



Cost Containment and Efficiency in National Health Systems

A Global Comparison

Edited by
John Rapoport, Philip Jacobs,
and Egon Jonsson



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Library of Congress Card No.: applied for

British Library Cataloguing-in-Publication Data

A catalogue record for this book is available from the British Library.

Bibliographic information published by the Deutsche Nationalbibliothek

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available on the Internet at <http://dnb.d-nb.de>.

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Printed in the Federal Republic of Germany
Printed on acid-free paper

Typesetting Thomson Digital, Noida, India

Printing Strauss GmbH, Mörlenbach

Bookbinding Litges & Dopf GmbH, Heppenheim

ISBN: 978-3-527-32110-0

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Preface

The increasing cost of healthcare is of great concern in many jurisdictions. There are several measures that can be used to deal with escalating costs while maintaining or improving the efficiency of the system: these range from limits on demand and supply of health services to improved effectiveness and tighter administrative control. The variety of measures available has been tried with varying success in different settings.

Because of this profusion of economic strategies and their aftermaths, it would be helpful for policy-makers everywhere to become familiar with economic health – reform experiences and their outcomes. In this vein, the IHE sought to develop a book of comparative economic aspects of health care reform, presented in a systematic way, across a variety of countries. The book would be written by leading experts in their countries, and would provide in a readable form descriptions and analyses of recent reforms. This is the kernel that led to the present book.

Several questions guided our inquiry. Is there a convergence of economic policies among countries? Are any of the strategies that have been highlighted by the authors becoming permanent fixtures on the health economic policy scene? The absence of evidence in this area has generated questions which seem to be on the minds of policy – makers everywhere. There is a need for international scientific leadership in the economic policy arena, as there is in many clinical fields.

We could not cover every country so we chose to focus on a limited number based on the fact that each has its own national health care system, is at a similar level of economic development, and has been known to employ a variety of strategies.

We hope that this volume helps to fill in the gap of knowledge in this area, and that the systematic approach that has been taken provides a useful tool for those interested in health care reform to get a better grasp of how policy makers have attacked this complex problem.

Edmonton, August 2008

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1

Introduction and Summary

John Rapoport, Egon Jonsson, and Philip Jacobs

1.1

Introduction

The chapters in this book review several decades of developments in health policy related to cost containment and efficiency in eight different countries. Both the similarities and the differences among the countries are striking. Table 1.1 documents their population, health spending and health status using OECD (Organisation for Economic Co-operation and Development) data. While these countries are not a random sample of OECD countries, it is notable that for all the characteristics included in the table the eight countries come from both halves of the OECD group of 30 countries. That is, they are found both above and below the OECD median values.

All the countries included in the book exist in the same global economy, have access to essentially the same medical technology and information, and are roughly at the same stage of economic development. The fundamental economic problems and sources of potential market failure affect health systems in all of them. However, the policy responses differ because of historical and cultural differences, varying political ideologies and social values, differences in paths of evolution of the national health systems, and the health needs of the population. In this chapter, we attempt to summarize the strategies discussed in the book, their effects on cost containment and efficiency, and their success and sustainability.

In the first section we describe briefly the approaches presented by each chapter author, and then discuss the conceptual relationship between cost containment and economic efficiency. We then examine the details and success of each strategy in a cross-country analysis. The concluding section considers the current policy agenda.

1.2

Highlights of Each Country's Approach

Canadian health systems are organized at the provincial level, but operate within a set of national principles and obtain significant funding from the national government.

Table 1.1 Statistical profiles of countries included (data is from 2005).

	Canada	Finland	Japan	Sweden	UK	Germany	Holland	New Zealand	OECD median
Population (million)	32.3	5.2	127.8	9.03	60	82.5	16.3	4.1	10.8
GDP per capita (US\$, PPP)	33 600	33 300	30 500	32 700	32 100	29 800	34 200	25 300	31 000
Health spending as % GDP	9.8	7.5	8	9.1	8.3	10.7	9.2	9	9.05
Public health spending as % of total spending	70.3	77.8	81.7	84.6	87.1	76.9	62.5	78.1	75
Health spending per capita (US\$, PPP)	3326	2331	2358	2918	2724	3287	3094	2343	2922
Acute care beds per 1000 population	2.9	2.9	8.2	2.2	3.1	6.4	3.1	NA	3.4
Practicing physicians per 1000 population	2.2	2.4	2	3.4	2.4	3.4	3.7	2.2	3.4
Life expectancy at birth (years)	79.9	78.9	82.1	80.6	79	79	79.4	79.6	79.3
Infant mortality per 1000 live births	5.3	3	2.8	2.4	5.1	3.9	4.9	5.1	4.1

NA = not available.

Sources: OECD Health Data, 2007; OECD in Figures, 2007.

While there is significant variation among provinces, Raisa Deber identifies several common strategies for both cost containment and efficiency enhancement. Supply-side measures include capped budgets for hospitals and physicians, as well as policies to limit the supply of physicians and other health care workers. Demand side policies include measures to address the appropriateness of care and, to a limited extent, to promote health and prevent disease. Organizational and structural initiatives to provide integrated care and to encourage competition are also discussed.

In his chapter on England, Adam Oliver makes clear that efficiency seeking has been the major policy goal over the past 20 years. This concern has led to changes in both the structure and operations of the National Health Service. The introduction of an internal market in 1991 enabled purchasers to negotiate contracts with competing providers of health care. The establishment of the National Institute for Health and Clinical Excellence (NICE) during the late 1990s provided analytical expertise to make information provided through health technology assessment available to decision makers, and positive NICE guidance was made mandatory for the National Health Service (NHS) in 2001. More recent reforms reviewed in the chapter include performance management techniques focused on reducing waiting times and increased opportunity for patients to choose their hospital.

In the chapter on Finland, Unto Häkkinen notes that cost containment first became a major concern as a result of the economic downturn of the early 1990s. The policies to address this worked through the decentralized nature of the Finnish system as the central government reduced its specific control and municipalities took more responsibility for organizing services. Government information guidance to municipalities through health technology assessment, improved statistical systems and strategic planning played an important role. In the pharmaceutical sector, the regulation of wholesale drug prices and generic substitution are discussed.

Cost containment has been the major objective of policy in Germany for the past 30 years, with efficiency also being an important focus since the 1990s. Markus Wörz and Reinhard Busse detail the role that global budgets and spending caps have played in the ambulatory care, hospital and pharmaceutical sectors. They explain the trend towards case-based hospital reimbursement. Cost shifts to private households through cost sharing and benefit exclusion are also discussed. The introduction of competition between sickness funds and providers led to major structural changes which are examined. Finally, the chapter explains the increased importance of joint self government in the German system.

The ongoing shift from supply-side policies to demand limitation is presented by Werner Brouwer and Frans Rutten as the context for their discussion of health system reforms in Holland. Supply-side policies in effect during the 1980s included price regulation, budgets and waiting lists. In the pharmaceutical area, reference pricing in various forms has been the major policy with measures to affect prescribing behavior and value-based reimbursement playing a greater role as the system evolves. In the post-2000 period, policy has been oriented towards encouraging competition, and specific strategies to limit demand include cost sharing and limits on the basic benefits package.

In his chapter on Japan, Akinori Hisashige makes clear that cost containment has been the focus, with efficiency being a much less prominent policy objective. Budget

setting at the national level, combined with a national fee schedule for payments to all providers and control on drug prices, has been the main approach to achieving the cost-containment objective. Fixed-bundle payments for sets of services have also been used. Controls on hospital beds and length of stay, health care manpower policy, and patient cost-sharing have been attempted but are of much less importance than national budget setting.

New Zealand's publicly funded health system first became concerned with efficiency during the 1980s. In her chapter, Toni Ashton discusses five policy strategies which together address both cost containment and economic efficiency concerns. A national global budget for health as well as regional budgets has been part of the system since early in its history, but recent changes in the way that accounting is carried out and budgets are enforced has made them a more important tool during the past 15 years. The quasi-market reforms of the 1990s described by Ashton involved a purchaser-provider split and significant restructuring of the organizations involved in the funding and provision of care. A national agency to manage pharmaceuticals was established. Waiting list management was also the focus of a specific policy. Priority settings for spending, using techniques such as clinical guidelines and technology assessment, were implemented.

Sweden has a very decentralized health care system with most operational decisions made at the regional or county council level. Bengt Jönsson points out that, as the system has evolved from pluralistic to single payer, the decentralization has been maintained while cost containment and efficiency have both played a role as major goals of policy. The diagnosis-related group (DRG)-based performance payment of hospitals, which was first discussed during the 1980s and more fully implemented in the 1990s, has implications for both goals. Sweden was one of the first European countries to establish a formal institute for Health Technology Assessment (HTA), and Jonsson traces the role that HTA has played over the past 20 years. Pharmaceutical policies are also a main focus of discussion, as Sweden has had experience with both reference pricing and generic substitution of drugs.

1.3

How Are Cost Containment and Efficiency Related?

The term 'cost containment' as used in most discussions in this book refers to reducing or slowing the rate of growth of health care spending. Sometimes, the reference is to health care spending by the government, while in other cases the concern is with overall national health care spending, whether government or private sector. 'Efficiency' implies spending money on that set of uses which yields maximum benefits. It is important to bear in mind that the reason the level of health care spending matters for social welfare is that the money spent on health care has alternative uses. It is *whatever else* could have been produced with this money that represents the true cost (i.e. the opportunity cost) of health care. This link between spending and opportunity cost is why it is important to consider economic efficiency

alongside cost containment. Policies directed at cost containment may have intended or unintended effects on efficiency; policies seeking efficiency may raise or lower health care costs.

Lavis and Stoddard present a useful economic framework for thinking about efficiency [1]. As they note, there are “. . . three levels of efficiency in economic theory: technical efficiency, cost effectiveness and allocative efficiency. Production is technically inefficient or cost-ineffective if the same ‘output’ could be produced with, respectively, fewer or less expensive ‘inputs’; production is allocatively inefficient if an equally valued level or mix of output is possible using fewer resources” ([1], p. 46). In summary, efficiency is both about ‘doing things right’ and ‘doing the right things’.

Economic efficiency may not be the primary goal of government decision makers. Distributional effects are implicit in any policy change. Sometimes, a distributional issue is a stated goal, such as in New Zealand where Maori health is an explicit focus of government policy, or in Sweden where according to health care law ‘human values’ and ‘equity’ must be considered together with cost-effectiveness as the guiding principle for resource allocation. More commonly, differential effects on groups in society are simply part of the political process leading to policy change. Typically, any policy change is likely to have both efficiency and distributional effects. From an analytical standpoint, the key aspect of an efficiency change is a difference in economic behavior. If one can identify specific incentives, which economic actors they affect, and how those actors change behavior resulting in different resource allocation, then one is talking about efficiency.

1.4

Strategies and Their Effects: A Cross-Country Analysis

The list below shows, in summary form, the strategies for cost containment or improved efficiency which the chapter authors have identified. It should be noted that this does not represent a comprehensive or complete list of all possible approaches. There may be other policies which were used in minor areas of health systems or which did not change during the time period considered. It should be noted that only those strategies which the authors brought forward as most important in their country’s policy over the past few decades for addressing the issues of cost containment and efficiency are included in the list:

- **Related to information for decision-making**
 - Analytical process (such as HTA or cost-effectiveness analysis) to guide decisions about the services included
 - Strategic planning
- **Related to price regulation**
 - DRG-type hospital reimbursement
 - Regulation of physician fees
 - Reference pricing of drugs

- **Related to budget setting or supply limitation**
 - Global budgets (entire sector or large part)
 - Capped budgets (specific providers or services)
 - Limit human resource supply
- **Related to financial incentives for individuals**
 - Cost sharing with households for covered services
- **Related to creating market incentives**
 - Increased opportunity for individual to choose insurer or hospital
 - Purchaser-provider split/internal market
- **Related to specific aspects of delivery system**
 - Increased size of insurers/regionalization
 - Waiting list management
 - Performance management
 - Generic substitution of drugs
- **Other**
 - Health promotion/disease prevention

Good *decision-making* requires good information. It is widely recognized by economists that information problems can lead to market failure and that provision or regulation of information is an important government function [2]. So, it is not surprising that government activities in the area of research and analysis, such as economic evaluation, HTA and health policy research figured prominently in the chapters for many countries. Indeed, seven of the eight countries identified government agencies or programs in this area. Most focused on new technologies and the question of which services should be included in the benefit package. A number of authors mentioned the importance of such a role for government since private interests are very active in lobbying for influence and producing analysis to support such lobbying. The main differences among countries are the extent to which a formal analytical framework, such as cost–utility analysis or cost–effectiveness analysis, was relied upon, the degree of independence of the agency from the main health system leadership, and the extent to which recommendations of the agency were mandatory or simply advisory. At one extreme perhaps is England’s National Institute for Health and Clinical Excellence (NICE), which relies extensively on cost–utility analysis and produces guidance which, in the case of a positive recommendation that an intervention is cost-effective, is mandatory for providers to follow. Although Sweden was one of the earliest countries to establish a HTA agency, it does not make recommendations which are mandatory for system participants to follow. In Finland, in recent years, increased funding has been provided to the FinOHTA, but its role remains advisory. In Germany, the information function is located in an institute integrated with joint self-governance, that is a body with provider, insurer and (nonvoting) patient representation. Holland is at a fairly early stage of thinking about the possible role of cost–utility analysis in deciding what to include in the benefit package. Canada has established a national agency for HTA with an advisory

role, while Finland and New Zealand each have broader priority setting or strategic planning functions which touch on the issues of technology assessment embedded in a more general framework.

Little clear evidence was provided on the success of information-related strategies. In Holland, the use of cost-effectiveness analysis for benefit package definition and in New Zealand a new framework for HTA were too recent to have been evaluated. The authors of the chapters on Canada, Finland and Sweden each noted that HTA seemed to have little effect on the actual health system operations because there was no mandate that information be considered or recommendations followed by decision makers. As Raisa Deber put it, the HTA agencies had "... very few policy levers to translate their recommendations into policy". Bengt Jonsson attributed the absence of effect of HTA on policy to "... lack of a systematic approach in the health care system to introduce and evaluate new technology". In Germany, Worz and Busse note that economic evaluation tools are used in decisions about individual technologies. By other criteria, HTA in some countries was very successful. Both Adam Oliver in England and Bengt Jonsson in Sweden pointed to the high scientific quality of studies by NICE and the Swedish Council on Technology Assessment in Health Care (the SBU), respectively, and the international recognition given to those agencies. In England, of course, the guidance of NICE is in part mandatory, so it did have some effect on system operations. However, Oliver details a number of methodological issues and criticisms which continue to generate controversy. One of particular interest in light of the twin foci of this book is the finding that a new technology can not only be cost-effective but also cost-increasing. In this case, a policy decision about whether to adopt the technology implies a choice between the policy goals of cost containment and economic efficiency.

The use of case-based, DRG-type, hospital pricing was one of the most mentioned strategies, and was used by six of the eight countries. In most countries it was initiated at or after the mid 1990s. This type of hospital reimbursement provides an incentive for hospital managers to treat patients at the lowest possible cost and also to treat more patients, as long as a hospital objective is to increase its surplus or reduce its deficits. While this certainly is consistent with reducing technical inefficiency, the cost reduction could also be achieved by diminishing quality; for example, reducing the length of stay below the clinically optimal level. The primary objective of this reform was somewhat different in each case. In several chapters the authors noted the key role of the switch to DRG-type hospital reimbursement, when combined with patient choice, in fostering competition among hospitals. Two types of competition were identified, each with an implicit technical efficiency result. In England, and to some extent in Sweden, competition among hospitals on the basis of quality might be facilitated since, with every hospital receiving the same case-based price, raising quality would represent one way to attract patients. In Holland and Germany the emphasis was more on the ability of case-based pricing to enable competitive negotiation over prices between insurers and hospitals. In Finland, the fact that DRG prices would better reflect real costs was seen as helpful in assuring equity among municipalities in hospital funding. Japan's use of DRG pricing was a pilot program aimed at cost containment as the primary goal.

Evidence on the success of case-based hospital pricing varied considerably among countries. In Sweden, Bengt Jonsson reported that no change in quality was apparent and a clear improvement in hospital productivity was found. Also in Germany there was evidence of increased hospital efficiency when case-based pricing was introduced. Akinori Hasashige reported from Japan that results from the small-scale use of DRG-type pricing were not promising for cost containment. In England, Germany and Holland it is too soon to make an evaluation of choice of hospital as facilitated by case-based pricing.

Price regulation was used for services other than hospitals as well. In Japan, a revision of the comprehensive fee schedule, covering all services, was the primary mechanism of cost containment. In the pharmaceutical area, Sweden, Holland and New Zealand have each used reference pricing for drugs in slightly different forms and with different results. A *reference pricing system* sets the price that an insurer will pay for a drug at the level of the lowest drug in the therapeutic class (or, in the case of Holland, at the average price of drugs in the therapeutic cluster). For a drug priced above that level, the patient will have to pay the difference between that price and the reimbursable price. This of course creates a strong incentive for patients not to choose higher-priced drugs and for drug manufacturers to price at no higher than the reimbursable level. Potential problems include administrative complexity, a decreased incentive for the introduction of new drugs in the country, and no incentive for competition to drive the price below the reimbursable price. Sweden abandoned the reference pricing system in 2002 in favor of a policy of generic substitution because reference pricing was administratively complex, did not achieve long-term savings, and also reduced the entry of new drug sellers. Holland excludes some drugs from the therapeutic cluster. The system seems to work well in New Zealand for cost containment, although there is some concern there about access to new drugs. Finland directly regulates the price of prescribed medicines, with wholesale prices determined administratively.

Supply limitation, which can include global or capped budgets as well as limits on particular resources, is a very direct way to address the cost-containment objective. Budgets have played an important role in the policy of many countries. Typically, countries vary in the extent to which the budget applies to the whole system or to a specific type of provider, how hard or fixed the budget cap is, and how the budget level is determined. In Japan, a budget ceiling set by the Ministry of Finance for the health ministry is a key point of control. There is also a national budget in New Zealand which covers about 65% of total health expenditures, and is allocated to district health boards on a population basis. Currently it is a fairly hard limit, with financial penalties for deficits.

Both Canada and Germany, and also Holland until fairly recently, used capped budgets for individual hospitals as cost-containment strategies. In Canada this led to significant decreases in numbers of hospital beds during the 1990s, in attempts by hospitals to shift costs to nonhospital providers, and also in waiting lists for hospital services. In Germany, capped budgets combined with progress toward case-based pricing for hospital services were associated with some attempts by hospitals to shift costs, to a decreased length of stay and to greater technical efficiency. A cap on total