

File ID 123200
Filename Chapter 11: The performance indicator framework of the Dutch health system : a progress report
Version Final published version (publisher's pdf)

SOURCE (OR PART OF THE FOLLOWING SOURCE):

Type Dissertation
Title Health services research at work for national health policy
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Faculty Faculty of Medicine
Year 2006
Pages 225
ISBN 9789071433757

FULL BIBLIOGRAPHIC DETAILS:

<http://dare.uva.nl/record/199437>

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C h a p t e r

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The performance indicator framework of the Dutch health system: a progress report

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Accepted for publication

Abstract

This chapter discusses the development, implementation, and findings of a health system performance indicator framework in the Netherlands. This framework was principally designed to satisfy the Ministry of Health's information needs in its far-reaching reform of the governance of the country's health system. A ministerial advisory task force, line managers, a multi-disciplinary academic public health research group, and population health information institutes comprise the main actors in this ongoing process.

The Dutch framework consists of a balanced scorecard approach (for health care performance information) linked with the Lalonde model (for population health information). Twenty-six indicator areas exist for each of the balanced scorecard's four perspectives (i.e., the system's consumer orientation, financial outlook, care delivery quality, and ability to learn and grow). These indicator areas reflect the government's monitoring and steering functions as well as the health system's stated public goals.

Making these indicators operational entails applying the following measurement principles:

- indicator areas must be relevant for policy and management decisions,
- the complete set must be applicable to the entire Dutch health system, and
- data used in the indicators must be available, actionable, reliable, and valid.

These indicators are primarily based on existing data collection systems and the National Institute for Public Health and the Environment supervises their implementation and coordinates data collection and evaluation.

Throughout the framework's development process an integrated communication strategy has informed policy makers representing insurers, providers, and consumers. When the framework is ready to be fully implemented, the results will be presented annually to the government and parliament.

To date, the combination of interactive indicator development and a tailored communications strategy has proven successful and has strengthened ownership among all stakeholders.

Introduction

The growing international interest in measuring the performance of health systems has also been felt in the Netherlands. As a member of the European Union (EU) and the Organisation for Economic Co-operation and Development (OECD), the Netherlands has participated in several collective initiatives that address health system performance measurement [1-3]. At the end of 2001, the Dutch Ministry of Health, Welfare, and Sports (hereafter known as “the Ministry”) initiated the development of a national health system performance indicator framework. The framework aims to satisfy the Ministry’s information needs and support its redefined governance role. Unlike countries with a national health system, the Dutch government is limited in its ability to monitor and steer the system. In view of the recent redesign of the health system, the Ministry needed a new model for its information infrastructure (i.e., the health system performance indicator framework). The development and implementation of the framework challenges the stakeholders’ policy development skills in the complex managerial and organizational context of the Dutch health care system. This chapter describes the specific Dutch context, the chosen framework development strategy, the conceptual model of the framework and its content, the policy processes that influenced its development, and the planned dissemination strategy. We then evaluate the impact of its development and implementation and present the lessons learned thus far by the different stakeholders.

History and Context

Like many other Western health care systems, the Dutch system originated in the second half of the nineteenth century. Industrialization and the emergence of nation states created the conditions in which public health issues could be addressed collectively. Although the first regulations for trained medical professionals and hospitals date back to this period, the role of the national government with respect to health care was limited until the 1970s of the twentieth century when a growing tension was perceived between economic development and the rising costs of health care.

In the Netherlands, health care provision is organized mainly on a private, not-for-profit basis. The organization and management of the health care system is divided into four sectors: prevention, curative care, chronic care, and social services. Private enterprise is highly valued in Dutch society and “self-regulation” has always been a dominant management philosophy, used by the government and providers alike. Since 1865, a number of laws and the Health Care Inspectorate have been the tools used by the Dutch government to monitor and assess the performance of the health sector. Accountability has not been a standard entry in the providers’ vocabulary.

A common national insurance scheme for health care costs did not exist until 1941, when the Sickness Fund Act (in Dutch: "Ziekenfondswet") was introduced during the German occupation. This law still forms the basis for the present social health insurance, in which everyone with an income below a certain threshold (including dependants) has compulsory insurance; the premium for this is fixed and collected through an income deduction. Those with incomes above the threshold can apply for private health insurance.

In 1968, social health insurance was expanded with the introduction of the Exceptional Medical Expenses Act (AWBZ). The AWBZ covers the cost of chronic care and nursing homes. Payment of AWBZ premiums are compulsory for everyone with an income and are fixed. Although the AWBZ was based on the changing care needs of an aging population, the economic recession in the 1970s and the need for cost containment were the main reasons the government became more involved in health care policy making. After a series of planning regulations that included health care manpower planning, reduction of bed capacity, and a budgetary regime, it was concluded that these policies were stifling the health care system. These regulations certainly did conflict with the philosophy of self-regulation.

Over the past 20 years, the government – led by a number of different political coalitions – has made efforts to redesign the health care system. The increase in health care costs and the limited effect of previous planning-based approaches has led to the idea that the health care system is best served by introducing a self-regulated market as the guiding principle for the interaction between all actors in health care. Several measures were taken to support this change. The non-profit sickness funds were privatized and for-profit health insurers were also allowed to execute the Sickness Fund Act. A reimbursement system for providers based on Diagnosis and Treatment Combinations (DTCs) was introduced to make competition between providers and insurers more transparent. Also, a new Health Insurance Act (in Dutch: Zorgverzekeringswet) will be introduced in 2006. Participation will be compulsory for all citizens, regardless of income. This Act will cover a basic package of acute and curative care. The contribution to be paid by the insured person will be partly nominal and partly income-related. Employers will contribute by making compulsory payments towards the income-related insurance contributions of their employees [4].

These measures show that although government rhetoric is that of being less directly involved in the health care market, it does want to set out the playing field boundaries for providers, insurers, and patients/consumers. "Steering from a distance" is the phrase used to indicate that although the government is taking on responsibilities for the health system, individual actors have their own roles to play as well. Furthermore, the provision-driven system has been reformed into a demand-driven system in which the government wants the health care policy to be guided by consumer preferences and care outcomes [5]. These changes in health system governance call for an information tool that supports the Ministry in its new governance role [6] (see for a detailed description of the Dutch health care system Exter et al. [7] and Van Ewijk et al. [8]). Characteristics of the Dutch population and some of the health system indicators in 2002 are presented in the table below along with data from Canada, New Zealand, United Kingdom and United States.

Table 1 Characteristics 2002

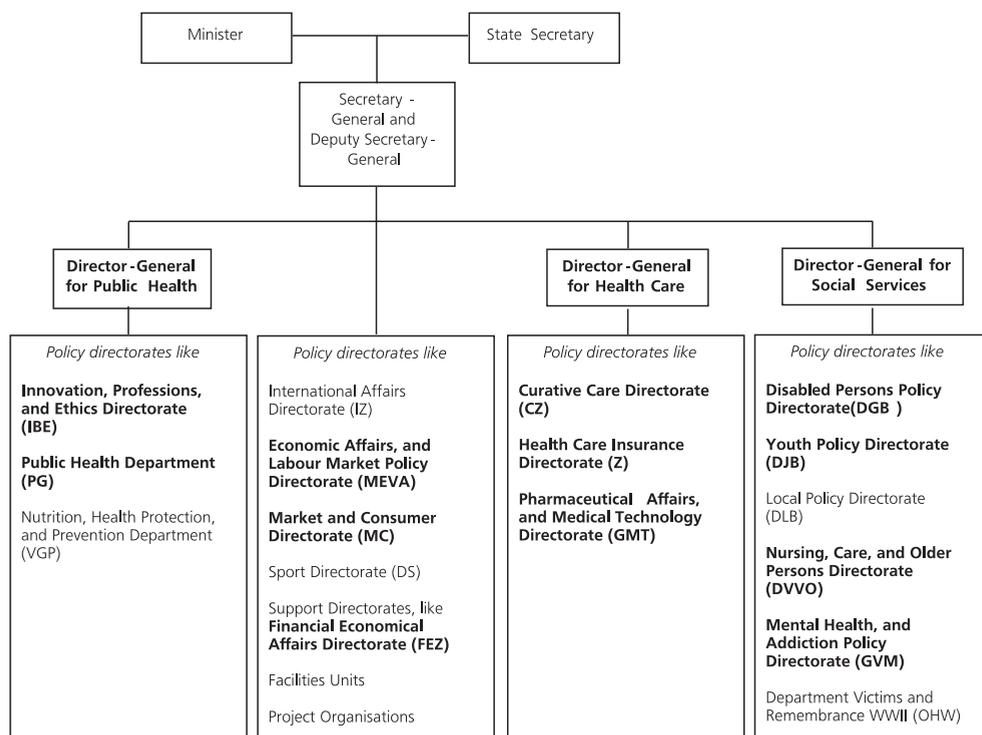
	Nether-lands	Canada	New Zealand	United Kingdom	United States
Total population - Thousands of persons	16,046 ^{'1}	31,414	3,939	58,837 ^{'1}	284,797 ^{'1}
Infant mortality - Deaths /1 000 live births	5.3 ^{'1}	5.3 ^{'2}	5.8 ^{'3}	5.5 ^{'1}	6.9 ^{'2}
Life expectancy: Females at birth - Years	80.6 ^{'1}	82.0 ^{'2}	80.8 ^{'2}	80.4 ^{'1}	79.5 ^{'2}
Life expectancy : Males at birth - Years	75.7 ^{'1}	76.7 ^{'2}	75.7 ^{'2}	75.7 ^{'1}	74.1 ^{'2}
Total expendit. on health - /capita, US\$ x-rate	2134 ^{'1}	2245	1070 ^{'1}	1848 ^{'1}	4887 ^{'1}
Private expend. on health - /capita, US\$ x-rate	782 ^{'1}	656	249 ^{'1}	329 ^{'1}	2719 ^{'1}
Public expend. on health - % gross domestic product	5.7 ^{'1}	6.9 ^{'1}	6.3 ^{'1}	6.2 ^{'1}	6.2 ^{'1}
Total expendit. on health - % gross domestic product	8.9 ^{'1}	9.7 ^{'1}	8.2 ^{'1}	7.6 ^{'1}	13.9 ^{'1}
General practitioners - Density /1000 pop. (HC)	0.5 ^{'1}	1.0 ^{'1}	0.8 ^{'2}	0.6 ^{'1}	0.8 ^{'3}
Practising nurses - Density /1000 pop. (HC)	12.8 ^{'1}	9.9 ^{'2}	9.6 ^{'2}	9.0 ^{'1}	8.1 ^{'3}
Total employment - % total population	49.4 ^{'1}	48.6 ^{'1}	47.2 ^{'1}	47.7 ^{'1}	48.4 ^{'2}
Total unemployment - % total population	1.4 ^{'1}	3.8 ^{'1}	2.6 ^{'1}	2.4 ^{'1}	2.4 ^{'1}
Coverage: Total health care - % of total population	75.7 ^{'1}	100.0	100.0	100.0 ^{'1}	25.3 ^{'1}
Legend:					
'1= data from 2001					
'2= data from 2000					
'3= data from 1999					
© Copyright OECD HEALTH DATA 2003					

Stakeholders

The health care system is complex, with multiple actors who have different goals and perspectives. These actors are often the main stakeholders involved in health care reforms such as designing, developing, and implementing a performance indicator framework. In the development process described here, the primary stakeholders were the Ministry, an academic research group, health care insurers, health care providers, and patients and consumers of health care.

The Ministry can be regarded as the principal stakeholder in the development process. Inspired by the aforementioned national developments as well as by international initiatives, the Ministry defined the need for a framework for health system performance indicators at national level. The Ministry sought research support from an academic research group for the development of such a framework. It initiated and funded the development of the performance indicator framework of which the Ministry will also be the primary user. As mentioned previously, the organization of Dutch health care is divided into care sectors. Both the financing and monitoring structure and the policy development structures are defined along the lines of the following care sectors: prevention, curative care, chronic care, and

Figure 1. The organizational chart of the Dutch Ministry of Health, Welfare, and Sports, (in December 2004).



The directors-general for the Public Health and Health Care subdivisions as well as representatives of the policy directorates printed in bold participated in the “Knowing Better” working group. See Dissemination Strategies for further explanation.

social services¹. The level of involvement by government varies per sector. The division of the health care system into sectors is in part reflected in the organizational structure of the Ministry. Since this has an impact on whether interventions that address the system at large are incorporated, the subdivisions at the Ministry will be introduced briefly.

There are three subdivisions in the Ministry’s organizational chart: public health, health care, and social services. Public health is concerned with improving the population’s overall state of health, preventing diseases, and supporting the public health policies of municipalities and other tiers of government. Health care deals with institutional and extramural care, the health care insurance system, and pharmacy and medical technology. The social services subdivision handles care for the disabled and older persons as well as youth policy, nursing, and mental health care. These subdivisions are set out in the organizational chart (Figure 1.).

In addition to these subdivisions, a new “Strategic Unit for Information Policy in Health Care” (In Dutch: Strategische Eenheid Informatiebeleid Zorg, SEIZ) was formed to facilitate the

1 The subdivision for social services is called “Maatschappelijke Zorg” in Dutch. In the Ministry’s English-language documents, the name of this subdivision is translated as “Social Support”. However, since “social services” is most commonly used in international literature, we will use social services throughout this chapter to indicate the “Maatschappelijke Zorg” subdivision.

development of information policy within the Ministry. This unit had the position of an executive office with advisory and coordinating tasks and responsibilities, and is not presented in the organizational chart. In November 2004, the SEIZ was integrated into a new policy directorate called the Market and Consumer Directorate (MC).

An academic research group was invited to support the Ministry in developing the framework. This group had published on performance indicators and the need to integrate public health thinking into health care policy making. They envisioned a system-wide approach to the framework, and realized this was a change from the sectoral approach currently dominant in Dutch health care policy making. The role chosen by the researchers was one of an advisory group, crafting the rough outline of the framework and suggesting the mechanism by which it would operate. As a result, the input from this group was significant at the start of the development and less apparent towards the end, when the blueprint was accepted and chosen as the basic structure for monitoring the performance of the Dutch health system. The group liaised with knowledge institutes to create an academic basis and sounding board for the conceptual framework. The National Institute for Public Health and the Environment (RIVM) and the Netherlands Institute for Health Services Research (NIVEL) were their main collaborative partners. During the development process, though, contacts were also established with all other Dutch national knowledge institutes such as the Netherlands Institute for Health Promotion and Disease Prevention (NIGZ), Prismant, Statistics Netherlands CBS, and the Dutch Institute for Healthcare Improvement (CBO).

The RIVM is a government organization that collects, analyses, and publishes reports on population health information about the Netherlands. It is also the secretariat for the European Community Health Indicators project, ECHI, [9] and coordinated the first pilot data collection for the Netherlands in the OECD health care quality indicators project. At the end of 2004, the RIVM was asked by the Ministry to take the lead in implementing the indicators of the performance framework.

The government has increasingly promoted the insurers' coordinating role in health care. Just as in other European social health insurance systems (like those in Germany and Switzerland), managed competition has been introduced in the Netherlands [10]. For the Dutch social insurance system this implies that sickness funds (insurers) should attract clients by contracting efficient and good-quality health care services. From the government's point of view, the insurers need to be transparent about their performance so consumers can choose between insurers and so the government can hold them accountable for that performance. Because of this, insurers have a keen interest in the development of the framework so they know which indicators will be used to measure their performance.

Care providers face yet another change in government influence in their primarily private, not-for-profit organizations. The current budget-based involvement will be complemented with indirect involvement by measuring performance using indicators that have yet to be defined. Their position as stakeholder can be defined as "reluctantly interested". On the one hand, this is based on their compulsory participation, and on the other on the uncertainty of the subsequent increase in workload and the consequences of a potential average or poor

performance. Also, hospitals, ambulant care, and home care organizations as well as mental health care providers are all involved in their individual care sector's own quality performance improvement initiatives. The development of the Ministry's performance indicator framework is regarded by some providers as potentially distracting from and competitive with their own initiatives. Others see opportunities for strengthening the case for their own initiatives by aligning these with the ministerial framework development.

The development of the regulated market for health care has also put performance measurement on the public agenda. Patients/consumers have important roles to play in the redesigned health system. Once the regulated market has come into effect, patients/consumers have to be able to choose between different services and products, including insurance. Also, insurers need to be able to purchase care and choose between providers. Transparency regarding products and performance is a prerequisite. Information to guide the choices of both patients/consumers and insurers is essential if the regulated market is to work. Recent initiatives undertaken jointly by health care insurers, researchers, and patient/consumer organizations such as the Dutch Consumer Association (Consumentenbond) and the Federation of Patients and Consumer Organizations in the Netherlands (NPCF) — and observed with keen interest by the government — have started to develop consumer assessment surveys for the Dutch population. These surveys are based on CAHPS® [11], developed in the United States, and the Quote questionnaires [12], developed in the Netherlands. Results from these newly developed questionnaires are based on patients' experiences with health care, and can inform both consumers and insurers [13;14]. This initiative is of great relevance for the Ministry of Health, because this information can potentially be aggregated to the macro-level where it will provide the Ministry with information about patients'/consumers' experiences with health care [15].

Conceptual Model

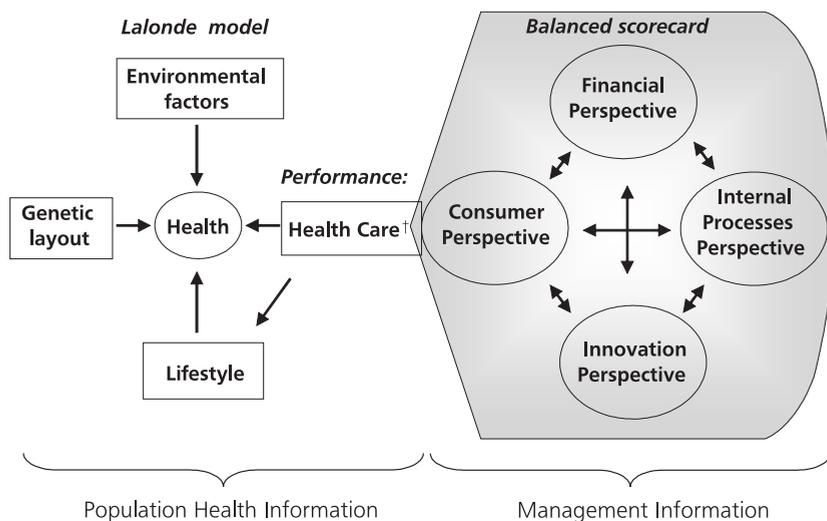
In 2002, the research group was invited to head up the development of the framework. As a starting point, the concepts of other national and international frameworks for health system performance were studied [16]. The Dutch government finds itself in a complicated position: the mix of public and private partners, non-profit, not-for-profit and for-profit organizations, and the limited legislative tools for managing the health care system are all components of the complex environment in which the Ministry needs to gather comprehensive performance information that fits its new governance role of steering from a distance. In addition, the Dutch health system is struggling to merge market mechanisms with solidarity principles. We identified the health of the Dutch population and the health care available to them as two major components of the health system. Based on the health care system's goal of helping people attain the best level of health, we concluded that both population health and health care were the two perspectives that had to be part of monitoring the performance of

the entire health system. Also, we realized that if we wanted to monitor health and health care within one framework, the sector-based approach to data collection and reporting would be inappropriate. However, since the division into sectors in health care management and governance is deeply rooted in all levels of policy making, we realized that any attempt to monitor the system as an integrated whole (and not based on its separate sectors) would mean a significant change in the thinking of policy makers and other stakeholders. Our interactive approach was a direct result of our awareness that we were part of a major change process.

We first conceptualized the performance of the components of the health system, population health, and health care. The performance in terms of population health can be described by Lalonde's model for determinants of health [17]. Lalonde described health as being determined by four types of factors: the environment, genetic constellation, life-style, and health care. An extended version of this model has for many years been the model on which the Dutch national Public Health Status and Forecasts reports have been based [18], thereby providing a framework Dutch policy makers are familiar with.

For the conceptualization of the performance of the health care system, we expanded the "care" determinant in Lalonde's model into a "balanced scorecard" as presented by Kaplan and Norton [19]. To make steering from a distance possible, the Dutch Ministry needs a limited amount of information on the performance of the entire health care system. The balanced scorecard was developed for managing corporate businesses. In Kaplan and Norton's design, the performance information is presented from four perspectives on the organization: the financial perspective, the consumer perspective, internal business processes perspective, and the innovation perspective. The first two are considered the "outcomes" of business strategy and the last two are the "drivers". For corporate businesses, the outcomes in financial terms are at the core of the overall performance. This model has been successfully implemented in for-profit, not-for-profit, and non-profit organizations in both public and private contexts and at different levels of steering and monitoring. For application in our performance indicators framework for the Dutch health system, the consumer perspective is the focal point of overall performance in health care. Patient-centeredness is illustrated in the conceptual model by the change in focal point towards the consumer perspective, which subsequently makes this the interface between the Lalonde model and the balanced scorecard.

The conceptual model was further developed by exploring the indicator areas that would come under the four perspectives. Here, the input for the discussions was given by policy documents and strategy plans developed by the government. Consequently, we identified the indicator areas reflected by the Ministry's policies and steering roles. Much of the debate here focused on whether the Ministry had to measure the performance of the health system at large, or whether it needed to measure the performance of those aspects of the system for which the Ministry was directly responsible. For example, there was debate about whether or not to include "waiting lists" in the framework. Strictly speaking, the health care providers and insurers are directly responsible for health care provision, not the government. However, some health care issues become political priorities, regardless of who is formally respon-

Figure 2: Performance indicator framework for the Dutch health system

†Health care includes all sectors: prevention, cure, care and welfare

(ten Asbroek et al., 2004 [20])

sible. Therefore, such issues (like waiting lists) are relevant for including in the framework. In the interactive approach, we identified all indicator areas. The collaboration between the research group and the stakeholders at the Ministry resulted in the conceptual framework (shown in Figure 2) presented in December 2002.

Selection of indicator areas

In the second stage, we focused our activities on selecting the indicator areas of the management information portion of the constructed model. We discussed which core questions needed answering in each of the four perspectives in order to meet the Ministry's information needs.

Consumer perspective: What effect does the health system have on the health or experienced health of consumers?

Financial perspective: What are the financial consequences of the health system?

Internal business processes perspective: Are the preconditions for a regulated market mechanism met and does this result in efficient health care delivery?

Innovation perspective: Does the health system have the ability to learn and grow? Does it learn and grow?

To answer these broadly formulated core questions, we identified sub-questions and corresponding indicator areas for each of the perspectives. The choice of indicator areas was guided by two criteria. First, indicator areas needed to be relevant for policy and manage-

ment decisions in the specific Dutch context. Second, the complete set of indicator areas (Table 1) had to be applicable to the entire Dutch health system.

Consumer perspective

The consumer perspective presents information concerning the link between the health system and the health status of the population. We identified the following outcome-focused sub-questions: Are people prevented from becoming ill? Do patients get better? Are disabled persons taken care of properly? Does the health care system help patients attain good health? Are the risks to which patients are exposed acceptable? Do patients have a choice of insurers and providers? Is the Dutch population in general – and its patients in particular – satisfied with the way the health care system functions?

These sub-questions are answered in four indicator areas:

- Effectiveness of health care (in all sectors: prevention, cure, care, and social services)
- Patient safety
- Availability of choice of insurer and provider
- Patient-centeredness

Financial perspective

We needed to answer the following sub-questions: What are the costs of health care? Do the market mechanisms (regulated or otherwise) function? Is the financial burden for consumers equally distributed (who pays for it)? Are all individuals able to carry this burden? Can financiers and providers guarantee continuity of care and are they financially viable?

These questions are represented by the following indicator areas:

- Health system costs
- Functioning of the market
- Vertical equity
- Financial accessibility
- Financial viability of care financiers and care providers

Internal business processes perspective.

The sub-questions we identified included:

How do the financiers – i.e., private and social insurers (for acute care), care agencies (for exceptional medical expenses) and municipalities (for preventive care and population screening) perform? How do they cope with their responsibilities? Do they purchase the right volume and types of care? Is the provided care of good quality? Are there enough human resources to provide the necessary care currently required? Does the market mechanism enforce the creation of new professions or concentrations of care provision? What are the effects for the patient: does the care delivery setting change?

The corresponding indicator areas are:

- Performance of care financiers (a. purchasing of care, b. productivity, and c. waiting lists)
- Quality of the health care delivery process

- Concentration of care provision
- Human resource management (1): a. availability of staff, b. vacancies, and c. staff satisfaction
- Substitution of care between professions and between care delivery settings

Innovation perspective.

We identified sub-questions that focused on the conditions for developing innovative potential and actual innovations: What financial means are made available for the learning and growth function of the health system? Are new technologies being promptly implemented? Does the information infrastructure accommodate innovation? Are employees' working conditions supportive of innovations? Are professionals motivated to exchange old habits and procedures for new ones? Does the health system anticipate the need for new professionals for the health care delivery of tomorrow (especially in professions with long training pathways)? Are organizational innovations (like new service arrangements) developed and implemented to enable the system to respond to changing contexts, opportunities, needs, and demands? Do the market mechanisms stimulate an increase in learning and growth potential through intensified cooperation between industry and health sectors?

Table 2 Overview of perspectives and indicator areas

Consumer perspective	Financial perspective	Internal business perspective	Innovation perspective
Effectiveness of care:	Health system costs	Performance of care financiers:	Allocation and volume of R&D funds
prevention	Functioning of the market	purchasing of care	Diffusion of innovations
curative care	Vertical equity	productivity	
chronic care		waiting times and lists	Information infrastructure
social services	Financial accessibility	Quality of health care delivery process	Human resource management (2):
mental health			innovative working environment
Patient safety	Financial viability of care financiers and providers	Concentration of care provision	education & training
Availability of choice of		Human resource management (1):	
provider and insurer		availability of staff vacancies	Organizational innovation
Patient-centeredness		staff satisfaction	Link with the industry
		Substitution of care between professions and settings	

The corresponding indicator areas are:

- Allocation of funds for learning and growth
- Diffusion of new technologies
- Information infrastructure
- Human resource management (2): a. innovative working environment and b. training of new staff in professions with long training pathways
- Development and diffusion of organizational innovations
- Industry-initiated research and development activities in health care

For each of the four perspectives, background papers were written setting out boundaries and definitions for the perspective and the indicator areas. These gave the first proposals for concrete indicators that could possibly be used.

Measurement principles

In the next step of development, the indicator areas in the framework needed to be fleshed out with actual indicators. The Ministry choose a pragmatic approach: the first assessment for the proposed indicator areas was “What does already exist” and secondly “Can this be aggregated to national level?”

Some indicator information already existed, such as the number of accredited health care institutes as a measure for quality of providers. Information for this indicator can be drawn directly from the national registry of accreditation for health care institutions. Other indicators would need aggregation of information into one health system measure. For example, the number of professionals necessary to deliver health care is now calculated for the different sectors in separate registries. Aggregation of these data seems feasible. For others indicators, like the “patient and consumer experience and satisfaction”, new initiatives are necessary to generate suitable information. Although measurement tools for patient satisfaction exist in different forms and shapes for different care settings, standardized methods are needed to measure patient and consumer experiences that can be aggregated to health system level. For this example the CAHPS® [11] instruments are now being introduced in the Netherlands by a consortium of different stakeholders.

For the Ministry it has always been clear that the implementation of the framework would need to build on existing data and data collecting systems. In the Netherlands, data collection in health care is fragmented. There are separate registries for institutions like hospitals, nursing homes, mental health care institutes, and obstetric care. Statistics Netherlands CBS (the national bureau of statistics) also collects data on health care and health care consumption. Some of the health care institutes have regional data collection systems, like the cancer registry. Indicators that could be built on these existing data sources were given priority. This meant that instead of building new systems, the coordination and cooperation between existing registries needed to be strengthened. For example, in a pilot project, hospital admis-

sion data (managed by Prismant) were linked to the national mortality database (managed by Statistics Netherlands CBS) to estimate the within-30-day mortality after hospital admission for myocardial infarction. Since then, other data-sharing and linkage projects have emerged. As we selected the indicator areas to reflect the core questions of each of the four perspectives and to fit the overall system responsibility and steering possibilities, the individual indicators needed to meet certain criteria. They had to be valid, reliable, and relevant for health policy. The indicators needed to have a high level of “actionability”. Overall criteria included:

- Alignment with future development of needs and demands.
- Alignment with the government’s steering role (from a distance, guarding public interest).
- Ability to link up with steering the health system, including possibilities for disaggregating to a region or sector.
- Coherent visualization of performance in different health fields.
- Contribution to the development of integrated care (“chains”).
- Alignment with international developments in the EU (ECHI-2 project), the OECD (OECD Health Project: Health Care Quality Indicators), the World Health Organization (WHO), and current laws and regulations.

All these criteria were used in choosing indicator areas.

Dissemination strategies

Interactive research input

The dissemination of the framework was facilitated by an intensive interactive development process involving multiple stakeholders.

All the subdivisions at the Ministry were represented in the working group “Knowing Better” (in Dutch: Beter Weten), an intra-departmental project group of approximately 30 participants, chaired by a director-general of the Ministry and coordinated by members of the SEIZ. In this working group, the information policy issues within the Ministry were the subject of debate, and new developments were disseminated in the Ministry through this network of sub-departmental representatives (see Figure 1).

Frequent meetings

Researchers met with representatives of the strategic coordination group on a bi-weekly basis, and on a monthly basis with the intra-departmental project group and the strategic coordination.

The choices for the model and the indicator areas — made in the meetings between the research team, strategic coordination team and intra-departmental project group — were the result of decision-making by consensus after discussing the strategic goals of the health

system, the information needs of policy makers at the Ministry, and studying existing theory and international experiences with national performance indicator frameworks.

In addition, the research group was reinforced with members from the Ministry, the NIVEL, and from the RIVM.

The interactive approach for the development of the framework allowed the framework to be tailored to the Ministry's information and policy needs. The research group was most active during the period January 2002 through June 2003, when the conceptual framework was developed and the indicator areas were defined in the four perspectives of the balanced scorecard. This also marked the beginning of the period when the Ministry took clearer ownership of the framework. The researchers' input became less intensive and was given on an "as needed" basis.

Communication plan to moderate societal debate

As the conceptual basis for the framework became more definite and accepted by both the project group and ministerial staff, a communication plan was developed to inform the stakeholders outside the Ministry. The Ministry presented the conceptual framework at two invitational conferences. The first was held on 29 January 2003. Those invited to attend included managers and policy makers of health care insurers, provider organizations, patient and consumer organizations, home care organizations, and the national mental health umbrella organization (GGZ Nederland). During this conference, the discussion with those attending focused on the policy of measuring performance at macro level. In the second conference, held on 12 March 2003, the participants were data managers (and those involved with reporting on performance) from the same institutions and organizations invited to the January conference. This conference focussed on the practical implications of measuring performance with a limited set of indicators.

The conferences were supported by two publications: "Setting a New Course" (in Dutch: *Bakens Zetten*) [21], which presented the conceptual framework, and a discussion paper that presented the framework and its proposed indicator areas [22].

With both conferences, the Ministry wanted to initiate a broad societal debate on performance measurement. This debate continued in national health care journals [23;24] and at health care conferences, such as "Sharing Knowledge Better" (in Dutch: *Kennis beter delen*) and "Calculating Policy" (in Dutch: *Cijferen met Beleid*). The government also opened a website for discussions with the public about the changes in the health care financing and insurance structure as well as for measurement of the performance of the system as a whole [25].

International cooperation

At international level, the Netherlands actively participated in the OECD Health Project and in the European Community Health Project. The Secretary-General of the Dutch Ministry of Health co-chaired this OECD project, which made clear the Netherlands' motivation to align its health policy to international developments. In the OECD's Health Care Quality Indica-

tor Project, the Netherlands was represented by the head of the research team supporting the Ministry in its development of the national framework. This created a strong network between the OECD and the project group developing the Dutch framework. When choosing the indicator areas, particularly with regard to the consumer perspective of the balanced scorecard, information was provided by the newly selected indicators in the OECD project. In the same way, the discussions at the Ministry provided information for the OECD project, especially for the indicators on prevention and primary health care. This relationship of jointly developing performance indicators substantially strengthened the support at the Ministry. A similar interaction occurred in the European Community Health Indicator project. The RIVM has been the secretariat for the project since it started in 1998. Although the project originally focused on health status data, as of 2003 it now also includes health system information, taking its example from the OECD project. The involved researchers at RIVM took part in the research team for developing the performance indicator framework in the Netherlands, and were also invited to participate as experts in the OECD plenary sessions and working groups, which optimized the alignment between the three indicator initiatives.

Consulting knowledge institutes

By actively participating in the international projects, the project group at the Ministry was encouraged to give priority to developing the indicator framework. The indicators sets developed at the OECD and EU served as good examples for the Dutch indicators. However, the OECD indicator set was strongly focused on curative care, and the EU set on health status. These indicator developments initiated a sense of urgency at some policy directorates in the Dutch Ministry (including those for mental health and social services) to start developing specific indicators for their own sectors. Several knowledge institutes and consultancy bureaus were approached to develop discussion papers and advisory statements to support sector-specific indicator sets. As a result, these institutes and bureaus had to gather information about the performance indicator framework and its underlying motives, and this contributed further to the dissemination of the framework.

Scientific spread

To further increase the awareness about the performance indicator framework in the Netherlands, an additional communication strategy addressed the academic world. We presented the conceptual framework at scientific meetings and conferences and started a meeting series with the RIVM. The RIVM produces the Dutch Public Health Status and Forecasts reports for the government. We made it a priority to hold discussions with them on the health system changes, the potential implications for the health status forecasts, and the consequences for information tools such as the performance indicator framework. Together with RIVM, the possibilities were explored for developing clinical logics [26] described at population level in order to make the link between health status and health system performance more explicit. These clinical logics will be included in the next Health Status Forecast.

This integration of public health information with health care performance information was essential to the construction of the conceptual framework.

Ministerial decision-making

The interactive work of the SEIZ working group and the research support group has resulted in identifying the conceptual model and identifying the indicator areas in the four perspectives in the balanced scorecard. The Ministry decided on the conceptual model in January 2003. This enabled further development of the framework and small working groups were formed for each of the four perspectives to further flesh out the indicators. The name of the working group was changed from “Knowing Better” to “Working Better” (in Dutch: *Beter Werken*).

In 2003, a steering group was formed within the Ministry’s hierarchical line structure to enable concrete decision-making and further dissemination at more levels in the Ministry. Participating in this steering group were the heads of subdivisions and the heads of the financial and macro-economic directorates (FEZ and MEVA).

By the end of 2003, the working groups at the Ministry that focused on indicator development had come up with a set of plans of action, each proposing an approach to further develop the actual indicators. The organizational structure was adjusted to enable optimal alignment with other current policy themes. Together with the Unit for Patient and Consumer Policy among others, the executive office SEIZ was integrated into a new policy directorate known as the Market and Consumer Directorate (MC). The development of the framework became an important task of this directorate – in this new organizational structure, this development was now clearly positioned in the administrative “line” hierarchy.

Political environment

The opinion was widely shared that the performance indicator framework would only be useful if it would provide information for the Ministry’s policy, steering, and monitoring functions. The governance model had received a great deal of attention within the Ministry, but with the frequent political changes it hadn’t been developed enough to be implemented. Three governments were in power while the framework was being developed, and each were made up of different coalitions: in 2002 by liberals, social democrats, and democrats; in May 2003 by liberals, Christian democrats, and liberal populists; and at the end of 2003 by liberal democrats and Christian democrats. During this period, the system redesign and redefinition of the roles of the actors in the system was not further developed. With the start of the second cabinet under the leadership of prime minister Balkenende in November 2003, a relatively stable environment came into being in which decisions regarding health system policy could be taken. This period made a stronger positioning of the framework possible, as well as further development of the governance model and the resulting tasks and responsibilities of the involved organizations.

Policy advice by the National Council for Public Health

In September 2003, the State Secretary for Health asked the National Council for Public Health (RVZ) to formulate a recommendation on the potential functions of the framework and how it could best be applied in the current Dutch health care context. The RVZ's recommendation focused on the managerial applications of the framework and the need for clearer communication strategies. It also advised using the framework to monitor the consequences of the planned new social health insurance [27].

Pilot testing

Throughout the entire development process (including during the informational conferences) questions arose about the framework's practical implications. A pilot exercise was undertaken to explore what existing information could be used to flesh out the indicators in the identified areas. Prismant, the leading organization for data collection and data management in the curative care sector, carried out this exercise in 2004. Expert consultations were held for each of the four perspectives. Health care data collection and data managing organizations were involved in the pilot test on an invitational basis. As a result, many organizations were informed about the framework development and the potential information needs of the Ministry in the near future. This project also boosted the development of the action plans that had been developed by the indicator working groups at the ministry. The pilot test showed that the availability of ready to use indicators is still very limited and, if existing, often not covering the whole system, or not covering all sectors. In its final presentation Prismant stated that only 14 out of 26 indicator areas could be filled with currently available information. This confirms our impression that not many "ready to use" indicators – for the proposed indicator areas - do exist.

Activities foreseen in the near future

By the end of 2004, the strategic position of the framework had been formulated. The performance indicator framework will be the basis on which the Ministry will report the results of health care policy to parliament and the public at large. This new document, called *The Balance of Care*, will be published bi-annually. Additional plans are being developed to build a web-based information system that presents the entire framework.

The RIVM was asked to develop and implement the individual indicators and to complete the framework and provide the content for the first edition of *The Balance of Care*, planned for publication in May 2006.

Chronological overview of activities and strategies, and stakeholders involved

2001: On invitation of the OECD, Klazinga presented the situation on health system performance measurement in the Netherlands as a case study at the OECD conference "Measuring UP" in Ottawa (autumn 2001). Top-level ministerial staff participated in the OECD Health Project working group (among them the Secretary General). During this period,

the Dutch ministry identified the need to be able to measure performance in health care at system level.

January – June 2002. Developing the conceptual framework. The ministry of health involved the academic research group to support the development of a framework for health system performance indicators. In this period most activities were carried out by the research team. Progress was presented in monthly “*Knowing Better*” working group meetings. At national level, the research group consulted institutes that are involved in health statistics and public health. RIVM, NiGZ, Nivel. Members of Nivel and RIVM became permanent members of the research team. At international level, the principal investigator represented The Netherlands in the OECD indicator project and participated in other networks focussing on indicator development. At the MoH, departments that had performance measurement on their agenda gave and got feedback to align other policies with the developing PIF. This occurred already in the first months. Researchers and the coordinating Strategic Unit for Information Policy in health care (SEIZ) tried to make all efforts convergent.

July 2002 – January 2003. When the first sketchy contours of the framework became apparent, the discussions in PBW focussed on the question “What does it mean for “my” department”. This was discussed at different levels. Within the ministry the topic of the framework became known to more people. In January 2003 the framework—with indicator areas, not indicators—was officially endorsed by “*Knowing Better*” and decided upon by a top level steering group for information policy (SIZ). The framework became a tool (under construction) owned by the ministry.

February – June 2003. Activities focussed on the development of the individual indicator areas, 26 in total. For each of four indicator groups a group manager was assigned, for each indicator area a project leader. He/she lead the development of a specific indicator. Most group and project leaders attended PBW frequently. Researchers participated in indicator group meetings and met separately with project leaders on request. In two invitational conferences the PIF was communicated with other parties in the health care field. 75 Institutes and organisations were invited and 180 participants were welcomed. In this period the ministry adopted the proposed framework. The activities focussed on the development of the 26 individual indicator areas. For each of four indicator area groups a group manager was assigned, for each indicator area a project leader.

July 2003 – December 2003. Project leaders developed proposals for individual indicators. Completeness of the proposals varied largely. Some were very explicit and included data, others were very global still.

Integration of indicators into the existing budgetary planning tools was proposed to link the framework with the governmental budgetary planning and control cycle. This initiative of the financial department was informative about the non-budgetary character of the framework and demonstrated the different goals of, on the one hand, the framework and the budget plans and reports on the other.

January – June 2004. To strengthen the development of the framework a project started to fill as many indicators as possible. This exercise, carried out by a national health care data registry institute (Prismant), was guided by the 26 proposals.

The Council for Public Health and Health Care (RvZ) advised the MoH on the strategic positioning of the framework in the existing organisational structure of the MoH and in the overall picture of roles, responsibilities and steering mechanisms.

To build a stronger influence on the development process of the PIF and other information policies the ministry created a new department within the hierarchical line structure that addresses the ministry's information policy agenda. The new department is built on the existing frame of SEIZ but with a stronger position within the ministry and linked to the health system reforms.

July 2004 – January 2005. The newly formed "Market and Consumer Department" was given the responsibility for the co-ordination of the policy processes necessary for the implementation of the framework. The advices of RvZ and Prismant will be integrated in the policy processes.

The national institute of Public Health and the Environment (RIVM) will develop the technical-infrastructure that is needed to fill the indicators with data. The involvement of the RIVM stresses the importance of public health data in the framework. RIVM coordinates the network of institutes that will contribute information for the individual indicators.

The technical infrastructure will provide longitudinal information to monitor the system's performance. This monitoring information is expected to be published bi-annually in the "Balance of Care". Table 3. summarizes the activities.

Evaluation

During the period of health system redesign the development of the framework has put health system performance measurement on the agenda of the Ministry's subdivisions and directorates and on the agendas of its counterparts. Also, the integration of public health information and health care management information was discussed at length. Although the currently dominant sectoral approach has not been replaced, the integration of sectors is receiving more attention.

The need for the performance framework was expressed at a time when international initiatives and national needs formed fertile ground for the prosperous growth of the health system performance indicator framework. But more than just fertile ground is needed for a good harvest – the weather conditions also have to be favourable. The conditions under which the framework had to be developed can be summarized as the policy context and, more specifically, the dominant policy developments that occurred parallel to the development of the performance indicator framework.

Table 3. Summary of activities

Activities	Stakeholders	2002	2003	2004
Development of conceptual framework	AMC/SEIZ/PBW	[Gantt bar spanning Q1-Q2 2002]		
Identifying indicator areas	AMC/SEIZ/PBW		[Gantt bar spanning Q3 2002 - Q1 2003]	
Endorsement of Conceptual model and its indicator areas,	SGIP/PBW/SEIZ		[Gantt bar in Q3 2002]	
Communication Plan: Involvement of organizations and institution, Conferences ¹	SEIZ		[Gantt bar in Q3 2002]	
Development of action plans for individual indicators	AMC/SEIZ/PBW		[Gantt bar spanning Q3 2002 - Q2 2003]	
Pilot Implementation Exercise : Which Indicators can already be filled? ²	Prismant/STATDAT/AMC/WGI			[Gantt bar in Q3 2003]
Assessment of Strategic Positioning of the framework in the existing organisational structure of the Ministry ³	RVZ		[Gantt bar spanning Q3 2002 - Q2 2003]	
Organisational changes, repositioning of Framework activities	SGIP,			[Gantt bar in Q3 2003]
Summarizing Framework Developments 2002-2004	AMC			[Gantt bar in Q4 2003]
Developing concrete indicatros, preparing for Balance of Care (due 2006)	RIVM			[Gantt bar in Q4 2003]

1 the involved participants of invitational conference were: HCI, UMBR, NPCF, STATDAT, INSUR, INSP

2 the involved resource organisations for pilot implementation by Prismant were: STATDAT, Nivel, INSP,UMBR,PolDep,

3 the involved organisations of a meeting to inform RVZ for their advise to the Ministry were: UMBR, STATDAT, HCI, PolDep, SGIP, SEIZ, AMC, NPCF, INSUR, INSP

List of abbreviations for stakeholders

SEIZ	Strategic Unit Information Policy (MoH)	INSP	Inspectorate for Health Care (MoH)
PBW	Ministerial Project Group (MoH)	Prismant	Prismant
SGIP	Steering Group Information Policy (MoH)	RVZ	Council for Public Health and Health Care
WGI	Working Groups for Indicator development (MoH)	HCI	Health Care Providers institutions (n=40)
MCD	Market and Consumer Department (New since Oct 2004)	UMBR	Representatives of umbrella organisations (n=20)
PolDep	Policy departments (MoH)	INSUR	Health Care Insurers (n=10)
AMC	Academic Research Team Academic Medical Centre University of Amsterdam	NPCF	National Patients and Clients Federation
RIVM	Researchers from RIVM	STATDAT	Statistics and Registry Managing Organisations
Nivel	Researcher from Nivel		
NiGZ	Researchers from NiGZ		

At the Ministry, six parallel policy developments can be identified that influenced the development process of the performance indicator framework [28]:

From budget accountability to policy accountability

The first policy mentioned here is one that has contributed significantly to the idea of developing a health system performance measurement system.

The inter-ministerial policy "From budget accountability to policy accountability" (VBTB, an initiative of the Ministry of Finance) was initiated to increase outcome-oriented policy making and accountability. It was implemented in all ministries, and the previously dominant budgetary orientation had to be abandoned.

The performance indicator framework could serve perfectly as a tool to achieve and reflect an outcome-oriented vision on policy making in health care. Also, it would provide a framework for reporting overall performance in a transparent way. The VBTB strategy had – and still has – a strong link with the financial policy making and accountability structure. The development of the framework therefore enjoyed the keen interest of the Ministry of Health's directorate of Financial and Economic Affairs (FEZ).

In summary, the VBTB strategy had a strong and positive influence on the development of the performance indicator framework.

Redesigning the budgetary planning and control reports

The FEZ sub-department at the Ministry of Health, which was especially interested in implementing the VBTB, explored the possibilities of integrating the indicator areas of the performance framework into the existing budgetary planning tools. In doing so, the framework would be linked with the governmental budgetary planning and control cycle, while at the same time facilitating the needs of the VBTB strategy. This investigation by FEZ provided information on the non-budgetary character of the framework and demonstrated the different goals of the framework on the one hand and the budgetary plans and reports on the other. Because the FEZ was aware that the framework content and budgetary planning and control reports were not a perfect match, this prompted it to prioritize redesigning its own reporting structure separately from that of developing the framework. Subsequently, the two emerging information structures were felt to be potentially competitive. At coordination meetings it was explicitly expressed that it was important to align both developmental processes and perceive them mutually as synergetic and congruent rather than competitive. A positive effect of the exploration by FEZ to integrate the indicators in their accounts and budgetary documents is that it showed the framework has a different nature and serves different goals than those shown in the existing FEZ reports from 2003. At this point it is unclear how the new financial planning and control reports will be structured and how this relates to the perspectives, indicator areas, and indicators of the performance indicator framework. The alignment of both developments will need ongoing attention.

Reducing the administrative burden

During the 2003 parliamentary elections, the government had targeted the decrease of administrative burden in the health care system as a priority. A policy was formulated that explicitly stated that the administrative burden should be reduced by 25%. This reduction was to be achieved by decreasing the number and length of the questionnaires sent to care providers by the Ministry. Providers feel that the government requests the same information over and over again, although sometimes with a slightly different focus. Different sub-departments at the Ministry sometimes even ask for the same information. It emerged during the working group meetings that participants felt more efficient information-gathering (i.e., omitting duplicate requests) would reduce the administrative burden by 25%, if not more.

In the working group "Knowing Better" it was expressed time and again that because of the administrative burden, the indicators should be built on data from existing registries and other information-collecting systems currently in use. Also, the expectation was that if the Ministry wants to have a comprehensive yet limited set of indicators (as proposed in the framework), less information will be needed rather than more. In such a situation, the framework would benefit from the policy of administrative burden reduction. It became clear, however, that information was not readily available for some of the proposed indicator areas. Because of this, new and additional data collection mechanisms would be necessary. These were viewed with reservation, as they could lead to an increase rather than a decrease in the administrative burden.

It is as yet unclear to what extent the framework contributes (or fails to contribute) to a decrease in the administrative burden.

Promoting the public interests: Affordability, Quality, and Accessibility

In the current political vocabulary, the government communicates messages relating to the performance of the health system in terms of three public interests: affordability (can health be paid for?), quality (does it meet a minimum standard of quality of health?), and accessibility (can all Dutch people make use of a basic package of care?). The government indirectly controls health care institutions, health care insurers, and health care consumers by using aggregated market information collected and interpreted by governmental regulatory and standardizing or supervisory agencies. This information will be compared to macro information, such as indicated in the performance indicator framework. Subsequently, a confrontation between market information and macro information should lead to the assessment of the level of attainment of public interests in health care. This information guides the steering from a distance the government employs on the health care market. This vocabulary of public interests emphasizes health care performance from the consumers' perspective. Although the performance indicator framework follows different ordering principles, the communication in terms of public interests does not necessarily conflict with the chosen framework. The framework will be used as a tool to form a database for analysis, informa-

tion development, and decision-making in health care. The communication regarding these decisions can be formulated in terminology of public interests. In such a way the framework provides a knowledge base that does not dictate the political rhetoric and is potentially less vulnerable to political change.

Redesign of governmental audit and control functions

Accessibility, affordability, and good quality will set the preconditions for decisions in the primary process of care delivery. Supervisors guarantee and manage these public interests based on a public testing framework, and keep the primary processes in balance with public interests. In the present situation, a number of agencies regulate the access to the primary process of health care institutions, and these agencies regulate the implementation of the insurance laws and regulate the market behaviour in some market segments. The Ministry tries to control the primary process through supervisors (Health Care Inspectorate, the Health Care Authority (in Dutch: "Zorgautoriteit"), and the Health Care Insurance Supervisory Board), who will identify failures to achieve efficient coordination of decisions in the health care market. In addition, the Ministry formulates norms related to public interests and also determines the testing framework of the supervisory body. The roles and responsibilities of the supervisory bodies are currently in flux, and the place and position of the present supervisory bodies and regulating institutions will be reconsidered. Legislation to this effect is currently being drawn up. The redesign of governmental audit and control functions has the potential to positively effect the development and implementation of the national framework. Further definition of the roles and responsibilities of supervisory bodies and regulating institutions will affect the choice and formulation of specific indicators that are directly related to these supervisory and regulating roles (i.e., the functioning of the markets, patient safety, and performance of care financiers).

Reorientation of health information infrastructure

The reorientation of health information infrastructure at the Dutch Ministry of Health is a three-pronged policy that includes the development of a performance indicator framework. The first aspect is the policy for arriving at a minimal data set (MDS), which is the minimum data the concerned parties in health care need from each other (i.e., data on production, quality, and capacity) in order to function optimally. These data will be analysed at central level, in this way forming a minimal data set for every sector or market in health care. Because the different parties in the health care market need information focused on their new roles (including new information), a data management function (data warehousing) will be formed.

The second aspect of information policy is the construction of one or more Trusted Third Parties (TTPs). In these constructions, an independent third party becomes the manager of the data collected in the MDS. The concerned parties (consumers, health institutions, health insurers, and government) will be given a key that determines what information is accessible

to individual parties. Agreements must be put down on paper and evaluated periodically to optimize efficiency in data collection and data use.

The third aspect is the development of performance indicators. Based on the available information from the MDS, performance indicators can be developed that are derived from the actual health care processes. At its core, the Dutch performance indicator framework for the health system includes information from the MDS. In principle, the policy of reorientation of the health information structure is set up in such a way that the three aspects should be developed synchronically. If successful, the MDS and a functional TTP can prove to be important sources of information for the framework and as a result could boost its development and implementation.

At international level, the interest for performance measurement has remained undiminished since the start of the Dutch framework initiatives. The most relevant developments for the Dutch situation are those at the OECD and the EU. There are strong organizational links between the Netherlands and both the OECD project and the EU project. These have contributed to an international policy context that has had a positive influence on the development of the Dutch framework.

The continuation of the OECD Health Care Quality Indicator project beyond its initial project period is expected to have a long-term positive influence on the development and implementation of performance measurement frameworks in its member states, including the Netherlands.

In the EU, the indicator sets of the European Community Health Indicator project (ECHI) used to consist mainly of health status indicators [1]. Now, though, they have incorporated the OECD health care indicators and by doing so has strengthened the link between the OECD and European Union indicator projects. For the EU member states participating in the OECD, the overlap in the two indicator sets sends a signal to national policy makers on the importance of these indicators and of health system performance measurement in general.

In the Netherlands, many actors have indicator development on their agendas. For example, provider organizations and professional associations have developed their own performance indicator sets either as part of internal quality improvement policies or as external accountability instruments. These initiatives have contributed to a positive context for developing the national performance indicator framework. Initiatives were taken to align specific indicator sets with the national performance indicator framework in 2003: performance indicators are in. However, mis-communication and misunderstanding is a concern because of the different perspectives and goals of the different actors developing these indicators. Organizations have expressed a fear of duplication because of so many different initiatives seemingly focusing on the same information. Careful communication between actors at national level and those at meso and micro levels is important to ensure ongoing support from and for these actors. This support is essential if indicators have to use data aggregated from micro and meso levels. At national level, as of January 2005, the RIVM has coordinated the indicator-

building activities related to the national framework, and will seek cooperation from other institutes to ensure broad support for this task.

Lessons Learned

Since 2002, the Dutch Ministry of Health has been developing a health system performance indicator framework for the Dutch health system. This framework includes and links public health information and health care system information. The Lalonde model and a balanced scorecard form the two core components of the Dutch framework.

An interactive approach was chosen that involved multiple stakeholders, including a research team and a ministerial working group. This approach proved to be useful. The research team was free to develop the conceptual model for the framework, which made it easier to incorporate existing international knowledge and experience about performance measurement frameworks in health care. The counterparts at the Ministry contributed to the conceptual framework, and coordinated it with the current policy context at the Ministry. Later on, the Ministry took full ownership of the framework and developed it further. This meant more participation by an even larger number of stakeholders, while at the same time a redesign of the organizational structure at the Ministry ensured more decision-making power of those working on the framework. A communication plan, advisory consultation, and a pilot test contributed to its further development.

Building the framework for performance measurement in a politically complex context has its specific challenges. Within this context, ambiguous terminology and implicit notions are part and parcel of day-to-day reality. To develop the performance indicator framework, it is necessary to be explicit about policy goals. Policy makers' timing for choosing to be explicit about these goals did not always coincide with the timing preferred by the developers of the framework on the ground, including the researchers. This challenged the framework's development while at the same time it stimulated the debate on the policy goals at the Ministry.

Other researchers have been disappointed in the way their work was incorporated into the policy making process. Their research report was received with enthusiasm before indefinite storage in an anonymous drawer brought an end to its career. In contrast, the researchers involved in the work described here have been working side-by-side with policy makers who had expressed a need for the instrument they were building together. This close interaction optimized the applicability and acceptance of the performance indicator framework that was developed.

The development of the Dutch health system performance indicator framework proved to be a social and political process as well as a methodological exercise. It needed to be carefully managed as a research-based, policy-led change process. In this process, other policy developments were also relevant, and acknowledging this interaction rather than ignoring it strengthened the positioning of the framework.

The managerial and organizational contexts in which health system performance frameworks need to be developed are dynamic, difficult to predict, and cannot be steered as an isolated independent process. In the case of the Netherlands, linking the framework's development to other developments and policy processes has proven successful. Both international and national developments could be made instrumental in dissemination of and communication about the Dutch framework.

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