different way. The results of this research may also not be generalised to hospitals and self-employed medical specialists in other countries, because the financing system in the Netherlands may differ from the financing systems in other countries. It can be concluded that the external validity of this research is poor.

The internal reliability represents the extent to which the data collection, analysis, and interpretation are consistent within the research (Boeije 2005:145). The internal reliability of the research is enhanced by using different research methods, also known as triangulation of methods (Boeije 2005:152). By doing a literature study and by conducting interviews, the data used within this research is collected in two ways. The interview questions were predetermined and based on the literature. This enhanced the reliability of the research, because it made sure that the same questions were asked during each interview. Also, the results of the interviews are used to do further literature research. The internal reliability is also enhanced by conducting a member check (Boeije 2005:153). A report of the interview was sent to the interviewee to check if the interview was analysed correctly. However, the internal reliability may be reduced by the fact that only 6 actors were interviewed. It may also be possible that the different interviewees gave biased answers during the interview. This can cause the results of the interviews to be less reliable. It can be concluded that the internal reliability of this research is reasonable.

The external reliability represents the extent to which independent researchers can reproduce the research and obtain results similar to those obtained in the original research (Swanborn 2002:23). This research does include a detailed description of the methodology and the interview questions are added. However, it may be possible that an independent researcher interprets these questions differently and asks other questions during the interviews. If an independent researcher does ask the same questions, it is still possible that the researcher interpret the findings differently. However, it is possible for an independent researcher to get the same information and results from the literature study. It can be concluded that the external reliability of this research is reasonable.

Section two of this thesis will go into the theoretical aspects of the research. Section three will present the results. Finally, section four will conclude and discuss the results.

2. Theoretical framework

The first paragraph of this section describes different ways to finance hospitals. We will look at the history of hospital funding and the current way of financing hospitals. The second paragraph goes into the performance-based financing system as proposed by the Minister of Health in 2011. The third paragraph describes a specific transition model towards the performance-based financing system; the income management model. Finally, the fourth paragraph gives a description of the MBI, which can be used to control health care expenditures.

2.1. History of hospital funding

According to Cutler (2002:882) three waves of health care reforms in developed countries can be observed. Also in the Netherlands these three waves can be seen. In this paragraph the three waves are used to describe the developments within hospital funding.

First wave: Universal coverage and equal access (1940-1970)

Until the 1940s there was no regulation regarding health insurance in the Netherlands. Medical specialists were free to start practices and to set their own prices. In this period the aim of the government was to ensure universal access to basic health services, to promote public health and to guarantee a minimum level of quality (van de Ven & Schut 2008:4). Due to this universal coverage and equal access to health care costs were rising rapidly.

From 1940 till 1983 hospitals were financed based on tariffs for each medical treatment. These tariffs covered the direct and indirect hospital costs and included the costs of professional's services and a tariff per patient-day. This is known as the output based financing system of hospitals (Groot 1999:357). The government controlled the costs by 'deciding on the tariffs, considering the nominal amount, the composition of the tariffs, and the way they were calculated' (Groot 1999:357). Due to a discrepancy in this system between marginal costs and revenues it became attractive for hospitals and medical specialists to maximise their output and therefore provide more treatments. Since all hospital services were always paid for, this system can be characterized as an output-based and open-ended budgeting system (Groot 1999:357; Lapré & Vandermeulen 2001:41). Between the 1960s and 1980s the percentage of the gross domestic product spent on health care rose from 3,8% to 7,5% (Schut 2003:8). The Dutch government became worried about the seemingly uncontrollable growth of health care expenditures. To contain health care expenditures supply and price regulations were developed since the mid-1970s (van de Ven & Schut 2008:5).

Second wave: Cost containment (1970-2000)

In 1983 the Dutch government decided to replace the open-ended budgeting system with an external budgeting system. A budgeting system meant that each hospital received in advance a global budget containing all costs except the costs of self-employed medical specialists, which were still being paid fee-for-service (Groot 1999:358; Hasaart 2011:21; Roos & Kremers 2008:12; CTG/ZAio 2006:27; Schut 2003:10). The year 1982 was taken as baseline year to calculate the budget; this is called historical budgeting (Hasaart 2011:21; Groot 1999:359). Each following year the budget was adjusted for changes, for example to adjust for projected growth in demand. For hospitals it was important to realize that output maximisation no longer led to increased financial resources (Groot 1999:359). If hospitals realized a budget surplus at the end of the year, they were allowed to keep

that surplus. However, if hospitals incurred a deficit, they had to find ways to cover that deficit (Hasaart 2011:21). This way of financing is called a closed-end budgeting system (Groot 1999:358).

In 1985 the financing system changed once again, because the historical budgeting system did not allow for changes in capacity and demand. The budgets now were taking the existing cost structure of hospitals into account and made a distinction between fixed costs and variable costs. The fixed costs were determined by the number of beds and the number of medical specialists. The variable costs were determined by number of admissions, nursing days, and outpatient visits. This system was called the Bredero system and was only introduced for the nursing, administration, and housekeeping budgets (Groot 1999:359-360; Roos & Kremers 2008:12).

In 1988 a similar financing system was introduced for all expenditure categories in hospitals, this system was called function-based budgeting (Groot 1999:360; CTG/ZAio 2006:27; Louwers & van Waes 2006:6; Roos & Kremers 2008:12; Hasaart 2011:22). The budgets were based on three components, namely an availability component, a capacity component, and a production component. The availability component was based on the costs of maintaining the basic function of the hospital and this related to the number of patients depending on a hospital, or the number of inhabitants living close to a hospital. The capacity component was measured based on the number of medical specialists and their capacity. Finally, the production component was based on the agreements between the hospital board and health insurers about the number of hospital admissions, inpatient days, first outpatient visits, and day care visits (Groot 1999:360-361; Hasaart 2011:22-23). The availability and capacity components needed to cover the fixed part of the hospital expenditures and the production component the variable part. As with the historical budgeting system, not all hospital expenditures were included in the function-based budgeting system. Some expenditures were still being reimbursed on a retrospective base (Hasaart 2011:23).

In 1994 the Dutch government introduced a Health Care Budgetary Framework (BKZ, Budgettair Kader Zorg) (Hermans & Friele 2009:50). With the BKZ the government tried to control and reduce health care expenditures. The expenditures of care must be within the predetermined BKZ. Exceedances of the BKZ needed to be compensated within the health care sector by a reduction in supply, a price reduction, and/or an increase in efficiency (Schut 2003:10; Roos & Kremers 2008:14). The BKZ consists of different sub-frameworks for hospitals, self-employed medical specialists, and general practitioners (Debets & Schroten 2005:171; OMS 2011a:7). Each sub-framework can be exceeded and need to be compensated within the subsector.

The function-based budgeting system had no real consequences for the payment of self-employed medical specialists (Hasaart 2011:23). These medical specialists were still being paid on a fee-for-service base, only maximum prices were set by the government (CTG/ZAio 2006:28). Hospitals, however, were being constrained by fixed budgets. Due to this payment contradiction the incentives of the hospital board and self-employed medical specialists were contradictory. Also, the Dutch government did several attempts to curb the growth of the self-employed medical specialists' compensation (Hasaart 2011:23). Since 1982 the Health Care Prices Act (Wtg, Wet Tarieven Gezondheidszorg) allowed the Dutch government to control the self-employed medical specialists' fees, and in a later stage their total revenues (van de Ven & Schut 2008:5). In 1995, after lengthy negotiations about possible fee cuts, the government introduced a lump-sum payment scheme for self-employed medical specialists (Hasaart 2011:23; van de Ven & Schut 2008:5; Schut 2003:10). This

new payment system replaced the fee-for-service payment with a fixed annual budget, and guaranteed each self-employed medical specialist his historical income (Hasaart 2011:23). However, if a self-employed medical specialist had reached his budget limit, he had no more interest in providing care to patients during the rest of the year. So, he had no incentive to produce more care. This caused waiting lists and can be seen as a major drawback of the lump-sum financing system (Hasaart 2011:23).

At the turn of the century there were many waiting list and health care expenditures exceeded the total budget for hospital care set by the government. To reduce waiting lists the Dutch government introduced a new financing system for hospitals and abolished the budgeting system. This new system was called cash-on-the-nail system (boter-bij-de-vis principe) and hospitals that produced more care received more funding. This can be seen as a reintroduction of the open-ended budgeting system, which led to a growth in health care expenditures, increasing from 4% growth in 2000 up to almost 7% growth in 2002 (Schut 2003:12-13; Roos & Kremers 2008:15). However, it seemed that the increasing waiting lists were not caused by a lack of funding but by a lack of efficiency (Schut 2003: 14).

Third wave: Efficiency by incentive-based reforms (from about 2000)

In 1987 the Dekker Committee proposed to introduce a market-oriented health care reform and national health insurance system (Van de Ven & Schut 2008:6; Schut 2003:21; Zuurbier & Krabbe-Alkemade 2007:23). According to Groot (1999:361-362) the Dekker Committee proposed to 'introduce an internal market for health services in which supply was offered by health care providers and demand was articulated by insurance companies'. Health care providers had to compete on price and quality. Health insurances needed to compete on premiums (Groot 1999:362). These plans were however not executed, because of uncertainties about the price of the insurance premiums and risk selection by health insurances (Groot 1999:362). But during the following years different parts of the Dekker Committee proposal were developed in more detail.

In 1990 the Dutch state secretary Simons presented a new plan to organize innovations in the health care sector. This proposal was quite similar to the Dekker plan. However, it contained some adjustments. Simons pleaded for the abolition of the obligation to contract all health care providers. With this abolition health care providers had more freedom to fit the wants and needs of the citizens. No other parts of Simons' plan were introduced in the Dutch health care system (Zuurbier & Krabbe-Alkemade 2007:24).

In 1995 the Biesheuvel Committee advised the Dutch government to change the hospital funding. According to this committee the funding of hospitals as well as the funding of self-employed medical specialists needed to be based on delivered services. In the following years the Dutch government tried to modernise the health care system (Zuurbier & Krabbe-Alkemade 2007:25).

In 2006 the Dutch Health Insurance Act (Zvw, Zorgverzekeringswet) was introduced. With this Act the Dutch health care system changed from supply-side regulation towards regulated competition (Van de Ven & Schut 2008:6). This change had already been proposed by the Dekker Committee in 1987 but it took almost 20 years to introduce regulated competition. The Zvw obliged each person who legally lives or works in the Netherlands to have an individual private health insurance with a legally described benefit package (Van de Ven & Schut 2008:6). To make this regulated competition possible

some preconditions needed to be fulfilled, for example regulated competition requires clear product descriptions to facilitate negotiations between health insurers and hospitals (Hasaart 2011:24). According to Van de Ven & Schut (2008:6) 'an adequate system of product classification and medical pricing needed to be developed to give providers appropriate incentives for efficiency and to prevent stinting on the delivery of services'. From 2003 onwards the Diagnosis Treatment Combinations (DBCs, Diagnose Behandel Combinaties) were developed (Zuurbier & Krabbe-Alkemade 2007:27; Schut 2003:29). In 2005 DBCs were introduced in hospitals, both university hospitals and general hospitals. With this introduction the budget financing system and the lump-sum financing system were partly abolished (CTG/ZAio 2006:28).

According to Hasaart (2011:25) a DBC is defined as 'the whole of activities and services of hospitals and medical specialists stemming from the demand for care for which the patient consults the specialist'. A DBC covers a complete process of care and starts from the first consultation and ends at the completion of the treatment. The DBC financing system consists of two parallel systems, which are called segment A and segment B. Within segment A prices are set by the NZa and are uniform across the country. Also, within segment A the budget model exists and hospitals cannot exceed their budget ceiling. The care within segment A is based on retrospective payment, like in the function-based budgeting system. Within segment B hospitals and health insurers negotiate about the price of DBCs. It is possible that the contract between health insurers and hospitals consists of an agreement on the volume of medical care and the steps to be taken if the actual volume of care exceeds the volume agreed upon in the contract. Within the DBC financing system the fee of medical specialists is regulated and is based on a norm time for each specific DBC, multiplied by a fixed fee per hour (Louwers & van Waes 2006:6; Hasaart 2011:25,27).

With the introduction of the DBC financing system in 2005 almost 10% of all care belonged to segment B and was free negotiable. Over the years this was extended, in 2009 almost 34% of all care belonged to segment B. In 2012 this was extended to 70% of all care. This extension was necessary to stimulate regulated competition in the Netherlands (Varkevisser 2010:9). However, in 2008, 2009 and 2010 substantial BKZ cost overruns occurred and the Minister of Health decided to use a generic budget cut which affected all hospitals and self-employed medical specialists (Ministerie VWS 2010a:5; OMS 2011a:7).

Unfortunately, problems occurred within the DBC financing system. Firstly, the system was too complex and more than 100.000 different DBCs could be used, it became too difficult to negotiate with health insurers about all these DBCs. Secondly, DBCs are organized within specialties. This means that when the same treatment was delivered in the same way by different specialties, different DBCs could be used. Also, if different specialties were consulted for the same treatment, different DBCs were charged. Thirdly, the Dutch DBCs are not connected with international standards of coding diseases. This makes it more difficult to use DBCs for information exchange about diseases, also with other countries. Other registration systems in Dutch hospitals do use international standards of coding diseases and DBCs do not connect with these systems (DBC-onderhoud 2010:6). This makes DBCs not integrated with other systems in hospitals, and this could cause confusion within hospitals. Finally, the validation process of the DBC financing system can be manually manipulated. Therefore hospitals may not have a high motivation for careful and complete registration and there is the possibility of up-coding or under registration (Hasaart 2011:31).

The DBC financing system had also many benefits. It gave hospitals detailed information about their care products and this resulted in a high level of transparency on diagnoses, processes, and costs. This information can be used by hospitals as feedback to redesign their processes and develop efficiency, and quality interventions (Hasaart 2011:31). To overcome the problems described, some changes in the financing system needed to be done. A revision of the DBC financing system was introduced in 2012 and is called DOT; **D**BCs **O**n their way to **T**ransparency.

The goal of the DOT financing system is to reduce the problems of the DBC financing system, as well as to improve the declaration system for hospitals and to achieve increased transparency, medical recognisability, stability, and openness to innovation but also to reduce the complexity of the current DBC system (Hasaart 2011:32). Almost 30.000 DBCs were replaced with 4.400 DOT care products (NZa 2011b:1; Ministerie VWS 2011a:8).

The care products used within the DOT financing system represent the performances health care providers deliver to patients. The care products contain all care activities from diagnosis to treatment (NZa 2012a:7; NZa 2011a:42). After forty-two days a clinical care product is closed and after ninety days an outpatient care product is closed automatically and health care providers can declare these care products to insurers(NZa 2011a:45). If a patient will visit the health care provider again within a year, a follow-up care product will be opened and declared.

The DOT care products are not specialty-specific but are based on the International Classification of Diseases (ICD10) (NZa 2012a:8). This makes the care products medically recognizable and international exchangeable. It also reduces complexity, because if different specialties treat the same diagnosis the same DOT care product is selected and multidisciplinary diseases can be captured in a single DOT care product (Hasaart 2011:32; DBC-onderhoud 2010:4,7; Ministerie VWS 2011a:8)[1].

The care products represent an average use of health care and an average cost of care (Belonen naar prestatie 2012). Health care providers can declare these care products to patients or health insurers. The price for this declaration can be based on country wide prices, set by the NZa or prices negotiated with health insurers (NZa 2012a:24). Which price is used is based on the segment the care product belongs to.

Within the new DOT financing system a grouper plays an important role. Care products will be determined retrospectively by a grouper instead of, as within the old DBC financing system, being selected by the medical specialist and then validated. This change is intended to reduce the administrative burden for medical specialists and hospitals (Hasaart 2011:32; NZa 2011a:18). A grouper is an external web application that combines all care activities and information on a patient into a care product (Hasaart 2011:32). A medical specialist will record which health care activities a patient underwent and he will pass this information on to a grouper. The grouper will derive the health care products from this information and will send this information to the hospital or ZBC. The hospital or ZBC can declare the care products to the health insurer (NZa 2011a:41). It is possible for the grouper to identify failure products. The grouper will identify such products if the submitted care

[1] The health care by medical specialists is divided in 22 chapters according to the ICD10. These 22 chapters are divided into a 121 care product groups. Each care product group has a binary decision tree which results in different care products (Belonen naar prestatie 2012). Within each care product group a distinction is made in three kinds of care products namely; intensive/invasive care products, conservative clinical care products, and outpatient care products (DBC-onderhoud 2010:13).

activities are inconsistent, if the care activities are not in line with the diagnosis of the patient or if care activities are missing. In these cases it is not possible to declare these products. Hospitals or medical specialists need to review and correct this information before they can re-send it to the grouper (DBC-onderhoud 2010:17; NZa 2011a:30). Besides the care products also five other kinds of products can be determined. These are add-ons, support products, other products, other pathways, and other performances. These types of care do have a high price and therefore need to be declared independently of the care products, because they will have a great effect on the cost (NZa 2012a:12; NZa 2011a:43)[2].

To sum up, table 1 describes the historical developments in hospital funding.

Table 1: Developments in hospital funding in the Netherlands

Period:	***Developments:***	***Specifications:***
….-1940	*No regulations regarding health insurance or prices*	
1940-1983	• Output-based and open-ended budgeting system for hospitals • Self-employed medical specialist were paid fee-for-service	• Hospitals received a tariff for each medical treatment
1960-1980	*Uncontrollable growth of health care expenditures*	
1983-1988	• External, closed-end budgeting system for hospitals • Self-employed medical specialist were paid fee-for-service	• A budgeting system meant that each hospital received in advance a global budget containing all cost for that year
1985	• Bredero system for the nursing, administration and housekeeping budgets	• The budgets now were taking the existing cost structure of hospitals into account
1987	*Proposal Dekker Committee*	
1988-2000	• Function-based budgeting system for hospitals • Maximum prices were set for self-employed medical specialists	• The budgets were based on three components, namely an availability component, a capacity component, and a production component
1990	*Proposal Simons Committee*	
1994-….	• Health Care Budgetary Framework introduced	• The framework tried to control and reduce the health care expenditures
1995	*Proposal Biesheuvel Committee*	
1995-2005	• Lump-sum payment system for self-employed medical specialists	• A fixed annual budget which guaranteed each medical specialist his historical income
2000-2005	• Cash-on-the-nail system for hospitals	• Hospitals which produced more care received more funding
2000-2002	*Uncontrollable growth of health care expenditures*	
2005-2012	• DBC financing system for both hospitals and self-employed medical specialists	• A DBC is defined as the whole set of activities and services of hospitals and medical specialists

[2] Add-ons are for example care activities which can be declared next to a care product. Add-ons are used for care that is not bounded to a specific diagnosis, for care that is unpredictable, and for care that only occasionally takes place. The cost of the intensive care unit and expensive and orphan drugs are included in the add-ons (NZa 2012a:12; NZa 2011a:43).

		stemming from the demand for care for which the patient consults the specialist
2006-….	• Dutch Health Insurance Act	• Introduction regulated competition and a compulsory private health insurance with a legally described benefit package
2008-2010	*Generic budget cuts for hospitals and self-employed medical specialists due to substantial cost overruns*	
2012-….	• DOT financing system for both hospitals and self-employed medical specialists	• The DOT financing system uses care products that represent the performances health care providers deliver to patients

2.2. Performance-based financing system

A policy objective of the Dutch Ministry of Health is to guarantee health care of good quality, which is accessible and affordable for every citizen (RVZ 2011:16). To reach this, the Dutch Minister of Health, wants to replace the function-based budgeting system with a performance-based financing system for hospitals and ZBCs. With this change the Dutch health care system took another step in completing the transition from supply-side regulation towards demand-driven health care (Ministerie VWS 2011a:2). The introduction of the DOT financing system, as described in the paragraph above, has been a necessary part towards a performance-based financing system. This paragraph describes the suggested final model and the different transition models required to get to the performance-based financing system.

2.2.1. Final model

The final model of the performance-based financing system should be effective in 2015. The period 2012 until 2015 will be a transition period in which the conditions will be created for the performance-based financing system. In 2015 medical specialist care will be divided into three segments; a free segment, a regulated segment, and a fixed segment (NZa 2011c:17; Ministerie VWS 2011a:11; OMS 2011a:15).

Within the free segment there will be full performance-based financing. This means that there will be free pricing and free volumes. Hospitals and ZBCs need to negotiate with health insurers to make agreements about prices and volumes. The prices used will be integral prices. This means that within the prices the fees of salaried and self-employed medical specialists, and capital costs will be included. The B segment will be extended and in 2012 include 70% of all care but may be extended even further (NZa 2011c:17,37; Ministerie VWS 2011a:11).

To guarantee the public interests the care within the regulated segment will be performance-based financed, however, the prices will have a maximum tariff. Health insurers and health care providers can negotiate lower tariffs. Within this segment integral prices will be used and self-employed medical specialists and hospital boards need to negotiate about the share of the fee for self-employed medical specialists. The regulated segment will include care specified in the Law on special medical operations (WBMV, Wet Bijzondere Medische Verrichtingen) and care delivered at the Intensive Care Unit (NZa 2011c:18; Ministerie VWS 2011a:11-12).

The fixed segment will include care that is not suitable for performance-based financing. If performance-based financing is used within this segment the public interests; quality, accessibility, and affordability, of this care may be at risk. Hospitals providing this care will get an availability contribution. The Minister of Health or the NZa will indicate which hospitals will get this contribution. The care which will be fully financed by this contribution will for example be donor teams, trauma care, and academic care. Care that will be partially financed by this contribution will for example be emergency care and care for burn victims (NZa 2011c:18-19; Ministerie VWS 2011a:12; OMS 2011a:15).

2.2.2. Transition models

The Dutch hospital financing system is in transition from a budgeting financing system towards a performance-based financing system. This transition will bring some risks for hospitals. Two kinds of risks can be described: system risks and regular revenue risks. System risks occur due to technical changes in the financing system. Regular revenue risks occur due to shifts in patient flows. It is expected that the performances of hospitals will become more transparent and patients will become better able to choose between hospitals and this will cause shifts in patient flows. Both system risks and regular revenue risks may cause revenues of hospitals to change. To reduce these risks the Minister of Health has introduced a transition model for hospitals for 2012 - 2013. This model will bring some certainties for hospitals and at the same time will take the market dynamics into account. However, the transition model will only take the system risks into account, because the regular revenue risks are part of the preferred market dynamics (Ministerie VWS 2011a:3-4).

To reduce these risks the revenue within the performance-based financing system will be compared with the revenue made within the old budgeting financing system, this old revenue is called the shadow revenue. The difference between these revenues will be the transition sum. If these revenues differ, this will be compensated. If the revenue is higher within the performance-based financing system, the difference has to be repaid to the health insurance fund. When comparing these revenues only the revenue of segment A of the budgeting financing system of 2011 will be taken into account and not segment B. Health care transferred to segment B in 2012 will be included in the transition sum. This means that there will be no safety net for changes in the product structure (NZa 2011c:22).

In 2012 95% of the transition sum will be settled and therefore the revenues within the DOT financing system do not have a great influence on the final revenue of hospitals. In 2013 70% of the transition sum will be settled (Ministerie VWS 2011a:5; NZa 2011c:22).

Within the system of performance-based financing the capital costs will be included in the integral prices. To make a good transition towards integral prices, a specific transition model for capital costs is introduced, which runs from 2011 until 2016 (Ministerie VWS 2011a:10; NZa 2011c:49).

In 2009 a start was made with transferring the capital costs to segment B, which meant that a reduction was made in the ex-post calculation of capital costs (NZa 2011d:1). From 2011 onwards the capital costs are included in the shadow revenue. The shadow revenue will now also include all existing capital components: the interest, the depreciation of buildings and installation, the depreciation of inventories, and the depreciation of doubtful debtors. The shadow revenue will only be based on segment A of 2011, this means that with the expansion of the segment B in 2012 no capital costs will be transferred to segment B (NZa 2011c:49). Within the transition model hospitals

will get a compensation for capital costs belonging to the Health Care Institutions Admission Act (WTZi, Wet Toelating Zorginstellingen). This compensation will become lower during the years. In 2011 hospitals will get a 95% compensation and in 2016, at the end of the transition model, hospitals will get only a 70% compensation. In 2017 no compensation will be given to hospitals (NZa 2011d:1-2; NZa2011c:50).

Health insurers need to play an important role in the final performance-based financing system as well as within the process of transition towards the final model. Health insurers need to become prudent buyers of health care on behalf of their enrolees. According to the Dutch Minister of Health health insurers need to be stimulated to become prudent buyers of health care. Therefore a transition model for health insurers is introduced (Ministerie VWS 2011a:2,7).

Currently health insurers are compensated for their costs in two ways. Health insurers receive ex-ante an amount of the health insurance fund (zorgverzekeringsfonds) which is based on the characteristics of their enrolees. However, the health insurance fund cannot predict the real costs exactly, therefore health insurers also receive ex-post an amount to compensate for certain losses (Baarsma et al. 2012:3). To make health insurers more risk-bearing, the ex-post calculation of the risk equalization will be fully abolished in 2015. In 2012 the ex-post calculation will still be used. However, from 2013 onwards the ex-post calculation will be phased out (Ministerie VWS 2011a:7-8; NZa 2011c:26).

2.3. Income management model

According to the Dutch Minister of Health the current funding system for self-employed medical specialists is unsustainable due to major cost overruns. Therefore action is needed to manage the costs of medical specialists. After lengthy negotiations with the OMS and the NVZ an agreement was made about controlling the cost of medical specialists but still guaranteeing health care of good quality, safety and efficiency. The income management model is the result of these negotiations (Ministerie VWS 2011b:1; Ministerie VWS 2010b:1). The income management model can be seen as a transition model towards the performance-based financing system. The model is introduced in 2012 and will run for three years (NZa 2011c:65). This paragraph goes into the characteristics, the methods for declaration, and the dynamics of the model.

2.3.1. Characteristics of income management model

The income management model is only applicable for self-employed medical specialists working in a hospital or a ZBC. Salaried medical specialists, with or without budget payment, are not bounded to the model. The goal of the income management model is to manage the income of self-employed medical specialists and to equalize the income of all different specialists within hospitals and ZBCs. To avoid salaried medical specialists to be disadvantaged, the tariff is set the same for self-employed medical specialists as for salaried medical specialists (NZa 2012b:6; NZa 2011c:65-66).

The Minister of Health determines the maximum amount of revenue that self-employed medical specialists are allowed to produce, based on the BKZ sub-framework for self-employed medical specialists. The NZa will use an allocation key to divide this maximum revenue amount among all hospitals and ZBCs in which self-employed medical specialists are active. The allocation of revenue will be based on historical revenues, the year 2009 will be taken as a basis (NZa 2011c:67-69; OMS 2011a:13). This means that all hospitals and ZBCs will get a revenue ceiling for the period 2012 until 2014. The revenue produced by medical specialists needs to be lower or equal to the ceiling of that

year. If the revenue exceeds this ceiling, the hospital needs to repay this amount to the health insurance fund. The amount of revenue needed to be repaid will be determined by the NZa at the end of the year. Therefore if the revenue ceiling is exceeded hospitals cannot pay directly fee to the self-employed medical specialists (NZa 2011c:79). During the year hospitals and ZBCs need to monitor their performances to avoid exceedances and waiting lists (NZa 2012b:8; NZa 2011c:68).

However, the revenue ceiling will not be determined by speciality but for the whole organisation. This means that the hospital board needs to make agreements with the self-employed medical specialists about the division of the revenue (OMS 2011b:11). Each self-employed medical specialist can declare his or her care products until the revenue ceiling is reached (NZa 2011c:67). The income management model consists of two declaration methods for self-employed medical specialists. Medical specialists can use one of these methods to declare their fee to patients or health insurers till the revenue ceiling is reached.

The first method is the VIA method. Within this method the self-employed medical specialists declare their fee via the hospital to health insurers or patients (Ministerie VWS 2010b:1; NZa 2012b:2; Ministerie VWS 2011b:4; OMS 2011a:13). In each hospital self-employed medical specialists may form a group, however, it is not mandatory for medical specialists to join this group. The medical specialists in a hospital or ZBC need to make own agreements about starting a group. There is no minimum amount of medical specialists needed for a group and it is possible to have several groups within a hospital. But only medical specialists within a group can declare using the VIA method (NZa 2011c:71-72; NZa 2012b:7). Within the group and with the hospital board agreements need to be made about the allocation of the revenue (Ministerie VWS 2011b:6). These agreements have to be sent to the NZa. If a group is established, the group is responsible for reaching the revenue ceiling or for repayment if the revenue ceiling is exceeded (NZa 2011c:67,72).

The second method is the TO method. Within this method the self-employed medical specialists declare their fee to the hospital (NZa 2012b:2,6; OMS 2011a:13). Medical specialists not joining a group can only declare using the TO method. However, not joining a group and only declaring using the TO method can have an influence on the fiscal status of self-employed medical specialists (Ministerie VWS 2011b:6; NZa 2011c:67). Within the TO method the hospital is responsible for reaching the revenue ceiling or for repayment if the revenue ceiling is exceeded. However, the hospital could make agreements with the medical specialists about the revenue ceiling (Ministerie VWS 2011b:5; NZa 2011c:72).

The NZa sets a revenue ceiling for the whole hospital (Ministerie VWS 2011b:4; NZa 2011c:65). Within the hospital, agreements need to be taken about partial revenue ceilings for self-employed medical specialists declaring either with the VIA method or with the TO method. The agreements for dividing the revenue ceiling are set for a year. It is not possible for a medical specialist to enter a group during the year (NZa 2011c:72). No matter which declaration method is chosen by the self-employed medical specialists, the tariff is the same. Maximum tariffs are set by the NZa and are based on the BKZ sub-framework for self-employed medical specialist (NZa 2011c:71-72).

2.3.2. Dynamics

The income management model is introduced to manage the income of self-employed medical specialists. However, this may be in conflict with the market dynamics the Dutch Minister of Health would like to see. The market dynamics needs to be maintained within the income management

model and at the same time waiting lists need to be prevented. According to the Minister of Health it is necessary to maintain a high productivity but at the same time control the income of medical specialists. Eventually, the Minister of Health would like to see a financing system in which it is possible to reward good quality of care and efficiency, and in which safety is priority (Ministerie VWS 2011b:3; NZa 2011c:68,73). The NZa has advised the Minister of Health to reserve 2,5% of the BKZ for these market dynamics. This 2,5% can be used to enhance the revenue ceiling of new entrants in 2012 and hospitals and ZBCs with growing volume (NZa 2011c:75; OMS 2011a:13). If the 2,5% of the BKZ is not used within a year, the remainder will be used at the end of the year to compensate hospitals and ZBCs that exceeded their revenue ceiling (NZa 2011c:78).

Only a hospital or a ZBC that has an agreement with a health insurer about the possibility to enhance their revenue ceiling is entitled to ask the NZa for an enhancement. Hospitals and ZBCs without agreements are not entitled to do so. This is applicable for both new entrants in 2012 and the hospitals and ZBCs with growing volume (NZa 2011c:76).

Hospitals and ZBCs that had an above-average growth in 2010 and 2011 can also ask for revenue ceiling enhancement. However, they only can ask for this enhancement if the production agreements exist with a health insurer (NZa 2011c:77).

2.4. Budget management tool

With the transition towards a performance-based financing system, hospitals will get more room and incentives to arrange health care processes in an efficient way. This transition should also result in health care of good quality and financial sustainability. However, according to the Dutch Minister of Health it still may be possible that the health care cost will rise due to the system of performance-based financing.

In 1994 the Dutch government introduced the BKZ (Hermans & Friele 2009:50). Each year the Dutch Minister of Health determines the BKZ for the following year based on the estimations of the CPB (Ministerie VWS 2011c:3). The framework consists of different sub-frameworks for hospitals, medical specialists, and general practitioners (Debets & Schroten 2005:171; OMS 2011a:7). The amount available for hospitals and ZBCs is based on the expenditures within segment A, segment B, capital costs, intensive care unit costs, expensive and orphan drugs costs, and the wages for salaried medical specialists. The self-employed medical specialists have their own sub-framework. The budgetary framework for hospitals and ZBCs is a total available amount, which includes the allowed volume growth and excludes the wage and price adjustments for that year (Ministerie VWS 2011c:3-4).

In 2012 the Minister of Health introduced the MBI, which is a part of the policy regarding the introduction of the performance-based financing system (Ministerie VWS 2011c:2; Ministerie VWS 2011a:6). At the end of the year it will be determined if health care expenditures exceeded the BKZ. If the expenditures that year do exceed the BKZ a settlement will take place (Ministerie VWS 2011a:6; Ministerie VWS 2011c:2-3). Under article 7 of the WMG the Minister of Health can ask the NZa to use the MBI to settle the exceedances. However, the Ministry of Health will determine the amount that is exceeded. The NZa will look at the share a hospital or ZBC had within the total health care expenditures that year and will determine the amount an individual hospital or ZBC has to repay to the health insurance fund (Ministerie VWS 2011c:1-3). Within the transition model the NZa will also look at the transition sum and will determine the exceedances after taking into account this transition sum (Ministerie VWS 2011c:4,5).

The MBI will be used in a generic way and no differentiation will take place between health care organisations. However, the MBI has some drawbacks. Schut et al. (2010:374) described that hospitals will have no influence on the exceedances of the BKZ and subsequently the budget cuts. The amount of the budget cuts is determined by the exceedances of all hospitals. Therefore, the possible budget cut will become an additional cost for hospitals. They will increase their prices with a risk factor to compensate for it. This may lead to an upwards price spiral, because higher prices will probably lead to higher budget cuts. However, hospitals within a competitive area will find it much harder to raise their prices, while they have the same chance of a budget cut. So, for the most competitive hospitals it is harder to protect themselves against the budget cuts. This could cause financial problems for hospitals. Hospitals will also try to increase the delivering of health care in the free segment, because within this segment it is possible for hospitals to raise their prices with a risk factor. However, this could cause waiting list within the regulated segment and patients going abroad for these treatments (Schut et al. 2011:295,296; Schut et al. 2010:374,375).

The constant threat of a budget cut will also make it much harder for hospitals to innovate and to invest in quality improvements. This threat will make it unattractive for new entrants, which will reduce the competition within the market (Schut et al. 2011:296; Schut et al. 2010:375).

3. Results

This section describes the results stemming from the interviews with the different stakeholders. These results are divided into different subjects. The first paragraph describes the results concerning the DOT financing system. The second and third paragraphs go into the transition models. The fourth paragraph describes the results concerning the performance-based financing system. The fifth paragraph goes into the MBI. The sixth paragraph describes changes within different relationships. Finally, the seventh paragraph goes into the ideas of the stakeholders about the future financing developments.

3.1. The effects of DOT

The DOT financing system was implemented in 2012. The interviewees thought quite differently about this implementation. Some respondents believed that the introduction of DOTs was necessary. The DBC financing system showed major drawbacks such as a high number of codes which increased complexity, overlaps between specialties, and the possibility to manipulate the validation process.

> *"DBCs became a toy of medical specialists."*

A better system was also needed for health insurers to become prudent buyers of health care. Health insurers need a clear product description to negotiate with hospitals and the DOT financing system was created to provide this. Some respondents believed problems could be solved by changing the DBC system, others believed that this could only be done by the introduction of DOTs.

> *"(…) why did we not choose the DOT system instead of the DBC system in 2005?"*

Although some believed the implementation of DOTs was necessary, it was a big change for hospitals, health insurers, and medical specialists. The implementation took a couple of years and this should have been enough for hospitals to get familiar with the system. However, some hospitals were not ready for it yet. Hospitals needed to inform their medical specialists about how to work with DOTs and how to register health care activities. Not all hospitals have done this correctly and there is still a lot of ignorance within hospitals. However, all responders stated that it was not necessary to postpone the introduction of DOTs.

Respondents believed that the introduction of DOTs had both positive and negative effects on hospitals, health insurers, and medical specialists. By using DOTs it is necessary for medical specialists to carefully register all care activities. With the introduction of the grouper it is not possible anymore for medical specialists to check and change the registration after the validation process. However, this was possible within the DBC financing system, because the validation took place within the hospital.

> *"If you register an outpatient treatment, but in reality it was a clinical procedure, you cannot change this."*

Some medical specialists try to skip the registration process and ask their secretaries to do it. The secretaries are less familiar with the registration process and this could cause the registration to be wrong. A correct registration is essential, otherwise medical specialists could miss a part of their income. Also, within the treatment of patients, comorbidity is better registered and therefore the declaration can be done more accurately.

Interviewees stated that the DOT financing system has also disadvantages and problems. DOTs do not cover the complex care of university hospitals, it is still possible to register different care products for the same treatment, and medical specialists have perverse incentives to use different, probably more profitable DOTs for certain patient groups.

"*DOTs are certainly not perfect.*"

Another disadvantage of the introduction of DOTs is that all hospitals needed to redefine the price of each care product. This can be seen as a major operation and can cause financing and liquidity problems, and uncertainty. According to a respondent, hospitals and health insurers were not able to define a right price for the care products in 2012. Within the DBC financing system health insurers had at one point knowledge of what a right price was for certain DBCs and which care profile belonged to these DBCs. This information was lacking for health insurers within the DOT financing system in 2012. So, it was difficult for hospitals and health insurers to negotiate on prices in 2012. The implementation of the DOT system was an administrative burden for hospitals and health insurers.

"In fact, two complete new financing systems are introduced within 6 years."

An interviewee stated that the great advantages of the DOT system are the possibility to make international comparisons because of the ICD classification and the output-based character of the DOT system; the type of care product delivered is essential.

3.2. The use of transition models

The transition models for hospitals, health insurers, and the income management model for self-employed medical specialists are created to get to the final performance-based financing system. However, not all respondents believed that these transition models were appropriate and necessary to reach performance-based financing. Only one interviewee believed that no transition models were needed to implement a performance-based financing system. After the introduction of the transition models it appeared that health insurers made overall production agreements with hospitals. With these agreements they bypassed the transition models. This showed that the actors could also do the transition towards performance-based financing on their own, without any transition models set by the government.

"In fact, now they did it on their own."

Other responders stated that a transition towards performance-based financing needs to be done step by step, because the transition is complex, and the actors need some time to get used to their new roles. Transition models are useful to slowly implement the performance-based financing system.

"The different actors need some certainty."

Several interviewees believed that hospitals needed a transition model, because of the introduction of the DOT financing system. The transition model will act as a safety net for system risks within the DOT financing system. System risks occur due to technical changes in the financing system. Hospitals should not get in financial problems due to these changes of the financing system.

However, respondents did wonder if the current models are suitable for the transition and if other models had to be used. For example, a transition model in which all different transitions are integrated.

"I think a different model would have been more appropriate."

The current transition period consists of four different models. A model for hospitals, a model for capital costs, the income management model for self-employed medical specialists, and a model for health insurers. Some interviewees thought that it was better if these models were integrated into one. However, problems then could occur, because the transition model for hospitals and the model for capital costs are not applicable for ZBCs but the income management model is.

"Now you have the income management model, the administrative outline agreement, and the enlargement of the B segment; it is just too much at the same time."

Also, the different time tracks of the transition models could have an effect on the functioning of the transition period, because it will be non-transparent for hospitals, medical specialists, and health insurers. However, most responders did not think that these different time periods were a big problem.

Each transition model has its own history and difficulties and therefore different periods were necessary. Respondents stated that the transition for hospitals can quite easily be done in two years and maybe no transition model was necessary at all. The transition for self-employed medical specialists is a bit harder, because difficulties with the fiscal status of these medical specialists could occur. Therefore, it is necessary to take a longer period for the implementation of integral prices for medical specialists. A long transition period for capital costs is needed, because decisions about investments take almost 30 years.

"So each model had its own considerations."

According to responders, problems could only occur when the transition model for hospitals is ending in 2013 and the income management model for self-employed medical specialists still continues in 2014. Hospital will have full performance-based financing while self-employed medical specialists are still controlled by the income management model. This could cause hospitals and medical specialists to have opposite incentives. Hospital boards will try to create interesting integral prices for their care products and will negotiate with health insurers about these prices. However, the fee of self-employed medical specialists is not included yet. Therefore, self-employed medical specialists may have fewer incentives to be involved in the negotiations or to act upon the agreements made.

Besides the necessity and the different time tracks, interviewees also expressed their opinion about the effects the transition models created for hospitals, self-employed medical specialists, and health insurers. According to one interviewee the transition models are misused by all stakeholders. For example, the shadow revenue will be made much higher than the actual revenue of hospitals is. This is done to make the financing in 2012 attractive for health insurers.

Moreover, because there are separate transition models for hospitals and self-employed medical specialists the incentives of both hospitals and self-employed medical specialists can diverge. With

these differences it is hard for hospitals to make integral decisions. Self-employed medical specialists could oppose to these decisions, because they have different financial incentives.

> *"Hospitals need to make considerations together with self-employed medical specialists."*

With the transition towards performance-based financing and the abolition of the ex-post calculation of the risk equalization, health insurers bear greater financial risks. To reduce these risks health insurers will create some control mechanisms for hospitals to prevent going bankrupt. For example, the health care costs of hospitals will be strictly monitored. However, according to responders, health insurers can also raise premiums by a risk factor to consumers.

3.3. Income management model

The income management model can be seen as a specific transition model for self-employed medical specialists. However, not all respondents believed that this model is appropriate and necessary to control the income of self-employed medical specialists. Some interviewees stated that the income management model was necessary to control and rearrange the income of medical specialists and to set up integral prices within the performance-based financing system. They believed that this was the goal of the model and the intention of the Dutch government.

A responder believed that due to errors in the DBC financing system, the income of self-employed medical specialists grew excessively. The tariffs set by the government were too high. Medical specialists benefited from these unrealistic tariffs and their income grew subsequently. This caused the BKZ for medical specialists to exceed in 2008.

> *"From one year to another self-employed medical specialists in the Netherlands earned half a billion Euros more".*

Also, the income differences between specialties became larger. According to an interviewee, the number of patients treated by specialties stayed the same, but some specialties doubled their income while others halved their original income. At the same time former Minister of Health, Dr. Klink, tried to oblige self-employed medical specialists to go into salaried service of hospitals and he wanted to regulate their income (Ministerie VWS 2010c:3-8). These developments caused tensions between medical specialists.

> *"There was a kind of unrest in hospitals."*

Some interviewees stated that the income management model should prevent the excessive growth of income of self-employed medical specialists and reduce the unrest within hospitals. A respondent believed that both the OMS and the NVZ agreed with the income management model to maintain the fiscal status of self-employed medical specialists and to end the unrest within hospitals. However, not all responders believed that the income management model was necessary. According to some of them, self-employed medical specialists do not earn too much.

> *"Self-employed medical specialists have the image that they earn too much and they are seen as cheaters."*

Some even stated that medical specialists may earn as much as they want if they guarantee health care of good quality. However, quality of care is hard to define, especially if it needs to be related to the income of medical specialists. Interviewees also believed that medical specialists have a lot of responsibility and this needs to be rewarded by a high income. A difference has to be made between medical specialists with high and low responsibility, but this subdivision is hard to make.

According to one interviewee self-employed medical specialists feel restricted by the income management model. The figures used are the revenues of medical specialists, however, their real income is much less, because they have to pay a lot of taxes, pension premiums, and a premium for a disability insurance. The income of self-employed medical specialists is, after deduction, almost the same as the income of salaried medical specialists. A respondent also stated that it seems that the income management model is created to give the hospital board more control about the self-employed medical specialists. But, in reality these kinds of measures work in the opposite direction.

Due to the complex design of the income management model all respondents believed that the model will have effects on hospitals and self-employed medical specialists.

"I expect a lot of problems within hospitals."

Within the current income management model the revenue ceiling plays an important role. According to some responders agreements are made about the revenue ceiling between the hospital board, health insurers, and the group of medical specialists.

"Hospitals need to manage their health care production like each other business."

In several hospitals an allocation model is used to divide the revenue ceiling among the specialties. Some interviewees were afraid that the revenue ceiling is set too low and is reached before the end of the year. Self-employed medical specialists will determine how many treatments they can deliver to prevent the revenue ceiling to be exceeded. This will also depend on the type of care products declared, because the income component differs among care products. It is possible that medical specialists will develop a preference for delivering certain types of treatments.

According to some responders self-employed medical specialists have an incentive to deliver as much care as possible below the revenue ceiling, because if they do not reach the ceiling the possibility exists that they will get a lower revenue ceiling the following year. However, self-employed medical specialists may possibly have an incentive to deliver just slightly more health care than the revenue ceiling, because this shows more capacity is available. If the revenue ceiling is exceeded this income needs to be repaid. So, self-employed medical specialists could also decide to stop delivering health care before the end of the year. This is a consideration medical specialists need to make.

"Self-employed medical specialists also delivered as much care as possible in previous years, so it is quite impossible to suddenly deliver 30% more care."

Waiting list could occur if self-employed medical specialists stop delivering certain treatments. Medical specialists can also choose to change the need assessment. This means that medical specialists will postpone a treatment if it is not necessary. In the past, self-employed medical specialists did not have the incentive to postpone certain treatments, because they got paid for all treatments. Now, if the revenue ceiling is almost reached, medical specialists will closer look if a

treatment is really necessary and they might select patients. However, a respondent wondered if it is still socially accepted to postpone treatments. A hospital board needs to come with solutions to prevent waiting lists. A hospital will possibly choose to pay the treatment themselves, however this is risky if no income is generated.

It seems that health insurers are also afraid that no treatments are delivered at the end of the year, because the agreements made include an obligation to keep delivering mandated health care when the revenue ceiling is reached.

"It cannot be the case that hospitals will stop treating patients in November."

This means that, according to interviewees, self-employed medical specialists need to deliver health care beyond the revenue ceiling and with the result that no revenue is made.

"I do not think they get no income for these treatments, their total income is just lower during the year."

Within the group of self-employed medical specialists agreements are made about how the revenue is divided over the different partnerships. Each individual medical specialist is free to negotiate about his share of the revenue. Therefore, self-employed medical specialists do not have the incentive to expand their partnership with new medical specialists, because then they have to divide their income with more colleagues.

Respondents believed that the income management model is not a perfect model to control the income of self-employed medical specialists, because of its imperfections. The revenue ceiling is based on historical revenues; the year 2009 is taken as a basis. If a hospital had a good year and made a lot of revenue in 2009, they have a high revenue ceiling in 2012. However, the opposite is also true, if a hospital did not make a lot of revenue in 2009, they do not have a high revenue ceiling in 2012. Interviewees stated that this is an unfair situation. This is also an obstacle if a hospital considers growth, specialisation, or concentration of services, because the revenue is not based on future plans.

Respondents also thought that the income management model looks like the lump-sum system introduced in 1995. However, the income management model does not give any minimum income guarantees, which the lump-sum system did.

"The model does not take into account that the world is changed since 1995."

The income management model does not take into account that hospitals became more differentiated. Medical specialists do not work anymore in only one hospital, they work in more hospitals, on different locations, and/or in a ZBC. A downside of the model is that this differentiation cannot be made in the revenue ceilings of self-employed medical specialists.

Self-employed medical specialists declaring using the TO method might lose their fiscal status. However, some responders believed that this is incorrect. These medical specialists often work in more hospitals and therefore use the TO method for their declarations. For these medical specialists it is not possible to join a group within a hospital.

"These self-employed medical specialists are the real entrepreneurs."

A respondent believed that the income management model was technically hard to implement and it caused a lot of administrative burden. Thereby, it created negative incentives for self-employed medical specialists.

"I really do not think that there is an ideal financing system for medical specialists."

Finally, some interviewees believed that the income of self-employed medical specialists could also be controlled in other ways.

"I really do not understand why it needs to be so complicated."

According to these respondents the income of medical specialists could be managed by determining good tariffs for each care product, based on the BKZ. Exceedances of the BKZ can be prevented by ex-post budget cuts. Others believed that the income management model will be abolished if performance-based financing with integral prices is fully implemented. With integral prices the price of a care product is determined by negotiations between health insurers and hospitals. The income of medical specialists is a part of this price and this will be determined by agreements with the hospital board.

3.4. Performance-based financing system

In 2015 a performance-based financing system should be implemented in the Dutch hospital care setting. Interviewees believed that the performance-based financing system will be implemented to improve the labour productivity within hospitals. The working population will shrink and health care demand will only increase, therefore, a financing system is needed that will ensure maximum efficiency. The proposed system will ensure that if a hospital increases its labour productivity, it will make money.

"*This system encourages hospitals to be efficient (…).*"

This is a change compared to the function-based financing system, because within this system a hospital only needed its function-based components to make money. So, according to some responders, the performance-based financing system is innovative for the Dutch hospital setting. After the transition period hospitals will have no safety nets and are dependent on their performances.

The performance-based financing system contains a lot of incentives and consequences for the different actors. Some respondents thought that this financing system will cause hospitals and medical specialists to become more aware of their performances. They will monitor their quality and services closely. Hospitals and medical specialists need to become interesting partners for health insurers. This financing system will make it possible for both hospitals and medical specialists to distinguish themselves from others.

"Hospitals and medical specialists now see better the results of their performances."

Both health insurers and hospitals will experience the effects of the negotiations more directly. However, according to a responder this could also be a negative effect of the financing system. If the negotiations did not go well, all actors will experience this. Hospitals cannot influence the effect their

treatments have on their revenue, because of the use of a grouper. This is a positive consequence, because this allows benchmarking between hospitals and medical specialists.

Several interviewees stated that the performance-based financing system contains an incentive to deliver more care. Hospitals will try to maximise their revenue given the demand for care. However, this depends on the level of competition in the market.

> *"This is one of the fundamental problems of the financing system; it contains the incentive to do more."*

Hospitals could deliver more health care than they are paid for. Respondents believed that another negative effect of performance-based financing will be that some people will only pursuit profits. According to them there need to be a difference between delivering health care quickly and cheap or delivering health care of good quality. Some interviewees stated that a performance-based financing system could create more efficiency in the health care sector.

Within performance-based financing integral prices will be used. Both hospitals and medical specialists will have to look at their cost structure to determine the integral prices. They will have the incentive to cut costs by looking if all infrastructures are needed for delivering certain treatments. The integral prices also have certain consequences for self-employed medical specialists. Integral prices will probably lead to a fixed income for self-employed medical specialists. Respondents wondered if self-employed medical specialists still have fiscal status within the performance-based financing system. If this fiscal status will be abolished self-employed medical specialists need to go into salaried services of a hospital or need to organise their care in another way. This can be seen as a big consequence for self-employed medical specialists. Responders believed that this will also have an impact on the delivering of health care. Due to the fixed income, medical specialists will not have an incentive anymore to deliver more health care and waiting lists will occur.

According to several respondents, patients will also become more aware of the costs of health care. This will make patients more aware of their own responsibility and they need to wonder if treatments are necessary. Another consequence for patients may be if the restitution policy will be abolished. Health insurers have stated that the policy may be abolished to make it easier to steer their enrolees to preferred health care organisation for mandated care. This will make it financially controllable for health insurers. However, this will have some consequences for patients, especially if the health insurer is going to steer patients to cheap hospitals and not to hospitals with a good quality care.

> *"The freedom of choice of patients will be under pressure with this abolishment."*

Within the performance-based financing system health insurers should play an important role. Health insurers need to become prudent buyers of health care on behalf of their enrolees. However, the respondents thought quite differently about this role. The performance-based financing system is introduced to support the role of health insurers. With this financing system health insurers can make agreements about performances, for example the volume, price, and quality of care. This causes health insurers to be responsible for concentration and dispersion of health care.

A lot of interviewees believed that concentration and dispersion of health care will be further developed in the near future. This could improve the quality of care, because only some medical

specialists will deliver certain treatments and become specialized. However, they believed that basic health care needs to be available in all general hospitals. Only highly specialized health care needs to be concentrated among hospitals (KPMG plexus 2011:5).

"The costs of a routine treatment do not differ among general hospitals."

However, one respondent wondered if the concentration and dispersion of health care is enough to keep health care affordable. He refers to the economic crisis and possibility of budget cuts in the health care sector.

Some responders question if health insurers need to play this role though. They are wondering if the paying party should be the one that steer patients to certain health care organisations.

"Who will give me the guarantee that I am steered to a health care organisation with a good quality of care and not to one that is profitable for the health insurer?"

Most respondents believed that health insurers are not ready yet for this new role and more developments need to take place. They also believed that the success of the performance-based financing system depends on how quickly health insurers become prudent buyers of health care.

With this new role health insurers need to purchase health care selectively. Some respondents were afraid that health insurers just purchase health care from all health care organisations. Health insurers do not look at quality differences yet, but only at the price they have to pay. Interviewees believed that health insurers need to look at the preferences and demands of their enrolees to determine which care to purchase. Only by doing this a health insurer can become a prudent buyer of health care.

"Insurers need to think: who are my enrolees and what do they want?"

However, some respondents stated that selective purchasing of health care is difficult, because there is not much health care to choose from. For hospitals it will become harder to be innovative, because they do not have the guarantee anymore that health insurers will purchase their health care. In addition, health insurers are afraid that their enrolees will be unsatisfied.

"Health insurers are afraid for a bad reputation."

Interviewees believed that health insurers do not need to get a penalty if they do not purchase selectively. Health insurers will automatically receive less revenue, because they will purchase health care that is more expensive or of less quality. A health insurer that buys more expensive health care will not be able to compensate this with the standard amount they receive from the health insurance fund. So, health insurers need to compensate this in another way, for example by their own resources or by raising the insurance premium for their enrolees.

"Due to competition health insurers will probably not raise their premiums."

Only some respondents are really positive about selective purchasing. They stated that health insurers have the means and knowledge to negotiate with hospitals about performances. For example the guidelines set by the profession are used to look at the quality of care within a hospital. Also, health insurers will do research to find out for example how satisfied patients are within the

health care sector. All this information can be used when health insurers are purchasing health care. Responders expected that the costs of care will decrease if health insurers purchase selectively.

All respondents believed that the performance-based financing system will have effects on the quality, accessibility, and affordability of health care. Some thought that the performance-based financing system will cause self-employed medical specialists and hospitals to have the same incentives regarding the quality, accessibility, and affordability of health care. But it is hard to keep all three aspects into account.

"It is a bit like juggling, keeping all balls in the air."

Only some responders believed that the quality of care will be jeopardized with a performance-based financing system and that measures such as concentration of health care are needed to ensure health care of good quality. The other respondents thought that the quality of care will be improved with a performance-based financing system. However, the quality of care will probably also improve due to the minimum guidelines set by the Health Care Inspectorate (IGZ, Inspectie voor de Gezondheidszorg). Hospitals can only differentiate their quality above these minimum norms. This will be extra stimulated by the volume norms. These norms set a minimum volume of certain treatments a hospital needs to deliver to be allowed to do these treatments. Concentration of care is the result of these norms.

The interviewees believed that the accessibility of health care will be jeopardized if the concentration of health care continues. If health insurers purchase health care selectively, patients may not be able to go to all health care providers and need to travel a longer distance for certain treatments. This makes health care less accessible. Younger patients are more willing to travel to another hospital if the quality of care is proved to be better. This travelling distance needs to weigh up against a higher quality of care.

"The selective purchasing of care will most certainly limit the accessibility of health care."

According to a responder, health insurers and the government have the duty of delivering health care, so they have to ensure that health care of good quality is accessible for all Dutch citizens. The government could give an availability contribution to hospitals to make sure that certain health care is available. However, he wondered if this is wise, because this will affect the market dynamics and the function of health insurers.

One responder believed that no waiting lists will occur, because of the market dynamics within the performance-based financing system. He stated that if hospitals have waiting lists other hospitals will act accordingly and will try to tackle these waiting lists by reducing their prices or by specializing. This should be a continuous process.

"This is how the market should work."

According to the respondents the affordability of health care will become less. For hospitals it is hard to determine and control the costs of health care. Both hospitals and health insurers need to look at the costs of health care on the long-term and on the macro level. However, this is hard.

"I think it is risky to only look at the short term costs."

Thereby, patients will be faced with deductibles. Interviewees believed that this jeopardizes the affordability of health care.

"For patients health care will only become more expensive."

However, some respondents believed that patients are willing to pay for good health care and a high deductible should not be a problem. Also, the amount of deductibles paid in the Netherlands is low compared to other European countries. Another responder pointed out that the affordability of health care has priority at this moment. The health care costs in the Netherlands are rising excessively and measures need to be taken to keep health care affordable. If no measures are taken, patients cannot afford health care anymore.

"As Minister De Jager stated, my biggest worry is not the debt crisis, but the increase of the costs in the health care sector."

According to some respondents the performance-based financing system has unresolved imperfections. One interviewee believed that the system is not enough transparent for actors to get control on their finances, because of the functioning of the grouper. The grouper validates the DOTs and therefore hospitals and medical specialists have no influence on this validation process. Others believed that the government still plays a role within the financing system and that this needs to be minimalized.

"It is a kind of regulated performance-based financing."

Finally, some responders worry that the different actors do not take up their new roles. Health insurers do not purchase selectively yet. They only look at the price and not at the quality of care. Patients are not able yet to choose between health care providers and health insurers. Health care organisations are not commercial enough to play the intended role within the financing system. According to these respondents, the actors need to take up their roles to make the performance-based financing system a success.

3.5. Budget management tool

At the end of the year it will be determined if the health care expenditures exceeded the BKZ. If the expenditures that year did exceed the BKZ the MBI will be used to settle the exceedances. The Minister of Health has decided that the health care expenditures may increase max with 2,5% per year. The respondents thought quite differently about this increase in expenditures, because it is unclear how much the expenditures will increase each year. Almost all expected the increase in health expenditures to be more than 2,5%. Some even stated that the growth will be above 6%, because of an increase in health care demand due to population aging. The increasing demand needs to be slowed down to make sure the health outlays will stop growing. However, the financing system includes an incentive for hospitals to deliver as much care as possible. So, hospitals have conflicting interests and need to deliver less health care than is actually demanded. This will be a problem that can lead to waiting lists.

"We should keep patients out of the hospitals."

An interviewee stated that patients need to be informed that not all treatments are possible anymore due to the rising health care expenditures. According to interviewees two measures could be taken to slow down the health care demand: i) The health insurance premium and the deductibles can be raised, and ii) the health insurance package can be minimized. Hospitals could also do more treatments with less expenditure. Hospitals will need to take measures to become more efficient, for example by efficient prescribing, substitution, and task rearrangements.

> *"It is ambitious and it is achieved but at the expense of either the hospital or the patient."*

Some respondents stated that the 2,5% increase in expenditures will certainly be achieved. If the health care expenditures will increase more the MBI will be used to settle these extra exceedances. This means that hospitals will need to repay the exceedances.

> *"That means that you actually do get 2.5% increase."*

> *"That is not a choice of the field but one that is taken by the Minister of Health."*

Responders wondered if the 2,5% increase is actually acceptable knowing that due to population aging certain treatments will be delivered more often, for example hip replacement surgeries. They believed that the increase in health care expenditures needs to be looked at over the years and possibly a differentiation needs to be made between specialties.

However, respondents thought quite differently about the appropriateness of the MBI. Some believed that the MBI is not appropriate to use, because it will not lead to an optimal distribution of financial resources.

> *"It is just a safety net of the government."*

All interviewees thought it was unfortunate that the MBI is used in a generic way, because this will give hospitals the incentive to produce as much health care as possible. In this way the generic budget cut will have less effect on their financial resources.

> *"It is better for hospitals to all exceed the budget limits, because it is certain they all have to repay."*

Some respondents believed that it is more appropriate to be limited by a ceiling at the beginning of the year than receive a budget cut at the end of the year. If a ceiling is set at the beginning of a year, hospitals know in advance what they could spend and this will give them the incentive to deliver not too much care. However, with the generic budget cut at the end of the year hospitals do not know how much they can spend and therefore always spend too much.

Responders stated that health insurers are afraid that hospitals exceed the BKZ and need to repay a part of these expenditures. However, health insurers already paid for these treatments. To have some certainty about their expenditures, health insurers made overall production agreements with hospitals. According to respondents these overall production agreements could cause waiting lists if a hospital delivered all health care before the year end. However, if hospitals delivered as much health care as agreed with health insurers, then a budget cut is still possible, because the total BKZ is exceeded. Schut et al. (2011:295) described that hospitals will have no influence on the exceedances

of the BKZ and subsequently the budget cuts. The amount of the budget cuts is determined by all hospitals.

"The MBI causes opposite incentives for hospitals."

According to some interviewees, the MBI is a barrier for hospitals to fully go for performance-based financing. Schut et al. (2011:295; 2010:374) described that hospitals will raise their prices as a result of the budget cut. However, hospitals within a competitive area will find it much harder to raise their prices, while they have the same chance of a budget cut. So, for the most competitive hospitals it is harder to protect themselves against the budget cuts. This could lead to hospitals going bankrupt. Hospitals will also try to increase the delivering of health care in the free segment, because within this segment it is possible for hospitals to raise their prices with a risk factor. However, this could cause waiting list within the regulated segment. Finally, the constant threat of a budget cut will make it much harder for hospitals to invest and innovate (Schut et al. 2011:295,296; Schut et al. 2010:375).

Respondents believed a differentiation should be made. However, they wondered if it is possible to make a good differentiation between hospitals, because it is unclear who will determine the aspects this differentiation should be based on. They all believed that it should be appropriate to make a differentiation based on quality aspects; however it is hard to objectively determine the hospital quality of care.

"If you can provide me with objective information about the quality of care, that is legally supported, I will immediately choose to differentiate the MBI."

A respondent believed that hospitals with a bad quality of care also have high expenditures, because this is related to each other.

"Quality of care should be important in all choices made."

According to interviewees, only by using a differentiated MBI hospitals will be rewarded for their performances. This differentiation should not be based on the number of treatments delivered but on performance and quality standards. By making a differentiation hospitals will get an incentive to deliver the best care they can.

"Then, it is possible to make a distinction between the good and the bad."

Some respondents believed that it is also important to look at an appropriate use of health care to make a differentiation between hospitals. This is a combination of making a good need assessment and doing the right treatment. The professional standards will become more important, because these standards include certain limits. Therefore, medical specialists will play an important role by the appropriate use of health care.

"They are the only ones that can determine what a patient really needs."

However, responders also expected that patients will need to be involved, because they have high health care demands. These high demands need to be reduced to make an appropriate use of health care.

"Patients need to become aware of what they are demanding."

Others, however, believed that an appropriate health care use is uneasy to reach. First, it is difficult to change and improve the need assessment of patients. Second, both patients and medical specialists do not have the incentive to demand/deliver less health care.

"Appropriate use of health care actually means not treating a lot of patients."

Some respondents stated that they are glad that the Baarsma Committee is looking at an appropriate way to use the MBI. They believed that this Committee could come with solid solutions for the use of the MBI.

The Baarsma Committee stated that not the hospitals need to be cut if the BKZ is exceeded. They believed that health insurers are primarily responsible for controlling the increase of health care expenditures. However, hospitals, medical specialists, and patients are also responsible for controlling the health care expenditures. Medical specialists need to deliver efficient and appropriate health care (Baarsma et al. 2012:6).

The Committee stated that the MBI will always cause disturbances within the market and therefore it is needed to make sure that the MBI will not be necessary; it should become an ultimate remedy (Baarsma et al. 2012:6). The Committee has proposed to control the health expenditures by using four steps (Baarsma et al. 2012:7,8). First, the estimations of the BKZ need to be determined by an independent organisation, for example the CPB. There should be aimed at an objective estimation of the health care costs. Second, based on these estimations, the government should determine the BKZ for the whole government term. If the BKZ will differ from the estimations the government will need to explain in a transparent manner why it is chosen for this. Third, the Cabinet needs to determine the BKZ for each year. This yearly BKZ will be divided among health insurers based on the characteristics of their enrolees. If health insurers will not become prudent buyers of health care, the government could decide to increase the BKZ or to legally determine that health insurers may not purchase more health care than their limit based on the BKZ. However, this limit shall not lead to not fulfilling their duty of delivering health care. Finally, it will be mandatory for health insurers to make agreements with hospitals for health care that is included in the basic benefit package. By making these production agreements health insurers may rule out exceedances of the BKZ and at the same time fulfil their duty of mandated care (Baarsma et al. 2012:7,8). According to the Committee, if health insurers decide to purchase health care selectively, they need to indicate which objective criteria their decisions are based on. Health care purchasing needs to become more transparent for hospitals and patients (Baarsma et al. 2012:8). The Committee believed that if a BKZ sub-framework is still exceeded with these measures, the health insurers involved should compensate this by their own resources or by raising their premiums. However, this could have an effect on the affordability of health care for patients (Baarsma et al. 2012:12,22).

According to the Committee, if it is eventually decided to still use the MBI, then only the hospitals that caused the exceedances need to repay it. The Committee advises that a team of technical experts need to create a differentiated MBI. However, if it is too expensive to create a differentiated MBI, a generic MBI can still be used. The measures of the Committee will cause exceedances of the BKZ to be much smaller than within the current situation (Baarsma et al. 2012:22).

3.6. Changing relationships between actors

Within the health care sector different relationships exist between actors. Within the transition period towards the final financing model these relationships may change. The relationship between health insurers and hospitals will change, because health insurers need to negotiate with hospitals about the purchase of health care. Respondents stated that the negotiations between health insurers and hospitals were very difficult in 2012. According to interviewees there was a lot of ignorance regarding the negotiations. This was caused by the introduction of DOTs and the implementation of the transition models.

> *"Negotiations with health insurers are always difficult, because you do not speak each other's languages."*

Interviewees expected the relationship between health insurers and hospitals to become more concise. Within the old financing system health insurers were focused on having a sustainable relationship with hospitals. With the transition towards a performance-based financing system health insurers need to negotiate with hospitals. Health insurers will, for example, ask for a business case if a hospital wants to innovate and they will closely monitor the production and costs of hospitals. However, health insurers also need to monitor health care processes. A difference can be made between health insurers that try to improve health care, and health insurers that only try to reduce the health care costs. The respondents believed that it is positive that health insurers want to improve health care. However, they believed that a sustainable relationship is still necessary to make these improvements. A responder thought that this change in relationship is more difficult for smaller health insurers, because they do not have the power of large health insurers.

> *"Large health insurers have the power of large numbers."*

Interviewees expected that health insurers will not negotiate on the price of a DOT, but overall production agreements will be made with hospitals and self-employed medical specialists. With these agreements all actors will have certainty about the amount of production a hospital could make. Health insurers could demand that no waiting lists may occur if the production limit is reached. However, responders wondered if the overall production agreements fit within performance-based financing. These agreements are almost the same as budgets and budget were abolished with the introduction of the performance-based financing system. These agreements probably will be used to determine the price of a DOT.

> *"However, you may wonder if these agreements are the intention of a performance-based financing system."*

Some interviewees thought that it is wrong to make this kind of overall agreements. Health insurers are responsible for the exceedances of the BKZ. However, with these agreements, health insurers try to make hospitals responsible for it. Respondents were also afraid that health insurers get too much power in the negotiations with hospitals and will make impossible demands.

The interviewees believed that the relationship between the hospital board and medical specialists also will change, depending on the culture within a hospital. The hospital board and the medical specialists need to become partners to negotiate with health insurers. However, the different transition models cause them to drift apart.

"I believe there is still too much distance between the hospital board and the medical specialists."

A respondent believed that it is positive self-employed medical specialists have formed a group within the income management model. The hospital board can negotiate with this group, instead of with all different partnerships. This makes it easier for hospital boards to make agreements within the hospital.

The transition models also create tensions between self-employed medical specialists and hospital boards. The self-employed medical specialists are limited by their revenue ceiling. The amount of the revenue ceiling is known in advance, at the beginning of the year. Hospitals are likely limited by the BKZ and a budget cut could take place at the end of the year with the MBI. So, hospitals and self-employed medical specialists have different incentives due to these different budget constraints. It is possible that one of both actors wants to stop delivering health care if their budget is reached. According to an interviewee hospital boards can "manipulate" this by, for example, understaffing the hospital if self-employed medical specialists want to deliver more health care than they are paid for.

According to some responders, within the transition period the hospital board will play a facilitating role. They will support the self-employed medical specialists by dividing the revenue ceiling. Different allocation models can be used. However, the role of the hospital board will change in 2015 if the performance-based financing system is introduced. The hospital board then will play an important role, because the integral prices will include the fee of medical specialists. Negotiations about this fee will take place between the hospital board and medical specialists. Hospital boards will make a contract price that they are willing to pay for treatments or certain partnerships. There will be subcontracting within hospitals. This will give hospital boards more steering power. However, respondents also expected that medical specialists will threat to leave the hospital if no good integral price is set.

"Hospital boards need to become ready for this new role."

According to an interviewee it is positive that medical specialists will have less control within hospitals. However, other respondents believed that medical specialists need to get a prominent role within hospitals, because they are better than hospital boards in making hospitals more efficient. They expected that within a couple of years medical specialists will take over hospitals.

Responders also expected that the relationship will change between the hospital board and salaried medical specialists. Hospital boards have a different relationship with salaried medical specialists than with self-employed medical specialists. Salaried medical specialists felt no pressure in the past to perform, they "just earned" their salary. However, with performance-based financing, also salaried medical specialists are responsible for the performances of a hospital. Salaried medical specialists need to become more commercial, as self-employed medical specialists are. So, the hospital board will stimulate salaried medical specialists to perform. Salaried medical specialists will need to look at their own performances and determine if all activities are necessary. However, a respondent stated that this could also mean that if a hospital cannot set a decent integral price or if it gets into financial problems, salaried medical specialists may threaten to leave the hospital.

Finally, the interviewees believed that the relationship between medical specialists will change with the performance-based financing system. Some respondents stated that the differences in income between salaried medical specialists and self-employed medical specialists will become smaller. They both declare the same tariffs, only the remuneration differs between the medical specialists. Self-employed medical specialists need to deduct a lot of costs. After this deduction the income of self-employed medical specialists and salaried medical specialists is almost the same. According to an interviewee, the new financing system can be seen as a kind of salaried system, because the revenue ceiling determines the limit of earnings.

A responder believed that all medical specialists need to go into salaried service of a hospital, because this will make hospitals more steerable. However, not all other interviewees agreed with this. Some believed that a forced salaried service is disadvantageous for medical specialists.

"Self-employed medical specialists are the conductor of the orchestra."

A forced salaried service will have extensive financial consequences for the goodwill, pensions, and production of self-employed medical specialists. Salaried medical specialists do not have an incentive to deliver more health care. If all medical specialists will be in salaried service of a hospital, more medical specialists are needed than in the current situation. Self-employed medical specialists will continue treating patients. However, salaried medical specialists will at one point stop treating patients. According to a respondent, medical specialists need a monetary reward to stay motivated and to keep on performing the best they can.

"Money motivates people to do more."

Some interviewees stated that salaried medical specialists can also get extra earnings to motivate them. This extra salary could be linked to their performances. However, this monetary reward should not be the most important motivation. According to a responder the reward of patients and the quality of care are important for medical specialists too. A balance needs to be found between good quality of care and delivering enough treatments. The income management model is a good tool to control the monetary reward.

Some respondents believed, however, that more self-employed medical specialists will choose to go into salaried service of a hospital, because more medical specialists want to work part-time, and they want to avoid the uncertainty regarding the integral prices and the effects on the fiscal status of self-employed medical specialists. They expected that other types of partnerships will be created. For example a partnership in which self-employed medical specialists will hire medical specialists. These medical specialists will be in salaried service of the partnership. This will make the partnerships more flexible and can also be used to solve the goodwill problems within partnerships. Interviewees stated that other kinds of models can be developed where not all medical specialists need to pay goodwill immediately, but will grow into the partnership.

"Salaried service is not a good model but a money-driven system, thus commercialism, is not good either."

Several respondents believed that other types of partnerships will be developed to maintain the fiscal status when the performance-based financing system is introduced. They expected that self-employed medical specialists will create private clinics or ZBCs to practise their profession. But they

also expected that medical specialists will create a limited liability company (BV, Besloten Vennootschap) with which they will deliver treatments to hospitals. Medical specialists within the BV will have a fiscal status.

Self-employed medical specialists will also create regional partnerships. The regional partnership can be seen as an umbrella body in which medical specialists of different hospitals organise themselves. This means that self-employed medical specialists may work in all these different hospitals. Self-employed medical specialists within these regional partnerships will have fiscal status.

"A hospital might not know which medical specialist will deliver the treatments."

Regional partnerships could also be useful for the concentration and dispersion of health care (2011b:24). Respondents believed that hospital boards are reluctant to talk about collaboration with other hospitals, because they are afraid of an intervention by the Netherlands Competition Authority (NMa, Nederlandse Mededingingsautoriteit), because they exceeded the turnover threshold set by the NMa. By using regional partnerships they can tackle this. Medical specialists will talk much easier about collaboration for quality improvement and their revenues are probably much lower than the turnover threshold. In this way agreements could be made without an intervention by the NMa.

"You see that hospital boards give self-employed medical specialists the space to make regional agreements."

So, regional partnerships can cause concentration and dispersion of health care. But regional partnerships can also be the consequence of concentration and dispersion of health care. Respondents stated that if a hospital board decides to stop delivering certain treatments within their hospital or health insurers do not purchase these treatments, medical specialists within a regional partnership can still deliver these treatments in other hospitals.

"I think you will see much dynamic coming from the medical specialists."

Interviewees believed that regional partnerships could also be created with medical specialists outside the prime area of a hospital. However, this will have negative consequences for the competition between hospitals. The relationship with the hospital boards will also change if regional partnerships will be created, because self-employed medical specialists will work in different hospitals. For hospital boards it will become harder to steer these medical specialists. However, respondents expected that regional partnerships will be beneficial for both hospitals and medical specialists. If it is also beneficial for patients will depend, according to interviewees, on the role health insurers are going to play. They shall need to guarantee good quality of care for their enrolees.

3.7. Future developments

The respondents thought quite differently about the future developments regarding the performance-based financing system for hospitals and the income management model for self-employed medical specialists. The implementation of performance-based financing partly depends on the political developments in the Netherlands. One respondent believed that within the Dutch government there is no real support for performance-based financing. There will always be a kind of hybrid system in which costs are controlled by the government.

After the elections on September 12th it may be possible that a different government is formed, for example a left-wing government. The responders believed that if this is the case implementation of the performance-based financing system will be slowed down or stopped.

"September 12th is D-Day."

However, they do not think all measures will be reversed, because this is too costly and difficult. A left-wing government will try to create a situation of controlling the health care expenditures. This can be done by continuing the current situation and keeping the revenue ceiling for both hospitals and self-employed medical specialists. A left-wing government will maybe introduce integral prices but will never agree with full performance-based financing within a free market.

"(…) but a free market model with full performance-based financing and letting it go… no, that will never happen."

However, if the implementation of performance-based financing will continue some respondents were optimistic and believed that the system will be fully implemented in 2015. Other responders were more reserved and thought that the implementation will take more years. They had several reasons for this; for example the extraordinarily inconsistent behaviour of the Dutch government, the unpredictable growth of the health care costs, and the uncertainty about the fiscal status of the self-employed medical specialists. One interviewee believed that in 2015 only the first steps are taken towards performance-based financing with integral prices, because of the difficulties with the computation of the goodwill of self-employed medical specialists. This computation is needed to create integral prices. This respondent believed that performance-based financing may be implemented in 2017.

"Experience shows that it always takes a few years longer than people think."

The different respondents made a consideration if the performance-based financing system is suitable and appropriate for the Dutch health care system. According to an interviewee, the performance-based financing system is a good combination of public and private involvement, which exists in the Netherlands since 1943.

"If you suddenly introduce a NHS system in the Netherlands, this will be a revolution."

However, another responder believed that commercialism in health care is not useful or even dangerous and questioned the role of health insurers. A performance-based financing system will cause people to become money-driven. A system in which the government has steering power is more appropriate according to this respondent. Some interviewees, however, questioned the role the government needs to play within a financing system and believed that this role needs to be minimalized quickly, because regulation is obstructive.

"Let all the actors do their job and health care will be organized perfectly."

Some say, the Dutch government has an extraordinarily inconsistent behaviour. The performance-based financing system is full of government interventions and this causes the different actors to change their roles constantly.

"You will undermine the system (…)."

Several respondents believed that performance-based financing is suitable and appropriate but with certain preconditions for all actors. Patients need to become critical health consumers, should have the opportunity to choose between health insurers and health care providers, and should consider the costs of health care.

> *"The role of patients as critical health consumers is one I wonder if it will come to fruition if no new investments are made."*

Also the role of the health insurer and health care providers need to be further developed to make the financing system to work. The health insurers need to become prudent buyers of health care and health care organisations need to become more commercial.

Responders stated that another difficulty is the public acceptance of a performance-based financing system. On the one side patients do not like to be confronted with restrictions, which could occur if health insurers purchase selectively. On the other side, patients are more willing to go to another hospital if the quality of care is better. The transparency of care, the willingness to travel to another hospital, and patient empowerment is improved. However, it seems that patients are not open for advice of their health insurer, because they do not trust health insurers.

> *"You could say that the time-spirit is improved for performance-based financing."*

According to a respondent there is on the one side a tradition of organising health care collectively and having regulation by the government. But on the other side a legislative framework is created based on the principles of competition. These two sides are difficult to combine.

Some interviewees thought that a performance-based financing system with integral prices will not be suitable for the funding of health care by medical specialists. They expected that integral prices will never be fully implemented and that other financing systems will be developed.

> *"That model with integral prices is based on the Biesheuvel model; one hospital with one hospital board. Nowadays medical specialists work in different hospitals and deliver services to all these hospitals. Why then using integral prices?"*

It may, for example, be more suitable for medical specialists to make agreements about the prices with health insurers. In this way it is possible for medical specialists to work in different hospitals. Another respondent also thought that a system of integral prices is not appropriate to use, because no account is taken with the integration of primary health care and secondary health care.

> *"We pretend that these are two separate areas and markets, however, that is not the case."*

It may also be appropriate to develop a financing model in which the financing of primary health care and secondary health care are integrated. A lot of health care delivered by medical specialists in a hospital could also be delivered by general practitioners or by other health care providers within the primary care setting. An integration of the financing systems could make it easier for a general practitioner to quickly refer a patient to a medical specialist in a hospital and also for a medical specialist to refer patients back to a general practitioner. This could, according to the respondent,

save money, because no unnecessary treatments and tests are performed. With the current financing system the integration of health care is hampered.

The performance-based financing system does not take any differences between specialties into account. According to a responder a difference can be made between gate specialties and support specialties. Gate specialties are specialties to which patients are referred for medical care, for example surgery and neurology. Support specialties are specialties that support the gate specialties treating patients, for example radiology. The support medical specialists do not have any influence on their workload, because this is determined by requests of the gate medical specialists, but are financed in the same way as the gate specialists.

> *"Currently, these medical specialists can keep on requesting care activities and say 'this is not my problem'. This seems nice, but it makes them little responsible for their own behaviour."*

A respondent stated that this is a weakness of the financing system and the fee of support specialists should be a part of the fee of gate specialists. In this way the gate specialists will also be responsible for the activities of support specialists. Requesting support activities will negatively affect the revenue of gate specialties and therefore they will request less unnecessary activities.

Finally, some responders thought that besides integral prices, the financing system for hospitals and medical specialists shall be based on outcome. So, the financing will be based on outcome indicators, for example quality rather than on the amount of treatments performed. This can be implemented in different ways, for example at a regional level. The respondents believed that this shall lead to a more efficient use of resources.

> *"It is better to organise it good in the core, than to have a lot of control mechanisms to prevent undesirable effects."*

However, outcome based financing could also have negative effects, for example patient selection. In this case a medical specialist will only treat patients that will certainly have good outcomes.

> *"Does a medical specialist want to be responsible for a patient that smokes, is obese, eats unhealthy food, and does not exercise?"*

4. Conclusion & discussion

This research has two main research questions:

1. *What is an efficient way of financing hospitals and self-employed medical specialists under a performance-based financing system?*
2. *How to combine elements of regulated competition and cost containment in the financing of hospitals and self-employed medical specialists?*

To be able to answer these research questions several sub questions are formulated. Three descriptive sub questions are already answered within section two of this thesis and will not be further discussed. The remaining sub questions will be answered in this section. The first paragraph describes the answers on the sub questions about the performance-based financing system. The second paragraph goes into the sub question about the income management model. The third paragraph describes the answers related to the future developments. The fourth paragraph answers the two main research questions. Finally, the fifth paragraph discusses the results and describes recommendations for further research.

4.1. Performance-based financing system

This paragraph answers two sub questions regarding the performance-based financing system: *Will the quality, accessibility, and affordability of health care improve with the performance-based financing system?* and *What kind of incentives will medical specialists, hospitals, and health insurers have with performance-based financing? Are these incentives the same or will there be a conflict of interests?*

4.1.1. Effects on quality, accessibility, and affordability

This research showed that the performance-based financing system could have effects on the quality, accessibility, and affordability of health care. It is uncertain if the quality of care will be improved. Health insurers should play an important role within the financing system. They should become prudent buyers of health care for their enrolees. Health insurers could use the quality guidelines of the medical profession or set their own quality standards to purchase health care selectively. In this way they could purchase health care of good quality (Ministerie VWS 2011a:2; Ministerie VWS 2011d:5). Hospitals will be stimulated to improve their quality to make sure their care is purchased. This may cause the total quality of care to improve. The performance-based financing system may cause concentration and dispersion of health care services. Concentration of care could improve the quality of care, because only some medical specialists will deliver certain specialized treatments. These medical specialists will become experts in these treatments and this could improve quality (KPMG plexus 2011:5).

The accessibility of health care may, however, not be improved with performance-based financing. If health insurers purchase health care selectively, patients may be steered to preferred providers. If specialized treatments will be concentrated among hospitals, patients may not be able to go to all health care providers for these treatments. The accessibility may also be jeopardized if waiting lists occur due to budget limits by the MBI (Schut et al. 2011:295,296; Schut et al. 2010:375). The accessibility could be improved by an availability contribution for hospitals (NZa 2011c:18-19; Ministerie VWS 2011a:12; OMS 2011a:15). This will make sure that certain health care is available.

Health care costs in the Netherlands are rising excessively and measures need to be taken to keep health care affordable (CPB 2010:48-53; Ministerie VWS 2011d:1). The affordability of health care for patients may become less with a performance-based financing system, because patients will be faced with deductibles.

4.1.2. Incentives for medical specialists, hospitals, and health insurers

The research showed that the performance-based financing system will create different incentives for all actors. With the introduction of the DOT financing system, medical specialist will have the incentive to carefully register all health care activities. Otherwise they could miss a part of their income. The grouper validates the care products and therefore it is not possible anymore for medical specialists to change the registration after the validation process (NZa 2011a:41).

Within the performance-based financing system integral prices will be used. This means that within the prices the fees of salaried and self-employed medical specialists, and capital costs will be included (NZa 2011c:17). Self-employed medical specialists shall declare their care products to the hospital. Uncertainty exists if the fiscal status of self-employed medical specialists then is still guaranteed (Ministerie VWS 2010b:1; NZa 2011c:67). To avoid this uncertainty, self-employed medical specialists may have the incentive to go into salaried service of a hospital. They may also have the incentive to create other types of partnerships to make sure the fiscal status is maintained (OMS 2011a:20; OMS 2011b:24). Medical specialists could for example create a BV or a regional partnership. These developments will give medical specialists the incentive to make quality agreements with other hospitals and this may cause concentration and dispersion of health care services (OMS 2011b:24). Hospital boards will have the incentive to make a contract price that they are willing to pay for treatments or certain specialties.

If no other types of partnerships are created, medical specialists and hospital boards shall negotiate about the share of the fee for self-employed medical specialists within the integral prices (NZa 2011c:18). At the beginning of the year the fee of medical specialists will be determined. This will cause the fee of self-employed medical specialists to become a fixed income. Medical specialists may then not have an incentive to deliver more health care. However, both the performance-based financing system and the MBI will give hospital boards the incentive to deliver more health care. Hospitals will try to maximise their revenue given the demand for care, because this will cause the generic budget cut to have less effect on their financial resources. The MBI will also give hospitals the incentive to raise their prices and to try to increase the delivering of health care in the free segment (Schut et al. 2011:295,296; Schut et al. 2010:375). This could cause conflicts with medical specialists within a hospital. Hospitals may have the incentive to give medical specialists extra earnings, based on their performances, to motivate them to deliver more health care.

Medical specialists that are currently in salaried service of a hospital shall need to become more commercial within the final performance-based financing system. They will also be responsible for the performances of a hospital. Hospital boards may stimulate salaried medical specialists to perform. However, medical specialists may also have the incentive to threaten to leave the hospital if a hospital cannot set a decent integral price or if it gets into financial problems.

According to the Minister of Health the performance-based financing system shall motivate hospitals to improve their health care and hospitals will become more innovative (Ministerie VWS 2011a:2; Ministerie VWS 2011d:5). Hospitals will become more aware of their performances and may try to

distinguish themselves from others, by reducing their prices or by specializing. They need to become an interesting partner for health insurers. However, hospitals do not have the guarantee that health insurers will purchase their health care, and this may make it harder to be innovative. Also, the constant threat of a budget cut via the MBI will make it much harder for hospitals to invest and innovate (Schut et al. 2011:296; Schut et al. 2010:375).

To make health insurers more risk-bearing, the ex-post calculation of the risk equalization will be fully abolished in 2015 (Ministerie VWS 2011a:7-8; NZa 2011c:26). To have certainty about their expenditures, health insurers will have the incentive to create some control mechanisms for hospitals, to make overall production agreements with hospitals and medical specialists, and to monitor health care processes. However, hospitals may not be very interested in these agreements, because they will try to maximise their revenue by delivering as much care as possible, especially within the free segment due to the MBI (Schut et al. 2011:295,296; Schut et al. 2010:375). This will create a conflict of interests. Health insurers could also raise their premiums for patients with a risk factor to compensate possible losses (Baarsma et al. 2012:22).

Health insurers will have the incentive to selectively purchase health care. If they do not purchase selectively they will make less revenue. A health insurer that buys more expensive health care will probably not be able to compensate this with the standard amount received from the health insurance fund. Health insurers should try to steer their enrolees to preferred health care organisation for mandated care to control their expenditures.

4.2. Income management model

This paragraph answers two sub question regarding the income management model: *What kind of incentives will self-employed medical specialists have with the income management model?* and *Will the income management model for self-employed medical specialists be in conflict with the performance-based financing system for hospitals?*

4.2.1. Incentives for self-employed medical specialists

This research showed that the income management model contains several incentives for self-employed medical specialists. These are both positive and negative. The revenue ceiling within the model will cause self-employed medical specialists to determine how many treatments they can deliver to prevent the revenue ceiling to be exceeded (NZa 2011c:68). Self-employed medical specialists will try to deliver as much care as possible below the revenue ceiling. Medical specialists will probably not deliver more care because if the revenue ceiling is exceeded this income needs to be repaid (NZa 2011c:79). So, self-employed medical specialists may have the incentive to stop delivering health care before the end of the year if the revenue ceiling is reached, as occurred within the lump-sum financing system (Hasaart 2011:12,23). Self-employed medical specialists could also decide to change the need assessment of patients. They will closer look if a treatment is really necessary. Both incentives might cause waiting lists.

The revenue ceiling is based on historical revenues and this could make it harder for medical specialists to innovate. It could become more difficult for self-employed medical specialists to think about future developments.

This research also showed that the revenue needs to be divided among all self-employed medical specialists within a hospital. This will cause medical specialists to negotiate about their share (OMS

2011b:11), and to keep their partnerships small, because otherwise they have to divide their income with more colleagues (OMS 2011a:36).

The income management model makes it difficult for self-employed medical specialists to work in other hospitals and ZBCs at the same time. One should consider if a division of the revenue ceiling among these organisations is possible (OMS 2011a:35). However, self-employed medical specialists may have an incentive to organise themselves in other ways, because declaring using the TO method can have an influence on the fiscal status of self-employed medical specialists (Ministerie VWS 2011b:6; NZa 2011c:67).

4.2.2. Income management model vs. performance-based financing system

Within the performance-based financing model hospitals have the incentive to deliver as much care as possible. Hospital will try to maximise their revenue given the demand for care. Also, the MBI will cause hospitals to have this incentive. Hospitals do not have any influence on the generic budget cut (Schut et al. 2011:295). By producing as much care as possible the budget cut will have less effect on their financial resources. The income management model, however, will limit self-employed medical specialists at the beginning of the year. This will cause them to deliver not too much care, because otherwise they will need to repay their income (NZa 2011c:79). Self-employed medical specialists could also decide to stop delivering health care before the end of the year.

These different incentives for hospitals and self-employed medical specialists can be seen as a conflict between these models. This may be resolved if health insurers will make overall production agreements with both hospitals and self-employed medical specialists. With these agreements both health insurers and hospitals and self-employed medical specialists will have certainty about the amount of production a hospital and self-employed medical specialists could deliver. Health insurers may demand that no waiting lists may occur if the production limit is reached.

However, the income management model is only a transition model for self-employed medical specialists. This model should be abolished in 2014. So, problems could occur when the transition model for hospitals is ending in 2013 and the income management model for self-employed medical specialists still continues in 2014 (NZa 2011c:65). Hospital will have full performance-based financing while self-employed medical specialists are still under the income management model.

From 2015 onwards the income of self-employed medical specialists will be part of the integral prices within the performance-based financing system (NZa 2011c:17). Negotiations about this fee will take place between the hospital board and medical specialists (NZa 2011c:18). Hospital boards may make a contract price that they are willing to pay for treatments or certain partnerships. Then, the income of self-employed medical specialists is controlled in this way.

4.3. Future developments

This paragraph answers the sub questions two sub questions about the future developments: *Is performance-based financing suitable and appropriate for hospital care in the Netherlands? Is the Dutch health care system ready to fully implement this system in 2015?* and *Could the medical specialists' funding be organised differently?*

The research showed that a system of performance-based financing is hard to implement in the Netherlands. A transition period is needed because of the system risks which could occur due to

technical changes in the financing system (Ministerie VWS 2011a:3-4). This transition period may make the system appropriate and suitable for the Dutch setting. The performance-based financing system may also be appropriate, because since the 1940s the Dutch health care consists of public and private involvement.

The system may only be suitable and appropriate if all actors pick up their intended roles. Health insurers should become prudent buyers of health care for their enrolees. Health care providers need to become more commercial and an interesting partner for health insurers (Ministerie VWS 2011a:2). Patients should become critical consumers. If the system becomes more transparent for patients, it may become easier to choose between health insurers and care providers (Ministerie VWS 2011a:2).

If the performance-based financing system will be implemented in 2015 depends on the political developments in the Netherlands. If a left-wing government is formed after the elections, the implementation will be slowed down or stopped. There will be a kind of a hybrid system in which costs are controlled by the government. This can be done by continuing the current situation and keeping the revenue ceiling for both hospitals and self-employed medical specialists. However, if a right-wing government is formed, the implementation of the system will continue and it may be fully implemented in 2015. Only the uncertainty about the fiscal status of the self-employed medical specialists could make the implementation difficult, because of the computation of the goodwill, which is needed to create integral prices (Ministerie VWS 2010b:1).

This research also showed that the performance-based financing system could be adjusted or replaced by other models. For example, instead of integral prices, direct agreements about the prices could be made between health insurers and medical specialists, without an intervention of the hospital board. In this way it is possible for medical specialists to work in different hospitals. It could also be appropriate to extend the financing system and base it on outcome indicators, for example quality rather than on the amount of treatments performed.

The performance-based financing system could be adjusted by taking differences between medical specialties into account. The support medical specialists are financed in the same way as the gate specialists. However, support medical specialists do not have any influence on their workload, because this is determined by requests of the gate medical specialists. The fee of support specialists should become a part of the fee of gate specialists. In this way the gate specialists will be responsible for the activities of support specialists. Requesting support activities will negatively affect the revenue of gate specialties and therefore they will request less unnecessary activities.

If a whole other type of financing system is developed, a financing system that integrates the financing of the primary health care and secondary health care could be appropriate. This could make it easier for both general practitioners and medical specialists to quickly refer patients.

4.4. Cost containment vs. performance-based financing

Based on the answers of the sub questions, this paragraph answers the two main research questions: *What is an efficient way of financing hospitals and self-employed medical specialists under a performance-based financing system?* and *How to combine elements of regulated competition and cost containment in the financing of hospitals and self-employed medical specialists?*

The performance-based system may not be an efficient way to finance hospitals and self-employed medical specialists. An efficient financing system should reduce the unrest within hospitals, which was caused by the proposed policies of former Minister of Health, Dr. Klink (Ministerie VWS 2010c:3-8). He tried to oblige self-employed medical specialists to go into salaried service of hospitals and he wanted to regulate their income. Uncertainty still exists concerning the fiscal status of self-employed medical specialists, because it is unclear if this status is still guaranteed within the performance-based financing system (Ministerie VWS 2010b:1; NZa 2011c:67).

However, an efficient financing system should maintain the fiscal status of self-employed medical specialists, because this may have positive effects on the delivery of health care by self-employed medical specialists. Within the performance-based financing system integral prices will be used. Medical specialists will negotiate at the beginning of the year with hospital boards about the share of their fee within the integral prices (NZa 2011c:18). This will cause the fee of self-employed medical specialists to become a fixed income. Medical specialists may then not have a financial incentive to deliver more health care. So, maintaining the fiscal status of self-employed medical specialists may affect the delivering of health care.

Within an efficient financing system hospitals need to be financially limited in the same way as self-employed medical specialists, because this will create the same incentives for hospitals and self-employed medical specialists concerning the delivering of health care. Within the performance-based financing system this is not the case. Hospitals are possibly limited at the end of the year by the MBI. Both the performance-based financing system and the MBI will give hospital boards the incentive to deliver more health care, because this will cause the generic budget cut to have less effect on their financial resources. However, if no other partnerships are created medical specialists will have a fixed income due to the integral prices. Medical specialists may then not have an incentive to deliver more health care. This could cause conflicts with medical specialists within a hospital. If both hospitals and self-employed medical specialists are financially limited at the beginning or at the end of the year their incentives could be identical.

An efficient financing system should also guarantee health care of good quality. This can be achieved in different ways. First, medical specialists could get an extra monetary reward based on their performances. Second, health insurers could use performance indicators to purchase health care selectively (Ministerie VWS 2011a:2; Ministerie VWS 2011d:5). In this way, only health care of high quality will be purchased. This will motivate hospitals to continuously improve their health care (Ministerie VWS 2011a:2). However, the financing system will need to guarantee the accessibility of basic health care. This can be guaranteed by an availability contribution for hospitals (NZa 2011c:18-19; Ministerie VWS 2011a:12; OMS 2011a:15).

An efficient financing system for hospitals and self-employed medical specialists should also prevent the possibility to manipulate the validation process of care products. Manipulation of the validation process could lead to unnecessary expenditure growth (Hasaart 2011:31).

Cost containment is necessary within the health care setting, because of the expenditures' growth. This cost containment needs to be combined with the performance-based financing system for hospitals and self-employed medical specialists. To make the performance-based financing system in the Netherlands successful, the MBI needs to become an ultimate remedy, because it causes disturbances within the market. Cost containment should be arranged by the actors within the

market. Self-employed medical specialists and hospitals should deliver efficient and appropriate health care (Baarsma et al. 2012:6). Health insurers should play an important role within the performance-based financing system and therefore they also need to play an important role within the cost containment. The BKZ should be divided among health insurers, based on the characteristics of their enrolees. By purchasing health care selectively health insurers should be responsible for monitoring and controlling the costs. Health insurers need to make agreements with hospitals for health care that is included in the basic benefit package. By making these production agreements health insurers may rule out exceedances of the BKZ and at the same time fulfil their duty of mandated care (Baarsma et al. 2012:7,8). If the BKZ is still exceeded health insurers will be responsible and need to take measures, for example by compensating the exceedances by their own resources or by raising their premiums. However, this has a great influence on the affordability of health care (Baarsma et al. 2012:22). The MBI can still be used to compensate the exceedances, however, only hospitals that caused the exceedances need to repay it (Baarsma et al. 2012:22). This should give hospitals a positive incentive to manage their health care production. This should lead to cost containment within the health care setting.

4.5. Discussion & recommendations

This research contributes to the understanding of the development of health care financing. It is innovative, because not much research has been done concerning the effects of the performance-based financing system and the income management model. By doing a literature study and by conducting interviews, the data used within this research is collected in two ways. Within the research also different important stakeholders within the financing system are interviewed. This makes it possible to analyse the different perspectives within the financing system.

However, within the research only a few aspects of the whole financing system are studied. The results are based on this selection and are therefore limited. In addition, only a few interviews with several stakeholders are held, this could affect the reliability and validity of the results. The results of this research are not applicable to medical specialists working in other health care settings, for example nursing home physicians or general practitioners, because they are financed in a different way. Other research should be conducted to conclude how these medical specialists are financed efficiently, because this research is only focused on hospital financing system. Little literature about the effects of the performance-based financing and the income management model was studied. Literature of Schut et al. (2010, 2011) and the Baarsma Committee about the effects of the MBI is analysed, however, other effects were found based on the interviews.

Based on this study, several recommendations can be made. First, further research could be done on the effects of the performance-based financing system for hospitals and self-employed medical specialists. These possible effects are still underexposed. A study could also be done on alternative ways of financing hospitals and self-employed. Within this research several other financing models are discussed, however, the effects, appropriateness, and suitableness of these models will need to be further explored. It is also recommended to do a research on cost containment within the health care sector. The use of the MBI should become an ultimate remedy. Therefore, research should be done on how to control costs in other ways and how to use the MBI in a differentiated way. The advice of the Baarsma Committee could be taken as a starting point. Also, study should be done on the effects the performance-based financing model will have on the fiscal status of self-employed medical specialists. This research could look into the possibilities to maintain the fiscal status of self-

employed medical specialists. The effects of other partnership models for self-employed need to be studied. Also, a research on international differences in financing hospitals and self-employed medical specialists should be done. Finally, we recommend to interview more stakeholders within further research. The use of quantitative data could be a significant contribution to this topic.

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Appendix

Appendix 1. Interview questions

Interview with an expert on health care funding at the NZa

Design new financing system:

1. How was the funding of medical specialists organized in the past?
2. Do you think that the proposed performance-based financing system is innovative?
3. Was the introduction of the DOT financing system necessary?
4. Do you think that it is ambitious to have a max 2,5% growth of the health care expenditures?
5. Will the MBI be the right tool to control these expenditures?
6. The transition towards a performance-based financing system will be done step by step using transition model. Do think these models are necessary?
7. Will the concentration and dispersion of health care affect the quality, accessibility, and affordability of health care?
8. Within the new financing system health insurers will get an important role. Do you think the health insurers can pick this new role?

Effects of the new financing system

9. Does the introduction of a performance-based financing system have any effects on the quality, accessibility, and affordability of health care?
10. Which incentives will the performance-based financing system have for the different actors (health insurers, hospital boards, and medical specialists)?
11. Do you expect problems within hospitals due to the fact that self-employed medical specialists will have another financing system than salaried medical specialists?
12. Do you expect that regional partnerships will be created?
13. Do you expect that the revenue ceiling of self-employed medical specialists will be reached at the same time as the revenue ceiling of hospitals?

Practicability of the new financing system

14. The different transition models have different time tracks. Do you expect problems due to these different time tracks?
15. Will the performance-based financing system be implemented in 2015?
16. Do you expect that this performance-based financing system to be appropriate and suitable for the Dutch health care setting?

Interview with an expert on performance-based financing at the Dutch Ministry of Health

DOTs

1. Do you think the introduction of the DOT financing system was necessary?
2. Were all hospitals ready to implement this new system?

Design new financing system:

3. Do you think that the proposed performance-based financing system is innovative?
4. Do you think that it is ambitious to have a max 2,5% growth of the health care expenditures?
5. Will the MBI be the right tool to control these expenditures?
6. Do you think the income of self-employed medical specialists need to be controlled?
7. The transition towards a performance-based financing system will be done step by step using transition model. Do think these models are necessary?
8. Within the new financing system health insurers will get an important role. Do you think the health insurers can pick this new role?

Effects of the new financing system

9. Does the introduction of a performance-based financing system have any effects on the quality, accessibility, and affordability of health care?
10. Which incentives will the performance-based financing system have for the different actors (health insurers, hospital boards, and medical specialists)?
11. Do you expect problems within hospitals due to the fact that self-employed medical specialists will have another financing system than salaried medical specialists?
12. Do you expect that regional partnerships will be created?
13. Do you expect that the revenue ceiling of self-employed medical specialists will be reached at the same time as the revenue ceiling of hospitals?

Practicability of the new financing system

14. The different transition models have different time tracks. Do you expect problems due to these different time tracks?
15. Will the performance-based financing system be implemented in 2015?
16. Do you expect that this performance-based financing system to be appropriate and suitable for the Dutch health care setting?

Interview with a senior purchaser of hospital care at a health insurance

Design new financing system:

1. Within the new financing system health insurers will get an important role. In what way do health insurers need to change their work?
2. Do health insurers have the means and resources to pick up this new role?
3. Will the concentration and dispersion of health care affect the quality, accessibility, and affordability of health care?
4. Were health insurers prepared for the introduction of performance-based financing system?

Effects of the new financing system

5. Which effects will the performance-based financing system have on the purchasing of health care?
6. Which incentives will the performance-based financing system have for the different actors (health insurers, hospital boards, and medical specialists)?
7. Do you expect the negotiations with hospitals to become more difficult?
8. Do you expect that the revenue ceiling of self-employed medical specialists will be reached at the same time as the revenue ceiling of hospitals?
9. Do the changes have any influence on the financial situation of health insurers?

Practicability of the new financing system

10. Will the performance-based financing system be implemented in 2015?
11. Do you expect that this performance-based financing system to be appropriate and suitable for the Dutch health care setting?

Interview with a member of the hospital board at a general hospital

DOTs

1. Was your hospital for all the changes regarding the financing system?
2. Do you think the introduction of the DOT financing system was necessary?
3. Do you think more time was necessary to implement the DOTs?

Design new financing system:

4. Do you think the new financing system is clear for all actors?
5. Are the transition models clear for all actors?
6. Is the income management model clear for self-employed medical specialists?
7. Do you think the income of self-employed medical specialists need to be controlled?
8. Do you think that it is ambitious to have a max 2,5% growth of the health care expenditures?
9.

Effects of the new financing system

10. Does the expansion of segment B have any effects on your hospital?
11. Which incentives will the performance-based financing system have for the different actors (health insurers, hospital boards, and medical specialists)?
12. Do you expect problems within hospitals due to the fact that self-employed medical specialists will have another financing system than salaried medical specialists?
13. Do you expect self-employed medical specialists to create other kinds of partnerships?
14. Do you expect the relationship between the hospital board and self-employed medical specialists to change?
15. Do you expect all self-employed medical specialists to form a group?
16. Do you expect that regional partnerships will be created?
17. Do you expect that the revenue ceiling of self-employed medical specialists will be reached at the same time as the revenue ceiling of hospitals?
18. Will the negotiations with health insurers become more difficult?
19. Do you expect that the changes within the financing system will have any influence on patients?

Practicability of the new financing system

20. Will the performance-based financing system be implemented in 2015?
21. Do you expect that this performance-based financing system to be appropriate and suitable for the Dutch health care setting?

Interview with a medical specialist at a general hospital

Implementation new financing system

1. Have the changes within the financing system any influence on medical specialists?
2. Do you think the new financing system is clear for all actors?
3. Do you think the income of self-employed medical specialists need to be controlled?
4. Do you think that it is ambitious to have a max 2,5% growth of the health care expenditures?
5. Was your hospital for all the changes regarding the financing system?
6. Do you think the introduction of the DOT financing system was necessary?
7. Do you think more time was necessary to implement the DOTs?

Effects of the new financing system

8. Does the introduction of a performance-based financing system have any effects on the quality, accessibility, and affordability of health care?
9. Will the concentration and dispersion of health care affect the quality, accessibility, and affordability of health care?
10. Do you expect all self-employed medical specialists to form a group?
11. Do you expect that a difference will occur between salaried medical specialists and self-employed medical specialists?
12. Do you expect that self-employed medical specialists will have specific incentives, for example patient selection?
13. Do you expect that the changes within the financing system will have any influence on patients?
14. Will the negotiations with health insurers become more difficult?

Practicability of the new financing system

15. Will the performance-based financing system be implemented in 2015?
16. Do you expect that this performance-based financing system to be appropriate and suitable for the Dutch health care setting?

Interview with two senior advisors at the OMS

DOTs

1. Do you think the introduction of the DOT financing system was necessary?
2. Were all hospitals ready to implement this new system?

Design new financing system:

3. Do you think that the proposed performance-based financing system is innovative?
4. Do you think that it is ambitious to have a max 2,5% growth of the health care expenditures?
5. Will the MBI be the right tool to control these expenditures?
6. Do you think the income of self-employed medical specialists need to be controlled?
7. Is the income management model necessary to implement the performance-based financing system?
8. Will the concentration and dispersion of health care affect the quality, accessibility, and affordability of health care?

Effects of the new financing system

9. Does the introduction of a performance-based financing system have any effects on the quality, accessibility, and affordability of health care?
10. Which incentives will the performance-based financing system have for the different actors (health insurers, hospital boards, and medical specialists)?
11. Do you expect that the revenue ceiling of self-employed medical specialists will be reached at the same time as the revenue ceiling of hospitals?
12. Will the relationship between medical specialists and the hospital board change?
13. Do you expect all self-employed medical specialists to form a group?
14. Do you expect that regional partnerships will be created?
15. Do you expect that self-employed medical specialists will have specific incentives, for example patient selection?
16. Do you expect problems within hospitals due to the fact that self-employed medical specialists will have another financing system than salaried medical specialists?
17. Do you expect that the changes within the financing system will have any influence on patients?
18. Do you expect the negotiations with hospitals to become more difficult?

Practicability of the new financing system

19. The different transition models have different time tracks. Do you expect problems due to these different time tracks?
20. Will the performance-based financing system be implemented in 2015?
21. Do you expect that this performance-based financing system to be appropriate and suitable for the Dutch health care setting?