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Foreword

The OECD Journal on Budgeting is a unique resource for policy makers, officials and researchers in public sector budgeting. Drawing on the best of the recent work of the OECD Working Party of Senior Budget Officials (SBO), as well as special contributions from finance ministries of member countries and from other practitioners, the Journal provides insights on leading-edge institutional arrangements, systems and instruments for the effective and efficient allocation and management of resources in the public sector.

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About this special issue

This *OECD Journal on Budgeting: Special Issue on Health* brings together articles that analyse how effective budgetary and governance frameworks can improve health system performance. An effective budgetary system and strong governance helps ensure government spending on health is allocated to priority areas, avoids under or over spending, checks that funds are accounted for, and helps evaluate whether expenditure had achieved its desired outcomes.

The articles in this special issue on health is a product of the *OECD Joint Network of Senior Health and Budget Officials*. Established in 2011, this Joint Network brings together people who work on the health budget, including representatives from ministries of finance, health, and social security organisations. Over the years, it has provided an effective way for government officials to discuss challenges and solutions to financing effective and efficient health systems.

Since 2015, the Joint Network has worked with non-OECD countries, through three regional networks: Asia; Central Eastern and South-Eastern Europe; and Latin America and the Caribbean. This activity is in partnership with the Global Fund to Fight AIDS, Tuberculosis and Malaria, the World Health Organization, the Asian and Inter-American Development Banks, and the World Bank.

The topics discussed in this special issue respond to areas of interest of both OECD members, and non-OECD countries active in the regional networks. A first article explores the degree of decentralisation in the health sector, how this can affect budgetary decision-making, and coordination challenges between central and sub-national governments. This is followed by an analysis of how performance measurement systems are integral for performance budgeting, by informing allocation decisions or as contextual information. The next two articles provide overviews of budgeting practices for health from the various regional networks covering non-OECD countries. This helps provide internationally comparable data on managing health care budgets.

In-depth analyses of selected budgetary issues in Norway and the United Kingdom complement these regional overviews. The article on Norway summarises the design choices and practical challenges in introducing an innovative quality-based financing scheme across the four regional health authorities. While in the UK, productivity measures of the health system play a role within budget setting, fiscal risk assessment and hospital reimbursement. This special issue concludes by presenting an alternative view on the challenges inherent in performance measurement systems for health.

This *Special Issue on Health* was authored by OECD staff from the Budgeting & Public Expenditures Division and the Health Division. Chris James, Caroline Penn and Andrew Blazey coordinated the materials used in this issue. Guest authors were Anita Charlesworth of the United Kingdom Health Foundation, Joseph White of Case Western Reserve University, and Thomas Neby Baardseng and Axel Miguel Huus of the Norwegian Ministry of Health and Care Services

Decentralisation in the health sector and responsibilities across levels of government: Impact on spending decisions and the budget

by

Chris James, Ivor Beazley, Caroline Penn, Leah Philips and Sean Dougherty
Comments from Andrew Blazey, Valerie Paris and Wojciech Zielinski are gratefully acknowledged.

This article sheds light on the role of subnational governments in health systems across OECD countries. The views in this article show a move away from traditional measures of decentralisation, such as the share of subnational government expenditure of total expenditure, to measures capturing a range of responsibilities in the health sector. The data comes from the 2017 OECD Survey on Performance Measurement Systems in the Health Sector and Responsibilities across Levels of Government. The results show that despite health representing a large sector of subnational government expenditure, central governments still have considerable decision-making power. This power applies to key policy-making and budgeting decisions.

JEL codes: H51, H75, I18

Key words: Decentralisation, subnational, health system

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This report was approved by the OECD Joint Network of Senior Budget and Health Officials at its 7th session on 15 February 2019 and prepared for publication by the OECD Secretariat.

Foreword

A trend towards the decentralisation of government and the ensuing dispersion of power is taking place across OECD countries. This has led to an increased awareness of the effect of decentralisation on the governance and organisation of public services. In the health sector, however, central governments often retain some control to ensure the efficient and equitable delivery of health systems. Therefore, the decision-making ability of sub-central governments on the level of spending and delivery of care is often constrained by central government regulation, legislation and convention.

This article sheds light on the role of subnational governments in the health sector across OECD countries. Looking at the decision-making power of subnational governments across a range of responsibilities helps assess both the level of decentralisation across health systems in the OECD and the autonomy of subnational governments.

The results show that the decision-making powers in health care tend to rest largely with the central government, which has considerable power across many aspects of the delivery of health services. More specifically, central governments are more likely to be responsible for decisions regarding the policy direction and budgetary allocations in health care.

This article is based on data from the 2017 *OECD Survey on Performance Measurement Systems in the Health Sector and Responsibilities across Levels of Government*. An accompanying article looks at the use of performance measurement systems in the health sector. The survey forms part of the work programme of the OECD Network on Fiscal Relations across Levels of Government, and was answered by participants in the OECD Joint Network of Senior Budget and Health Officials. This Joint Network brings together government officials who work on health budgets and financing, including representatives from Ministries of Finance, Health and social security organisations. It provides a forum for government officials to discuss challenges and solutions to the fiscal sustainability of health systems.

Executive Summary

Many health systems in the OECD are decentralised, with subnational governments responsible for the planning, provision and organisation of health services. The level of responsibility of subnational governments in health systems is generally calculated as the share of subnational government expenditure in total government expenditure. The ability of subnational governments to make decisions in health systems, however, is often narrower than implied by this measure, due to restrictions or regulations established at the national level. Therefore, the share of subnational expenditure on health can be a misleading representation of the true decision-making power of subnational authorities.

This chapter provides a more rounded view of the level of decentralisation across health systems, by capturing measures across four dimensions. This includes whether sub-central decision makers exert control over policy objectives and aspects of service delivery, the budget, the civil service, and over standards such as quality and quantity of services delivered. Responsibilities over decisions may lie at the central, regional, or local level, or in some cases, be a shared responsibility across multiple levels of government.

Despite the trend towards the decentralisation of governments, considerable power still lies at the central level over the decisions regarding the delivery of health services. This reinforces the view that most central governments still see it as their role to ensure that health services are delivered efficiently and equitably, even within decentralised systems. This power is particularly strong with regard to policy decisions, such as setting the legal framework for health systems, and deciding on public heath objectives. Central governments across OECD are also often responsible for decisions over the collection and allocation of funds for health care. This can help to ensure fairness in the financial contribution to the health system across the population, as well as the even distribution of resources.

Regional governments play less of a role in health systems across the OECD than central government, with the exception of a few federalist countries. Where regional governments are involved in the decision-making process, the responsibility is often shared with central government, specifically the planning, provision, and maintenance of hospital infrastructure. Overall, local governments have a limited decision-making role in the health sector.

For the majority of countries, subnational expenditure on health is greater than the decision-making responsibilities of subnational governments. This indicates that expenditure shares do not represent the actual spending power of subnational governments. While this chapter makes no attempt to draw conclusions as to the optimal level of decentralisation, or which responsibilities should be devolved to subnational governments, issues can arise if there is misalignment between levels of government. One potential source of misalignment can occur when subnational governments are responsible for financing health systems, but have limited power to raise revenue or plan services. This misalignment caused by separating planning and delivery responsibilities has the potential to create difficulties for subnational service delivery requirements or standards. In addition, in some cases, key decisions in the health sector are shared among multiple levels of government. Frameworks in place should ensure that the responsibilities across levels of government are clearly defined, to avoid duplication or overlap in tasks.

1. Introduction and main findings

Decentralisation is a fundamental characteristic of many health systems, with subnational governments often responsible for the delivery and financing of health services. However, the degree of decentralisation varies markedly across OECD countries. Although it can be a result of historical context, for example the influence of federal or unitary systems, decentralisation is often caused by the need of central government to alleviate budget pressures (OECD, 2015[1]). Decentralisation of the health system may also be viewed as a mechanism to improve health outcomes, through stimulating efficiency or providing a more focused set of health care services based on need.

More broadly, a trend towards the decentralisation of government and the ensuing dispersion of power is taking place across OECD countries. This has led to an increased recognition of the significant effect decentralisation can have in shaping the governance and spending frameworks ascribed to public services and how productivity and service quality are monitored. Most central governments see it as their role to ensure health services are delivered efficiently and equitably, due to a range of economic, social and financial reasons. Therefore sub-central health spending and standards of delivery are often influenced by central government regulation, legislation and convention, which reduces the discretion subnational governments have over health policy and service delivery.

This paper builds on a literature review that was presented at the 2017 meeting of the Network on Fiscal Relations across Levels of Government (Phillips, 2018[2]). The main aim of this paper is to summarise the results of a recent OECD survey. Part 1 of the questionnaire focused on responsibilities across decision makers, while part 2 focused on performance systems in the health care sector. This paper concentrates on the results of part 1, to build an understanding of the roles of the different decision-making powers in the health sector. An accompanying paper analyses part 2, looking at the use of health performance measurement systems. Participants of the OECD Joint Network of Senior Budget and Health Officials – government officials with responsibility for the health budget – answered the questionnaire. This Joint Network brings together government officials who work on the health budget and health financing, including representatives from ministries of finance, health and social security organisations. Over the years it has provided an effective space for government officials to openly discuss challenges and solutions to the fiscal sustainability of health systems.

This paper presents quantitative and qualitative information on the decentralised nature of health systems, mainly hospitals, and how the degree of decentralisation and spending power varies according to different institutional characteristics.

The main trends from the survey results are:

- Decision-making in health care tends to rest largely with the central government on average, which has considerable power across many aspects of the delivery of health services. More specifically, central governments are more likely to be responsible for decisions regarding the policy aspects of health care. They have however, less control over decisions regarding the inputs and outputs or monitoring of health care services. In most countries, subnational governments have vast responsibility for input-related matters, such as determining which services can be outsourced and deciding on the contractual status of staff. On average, local governments have little decision-making power in the health sector, but have more responsibility with regard to health inputs.

- The role of the central governments in health care does not vary markedly between federal and unitary countries. However, subnational governments, especially regional governments, can still have significant shared decision-making responsibilities. Such subnational governments tend to have more decision-making power in federal than in unitary countries.

2. Questionnaire on responsibilities and performance in health systems

A recent survey was designed to collect information from OECD and partner countries on decentralisation and decision-making power, as well as the monitoring and measurement arrangements in health care across levels of government. The questionnaire comprised approximately 70 questions, including checkboxes with optional comments sections and multiline answer responses. The questionnaire was succinct to avoid a large administrative burden on participating countries. Respondents comprised of government officials from ministries of finance and health who are directly engaged in their country's budget for health.

2.1. Background and definitions

Governments play a critical role in providing health care and other public services, which are needed to support economic growth (Lau, Lonti and Schultz, 2017[3]). Often, subnational governments are responsible for delivering health services, or central governments delegate this responsibility to subnational actors. In the survey, subnational governments were defined as sub-central levels of government. Regional governments are upper-tier municipalities including states, territories or provinces. Local governments are the lowest tier of government including counties, cities, districts, municipalities, councils or shires. In the context of countries with only two levels of government, the lower level was defined as local government.

The main characteristic of a decentralised government is the existence of several governing bodies, which have the power for political, administrative or budgetary decision-making at a regional or local level. Three levels of government are defined: central/federal, state/province/region, and local/municipality. Generally, the decision maker is a level of government. However, it can also include decision-makers at the provider level. Indeed, survey respondents were also asked to specify other entities that were involved in decision-making, for example, hospitals or care providers.

Different types of decentralisation include fiscal decentralisation (the transfer of financial resources in the form of grants and tax raising powers to subnational units of government); administrative decentralisation (the functions of central government are shifted to geographically distinct administrative units); and political decentralisation (where powers and responsibilities are devolved to elected subnational governments). The spending autonomy concept encompasses some facet of all these types of decentralisation, but mainly focuses on administrative decentralisation.

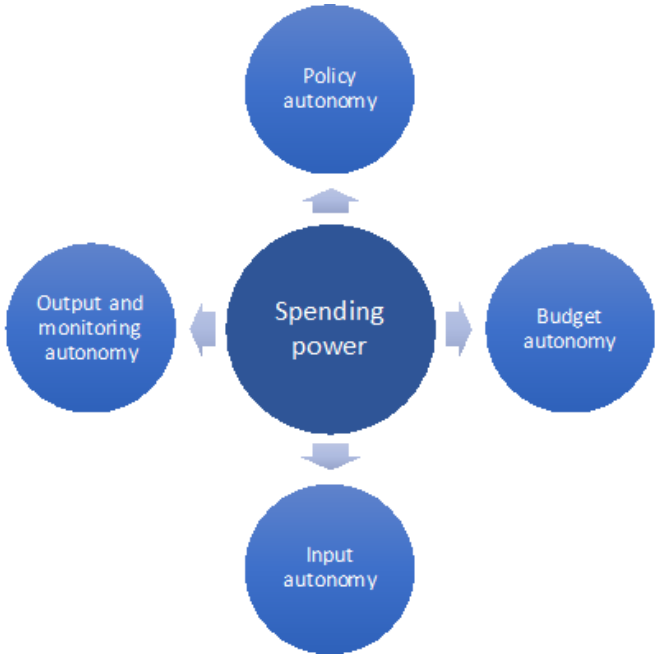
Accurately comparing and measuring decentralisation across countries is difficult. Part 1 of the questionnaire asked about the roles and responsibilities of health care service delivery between levels of government, in order to gauge the spending power of subnational actors. Spending power describes the ability of subnational decision-makers to shape, determine and change their policy setting. It describes the level of control or authority of subnational decision-makers over policy and budgeting decisions, including deciding how services are organised, how funds are allocated, the ideal level and quality of inputs and

outputs and how service delivery is measured and monitored. Spending power of subnational actors is often restricted by a multitude of barriers on subnational decision makers across various aspects of health care, that reduce the freedom governments have over their own spending. Barriers include mandatory spending, regulatory constraints, minimum national standards on inputs and outputs, or budget conventions. In addition, some subnational responsibilities can be mandatory through legislation or regulation while others may be optional, but expected.

Spending power can be classified into four major facets of autonomy. These four aspects of autonomy aim to provide an overall picture of the spending power of a subnational decision maker. These dimensions are shown in Figure 1 (Bach, Blöchliger and Wallau, 2009[4]).

1. Policy autonomy: Do sub-central decision makers exert control over main policy objectives and main aspects of service delivery?
2. Budget autonomy: Do sub-central decision makers exert control over the budget (e.g. is budget autonomy limited by upper level regulation)?
3. Input autonomy: Do sub-central decision makers exert control over the civil service (personnel management, salaries) and other input-side aspects (e.g. right to tender or contract out services)?
4. Output and monitoring autonomy: Do sub-central decision makers exert control over standards such as quality and quantity of services delivered and devices to monitor and evaluate standards, such as benchmarking?

Figure 1. Classification of spending power



Source: Adapted from Bach et al.

Federal countries have constitutionally protected subnational governments, which have their own parliament, government, and large competences. Quasi-subordinate levels in unitary countries have no constitutional powers or responsibilities, and can only exercise

the powers that the central state level delegates, leaving greater scope for intervention by central governments (Phillips, 2018[2]) (OECD, 2018[5]). The classification of the participating countries into federal and unitary categories is shown below in Table 1.

2.2. Scope of questionnaire and responses

The questionnaire included two main parts. Part 1 of the questionnaire asked about the roles and responsibilities of health care service delivery between levels of government, generally focusing on hospitals. Table 1 shows the countries that responded to part 1 of the questionnaire. The second part of the questionnaire covers national performance measurement systems, and the results of which are discussed in a subsequent paper.

The survey was sent to countries in early November 2017 with an initial due date by January 2018. Most countries responded to the survey at the beginning of 2018 with all responses received from participants by May 2018. Twenty-nine OECD countries and three partner countries responded to the survey part 1 of the survey.

Table 1. Country respondents classified into federal and unitary countries

Federal countries	Quasi-federal	Unitary countries
Australia	Spain	Chile
Austria		Czech republic
Belgium		Denmark
Canada		Estonia
Germany		Finland
Italy		Greece
Mexico		Iceland
Switzerland		Ireland
Argentina		Japan
		Latvia
		Lithuania
		`Luxembourg
		Netherlands
		New Zealand
		Norway
		Poland
		Slovenia
		Turkey
		United Kingdom
		Kazakhstan
		Malta

Source: OECD/UCLG (2016), Subnational Governments around the world: Structure and finance.

3. Spending and institutional characteristics in health care

3.1. Organisation of health financing and coverage arrangements

Health care coverage arrangements vary across OECD countries, with coverage organised within three main types: national health systems (including those with distinct localised services), single health insurance funds or multiple health insurance funds/companies. In

OECD countries with insurance-based systems, health insurance is compulsory in all countries except the United States.

Table 2 summarises the main source of basic health care coverage across OECD countries, based on results from the latest OECD Health Systems Characteristics Survey:

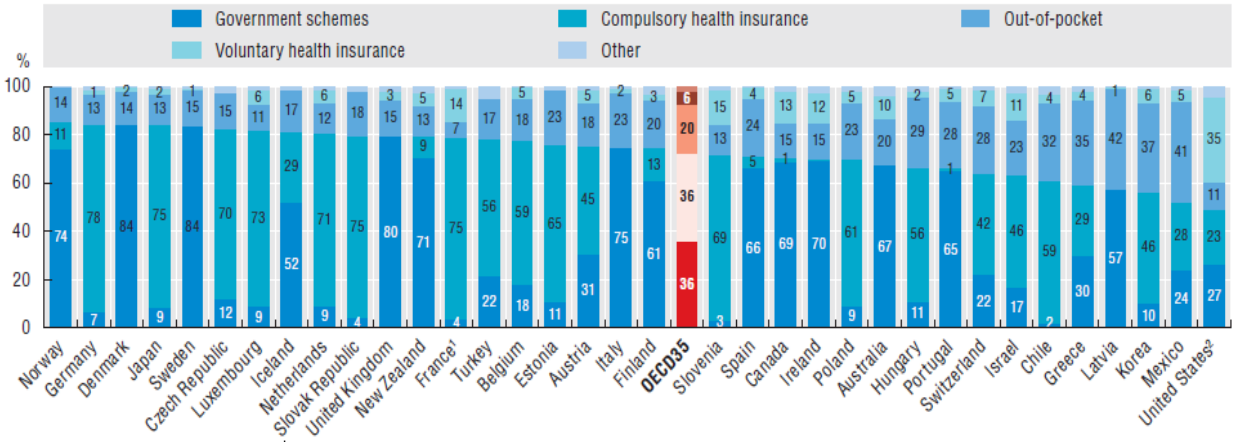
Table 2. Main source of basic health coverage across OECD and other surveyed countries

National health system (including those with distinct localised services)	Australia, Canada, Denmark, Finland, Iceland, Ireland, Italy, Latvia, New Zealand, Norway, Portugal, Spain, Sweden, United Kingdom
Single health insurance fund (single payer)	Estonia, France, Greece, Hungary, Korea, Lithuania, Luxembourg, Poland, Slovenia, Turkey
Multiple health insurance funds or companies	Austria, Belgium, Chile, Czech Republic, Germany, Israel, Japan, Mexico, Netherlands, Slovak Republic, Switzerland, United States

Source: OECD 2016 Health Systems Characteristics Survey, authors' analysis of survey results. Full results of this survey available here: https://qdd.oecd.org/subject.aspx?Subject=hsc.

Government schemes and compulsory health insurance (whether organised as single or multiple funds) together accounted for almost 75% of all health care spending in 2015, on average across the OECD (OECD, 2017[6]), shown on Figure 2 below. In Denmark, Sweden and the United Kingdom, central or subnational governments financed 80% or more of all health spending. In Germany, Japan, France and the Slovak Republic more than 75% of health expenditures were paid through compulsory health insurance. Only in the United States, government or compulsory health insurance financed less than half of all health spending.

Figure 2. Health expenditure by type of financing, 2015 (or nearest year)



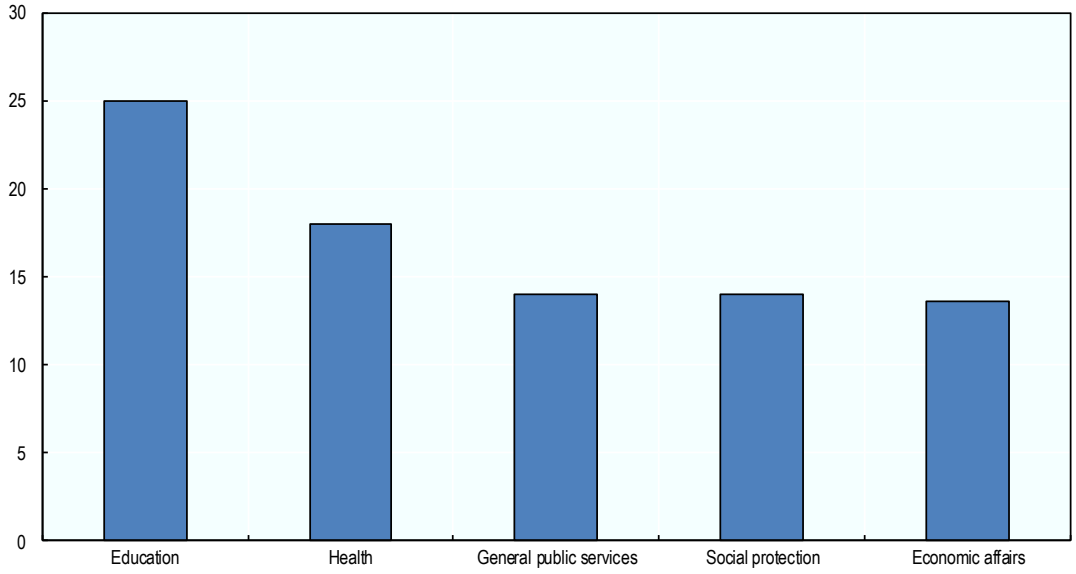
Source: OECD Health at a Glance 2017.

3.2. Decentralisation of health spending by expenditure shares

Data on government spending by level of government can indicate the level of subnational spending power. The degree and type of subnational government spending is generally calculated as the subnational expenditure share as a proportion of total expenditure and the breakdown of subnational expenditure according to national accounts using the Classification of Functions of Government (COFOG). While these indicators do not capture the complexity of fiscal arrangements, they can give a first impression of how much fiscal power regional and local jurisdictions enjoy (Blöchliger and King, 2006[7]).

The categorisation of subnational government expenditure by sub-sector provides a measure of the role of subnational government. Health represents the second largest sector for subnational government expenditure after education, accounting for 18% of subnational expenditure in 2015 (Figure 3)

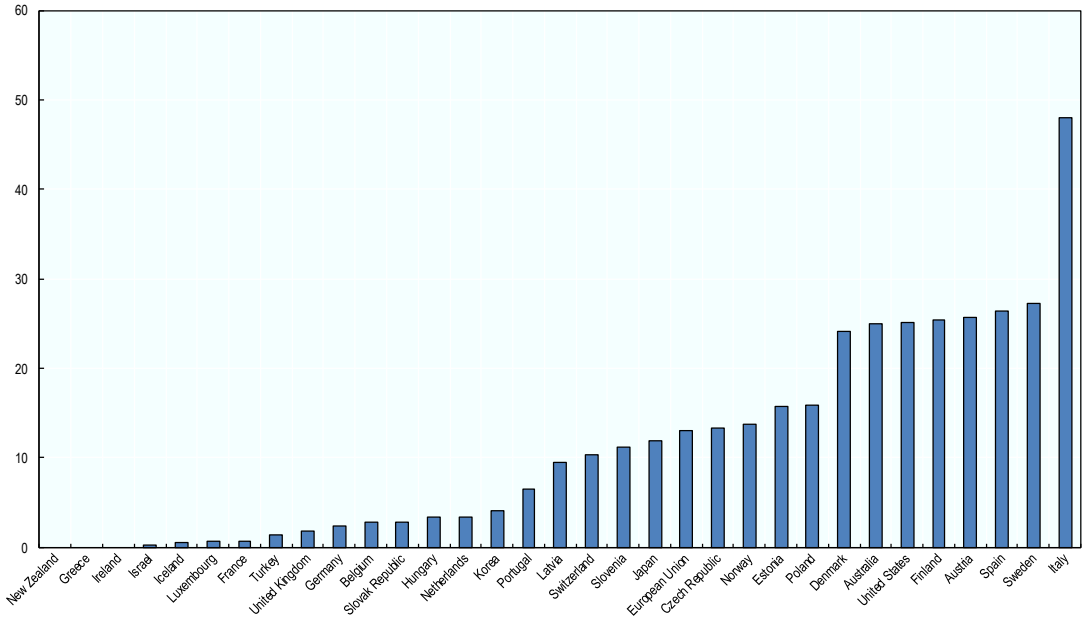
Figure 3. Subnational expenditure by economic function (%, 2015)



Note: Subnational expenditure by function are shown as a percentage of total subnational expenditure. OECD weighted average (weighted by population size of each country). Excludes Canada, Mexico and Chile. Other expenditure data include defence; public order and safety; housing and community amenities; recreation, culture and religion; environment; social protection expenditure includes both capital and current expenditure. Source: OECD Regions and Cities database (2018).

Figure 4 shows subnational expenditure shares as percentage of total subnational expenditure for OECD countries. In Austria, Finland, Italy, Spain, Sweden and the United States, subnational health spending exceeded 25% of total subnational expenditure, suggesting that health costs can have a significant impact on subnational government budgets.

Figure 4. Subnational health expenditure as a percentage of total subnational expenditure (2015)



Note: OECD weighted average (weighted by population of each country). Excludes Canada, Mexico and Chile.
Source: OECD Regions and Cities database (2018)

In the health sector, subnational expenditure on health accounted for 24% (unweighted average) of public health spending across OECD countries in 2015, the average, however, hides wide variations across counties. Based on expenditure shares, health remains highly centralised in many countries, including Greece, Ireland, New Zealand, Israel, Luxembourg, Turkey, and France. In contrast, subnational government health spending exceeds 85% of total public health spending in Sweden, Spain, and Switzerland, where wide responsibilities for healthcare services and financing are decentralised to the municipal, regional or health district levels (OECD, 2018[5]).

Mechanisms for health financing across levels of government vary. In Australia for example, the central government funds health care in accordance with national agreements, which have been established between the central and regional governments. Regional governments also fund health care through taxes and own-source revenue, in accordance with their own legislation. In Finland, the central government is responsible for collecting general taxes, with some funding being used for health care. Additionally, a specific social security fee is collected from all employees to finance specific health care costs provided through the statutory sickness insurance scheme.

By contrast, health is more decentralised in Switzerland. Regional and local governments are sovereign as to the allocation of the taxes they collect. Generally, taxes are not earmarked for health care provision, except with regard to certain areas like a share of central government excise duties on tobacco products for public health purposes and a centrally set contribution from health insurances for prevention activities. Health insurance premiums are set by the privately administered health insurers. However, the Federal Office of Public Health regulates premiums and approves all premium levels on a yearly basis.

4. Decentralisation of decision-making autonomy in the health sector

4.1. Introduction

The degree of subnational government spending power is generally depicted as the subnational expenditure share as a proportion of total government expenditure. This holds when looking at general government expenditure, as well as for health expenditure. However, because of barriers and restrictions on subnational decision-making, including earmarked grants and mandatory spending and national standards, simple expenditure shares can misrepresent the true level of subnational decision-making autonomy. This makes accurately comparing and measuring decentralisation across countries difficult, far beyond the purely statistical challenges that cross-country comparisons face.

The following section focuses on the survey data gathered on the degree of decentralisation of decision-making in the health care sector. This part of the questionnaire asked respondents to detail which level of government is responsible for particular decisions in health care, generally in regard to hospitals. Around 50 questions were asked in this part of the survey, relating to the allocation of responsibilities for around 50 key decisions in the delivery of health care. Ten questions were related to policy autonomy, 17 decisions related to budget autonomy, 9 related to input autonomy, and 9 related to input and output autonomy.

Key decision-making responsibilities in health care include the right to amend regulations, grant subsidies and concessions, finance capital and medical staff, and allocate funding across hospitals. More specifically, questions asked in the survey included which level of government is responsible for: financing new hospital buildings; setting the level of taxes that will be earmarked for health care; and setting the legal framework (e.g. laws establishing objectives, rights and obligations in hospitals).

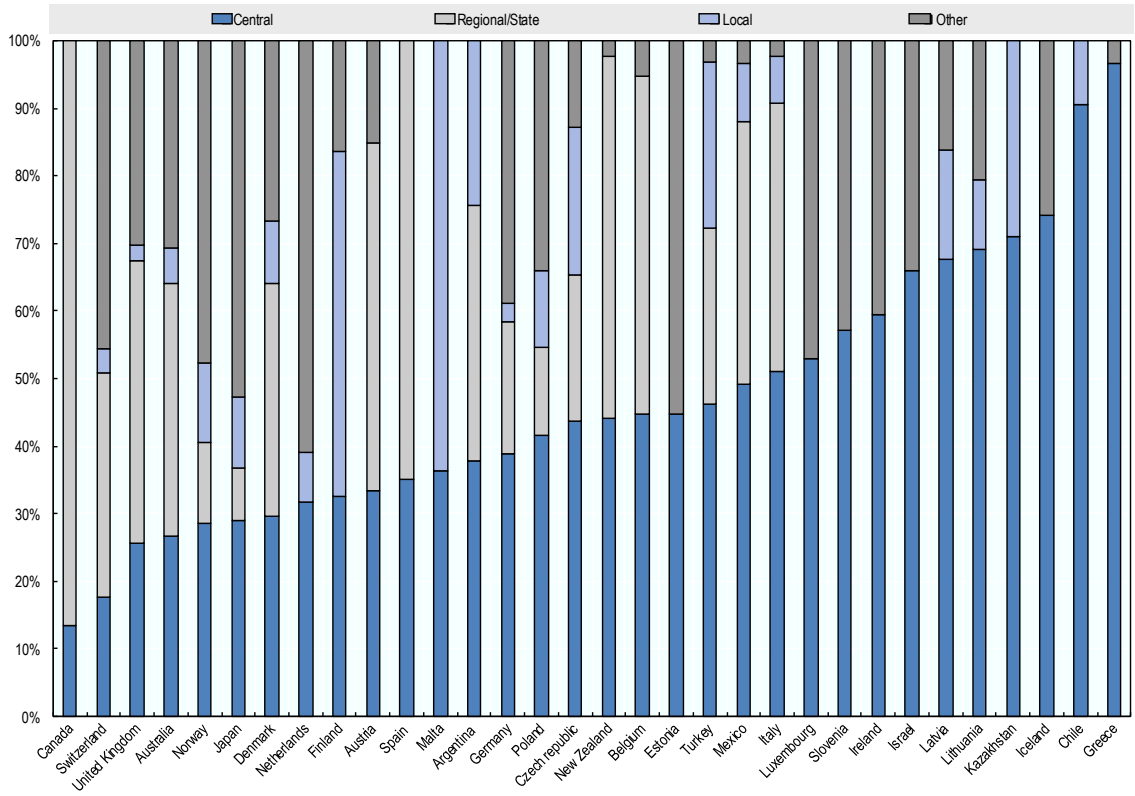
4.2. General results

4.2.1. Responsibilities across levels of government

Figure 5 shows the allocation of responsibility for decisions in health care, across respondents. It is calculated as the number of times a country responded that a level of government was responsible for a health decision, and then shows these sub-totals as a proportion of the total ‘yes’ responses, for each country.

Decision-making power across many facets of the health sector in surveyed countries is strongly skewed towards the central government. This strong centralisation of health responsibilities is despite a general trend towards decentralisation of health care over the last 20 years, which has transferred competences to the subnational level. However, some OECD countries such as Australia, Germany or Sweden, have recentralised over the last 20 years (OECD, 2018[5]). On average, central governments are nearly twice as likely to be responsible for the health decisions surveyed, compared with regional governments, and four times more likely compared with local governments. As shown in the figure below, health remains a centralised responsibility in several countries, but most strongly in Greece, Chile and Iceland. At the other end of the spectrum, the subnational government is habitually responsible for health decisions in Canada, Switzerland and Spain.

Figure 5. Decision-making power in the health sector, across levels of government (proportion, in %)



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Reponses to 'other' gave the opportunity for countries to express the presence of any other significant decision-making power across areas of spending power. Responses to other included public and private health insurance funds, and public and private service providers, particularly hospitals.

Table 3 shows the proportion of decisions that were the responsibility of each level of government. For example, in Greece, central government was responsible for 94% of health care decisions, showing the high degree of centralisation. In many countries, decisions were shared across levels of government. In Mexico, central and regional governments were responsible for 91% and 72% of decisions respectively – indicating that many decisions are a shared responsibility between these two levels of government. Shared responsibilities are discussed more in Section 4.4.

Table 3. Country responses (% of responses ticked for each level of government)

	Central	Regional	Local	Other
Argentina	97	97	63	0
Greece	94	0	0	3
Turkey	94	53	50	6
Chile	91	0	9	0
Israel	91	0	0	47
Mexico	91	72	16	6
Kazakhstan	84	0	34	0
Lithuania	84	0	13	25
Iceland	81	0	0	28
Latvia	78	0	19	19
Slovenia	75	0	0	56
Czech republic	75	38	38	22
Ireland	69	0	0	47
Italy	69	53	9	3
Poland	69	22	19	56
Australia	63	88	13	72
New Zealand	59	72	0	3
Denmark	59	69	19	53
Luxembourg	56	0	0	50
Belgium	53	59	0	6
Estonia	53	0	0	66
Finland	50	0	78	25
Germany	44	22	3	44
Netherlands	41	0	9	78
Malta	38	0	66	0
Norway	38	16	16	63
Austria	34	53	0	16
Japan	34	9	13	63
United Kingdom	34	56	3	41
Switzerland	31	59	6	81
Spain	25	81	0	0
Canada	16	100	0	0

Note: Figures represent the proportion that a country indicated that a level of government was responsible for each different decision in health care. Responses are not mutually exclusive and several levels of governments can share one responsibility.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

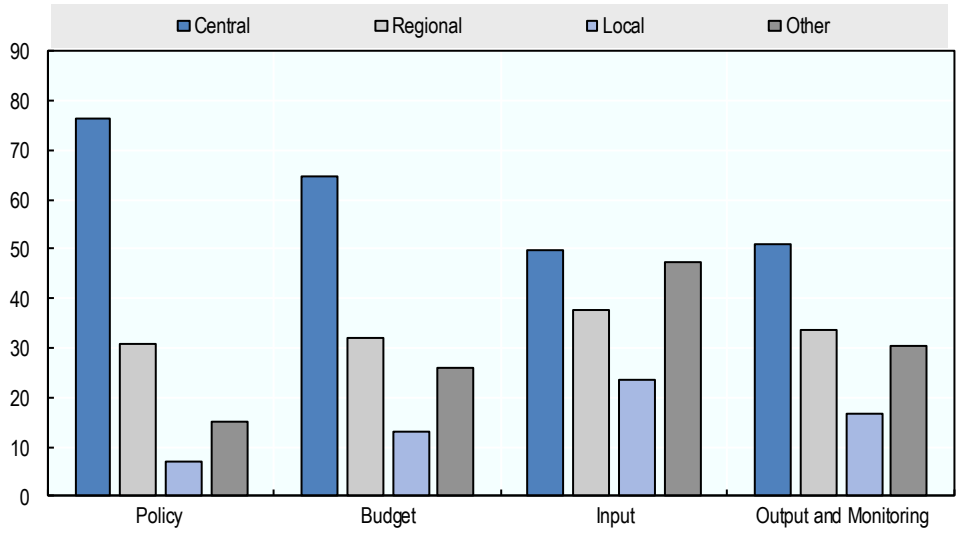
4.2.2. Responsibilities across area of spending autonomy

Areas of spending power consist of policy, budget, input, and output and monitoring. As shown in Figure 6, central governments still have considerable spending autonomy. However, they are most likely to be responsible for decisions regarding the policy and budgetary aspects of health care, and have less control over decisions regarding the inputs and outputs as well as monitoring of health care. Decisions for input-related matters, such as determining which services can be outsourced and deciding on the contractual status of

staff, fall more so on subnational governments, especially for regional governments in federal countries.

Local governments have little decision-making power in the health care sector, but have more responsibility with regard to health inputs, namely, deciding on hospital infrastructure maintenance and planning hospital infrastructure. Financing the current spending of hospitals and financing new high-cost equipment are more likely to be the responsibility of local governments in federal countries.

Figure 6. Responsibilities across areas of spending autonomy

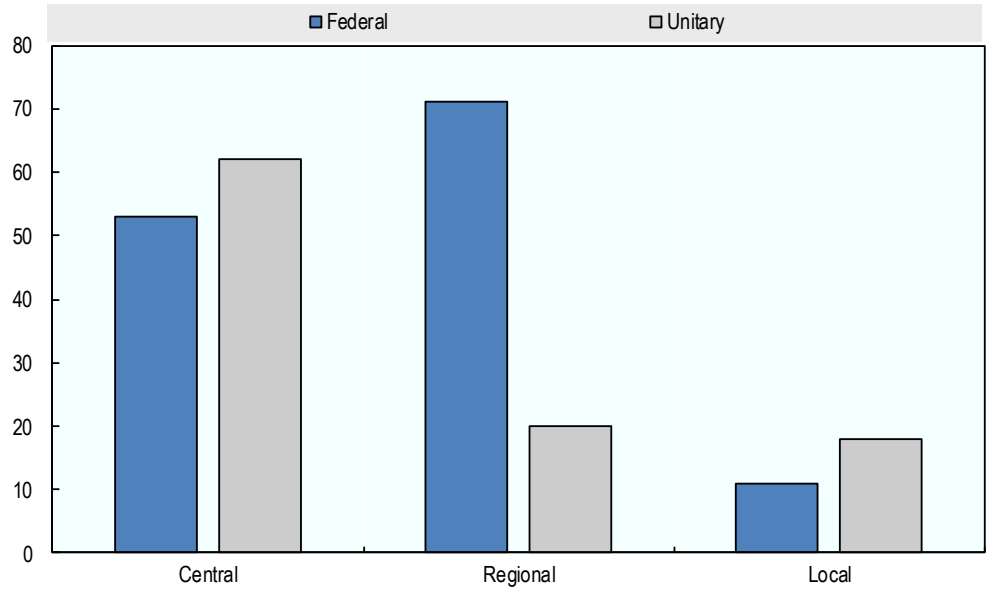


Note: Graph shows the average level of responsibility across policy, budget, input, and output and monitoring autonomy across all decisions, for central, regional, local, and other decision makers. The breakdown of individual decisions is given in Table A.A.1 in the annex.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

4.2.3. Responsibilities across federal and unitary countries

The role of the central governments in health care does not vary markedly between federal and unitary countries (Figure 7). However, subnational government decision-making power tends to be higher in federal than in unitary countries. On average, regional governments in federal countries are responsible for 71% of decisions, compared to 20% in unitary countries.

Figure 7. Responsibility across federal and unitary countries (%)



Note: The graph shows levels average level of responsibility in central, regional, and local governments across all health care decisions.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018)

4.3. Responsibility by area of spending autonomy

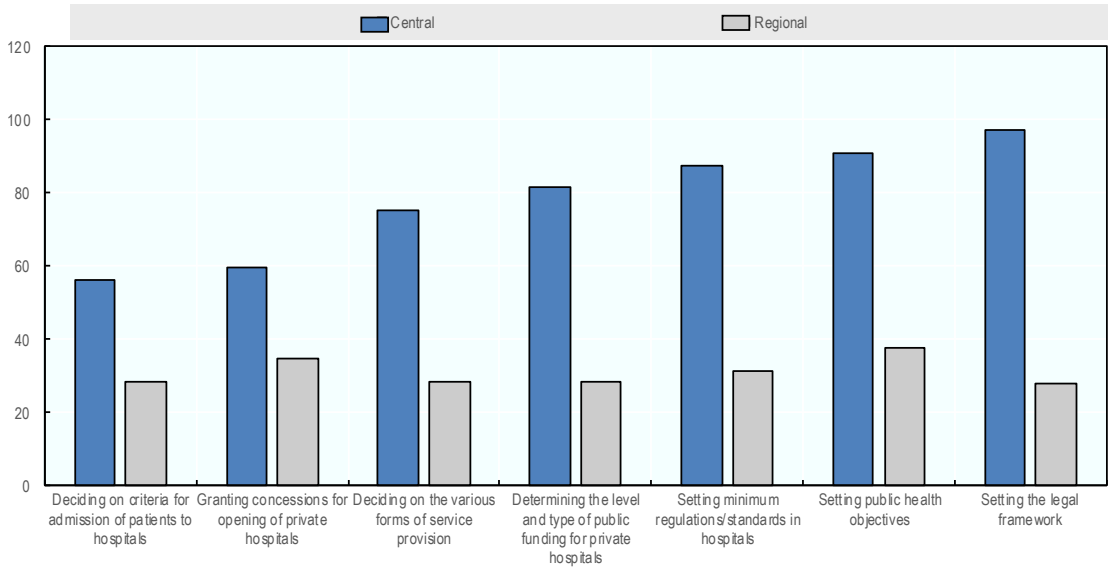
4.3.1. Policy decisions in health care

The majority of survey respondents stated that the central government is responsible for key decisions about policy (Figure 8). Specifically, setting public health objectives was a central government responsibility and a regional government responsibility, for 91% and 38% of respondents respectively. Setting the legal framework (*e.g.*, a law establishing objectives, rights and obligations in hospitals) was the responsibility of the central government for 97% of respondents, and deciding on the various forms of service provision (public vs. private provision) was the responsibility of the central government and the regional government for 75% and 28% of respondents respectively.

Setting minimum regulations/standards in hospitals was the responsibility of the central government in many countries (88% of respondents), excluding Belgium, Canada, Norway and the United Kingdom. Explicit minimum standards for service coverage, whether social and/or geographical, promote equal access across all citizens. Belgium's current framework of minimum standards has been in place since the '6th state reform', of which the last stage was finalised in July 2014. This reform involved transferring some competences (mainly for elderly residential care, mental health, recognition of medical professions and hospital standardisation) in health care from the central government to communities. However, even if competences in some fields were transferred, the 'playing field' for the communities is still subject to a national co-ordination or framework of rules. For example, regional rules for hospital standards cannot alter rules for social security, or the exercising of medical professions, or the financing rules of hospitals.

Figure 8. Responsibilities for key policy decisions between central and regional governments (%)

Proportion of respondents that stated it was the responsibility of central or regional governments



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

4.3.2. Budgeting decisions in health care

Compared to policy decisions, key budgeting decisions were more evenly split across decision-makers, but central governments have considerable power (Figure 9). Setting the level of taxes earmarked for health care and setting the base and level of social contributions/premiums for health care was the responsibility of the central government for 91% of respondents.

The same percentage of respondents answered that the central government was responsible for designing and implementing a scale for user contributions, as well as differentiating user contributions according to the social situation of users. User contributions cover all individual payments to service providers, including private co-payments through insurance schemes, in return for a service. User contributions for health services can potentially contain excess demand, reducing pressure on government budgets and improving the quality of public services. However, user fees may be less suited for demand management when services are not particularly price sensitive, which may be the case for acute hospital care (Blöchliger, 2008[8]). Indeed, there is an abundance of evidence demonstrating that excessive user fees and other out-of-pocket payments can impede access to care and cause financial hardship (WHO, 2010[9]).

Deciding on the resource allocation between sectors of care, in terms of hospital care, outpatient care, long-term care etc… was more evenly split with 66% and 39% of respondents suggesting that it was a central and regional government responsibility respectively.

The central government is often responsible for regulating private hospital activity and determining the level and type of public funding for private hospitals. In Belgium, the definition of 'hospitals' is officially regulated and private health sector providers must be not-for-profit. For-profit institutions can enter the market but do not receive direct public financing. In Denmark, if public hospitals are unable to offer a service within a given timeframe determined by the central government, public hospitals may refer the patient to a private hospital, and the public sector pays the costs. In addition, private hospitals offer treatments funded by user fees or private insurance.

Budgeting decisions concerning hospitals were more evenly shared across decision-makers compared to other budgeting responsibilities (Figure 9). Financing new hospital buildings was a central government responsibility and a regional government responsibility, for 59% and 47% of respondents respectively. In Italy, there is a specific national fund for investment in health care that can be used for the financing of new hospital buildings. Previously, regions used to finance new hospital buildings through public-private partnerships. Financing new high-cost equipment was the responsibility of the central government for 50% of respondents, the responsibility of regional governments for 47% of respondents, and the responsibility of the other entities, like hospitals, for 41% of respondents. Similarly, financing the maintenance of existing hospitals was a central government responsibility and a regional government responsibility, for 50% and 47% of respondents respectively. Financing hospital current spending was a central government responsibility (50%) and a regional government responsibility (34%). As would be expected, these key financing decisions are more likely to be the joint responsibility of central and regional governments in federal countries

Many countries responded that entities other than central, regional or local governments were responsible for budgeting decisions in hospitals. These key decisions, for example financing hospital staff's salaries, are often made internally by the individual hospital. For example in Switzerland, most hospitals have sufficient autonomy to decide on their own investments, but regional government are able to influence decisions through their service plans.

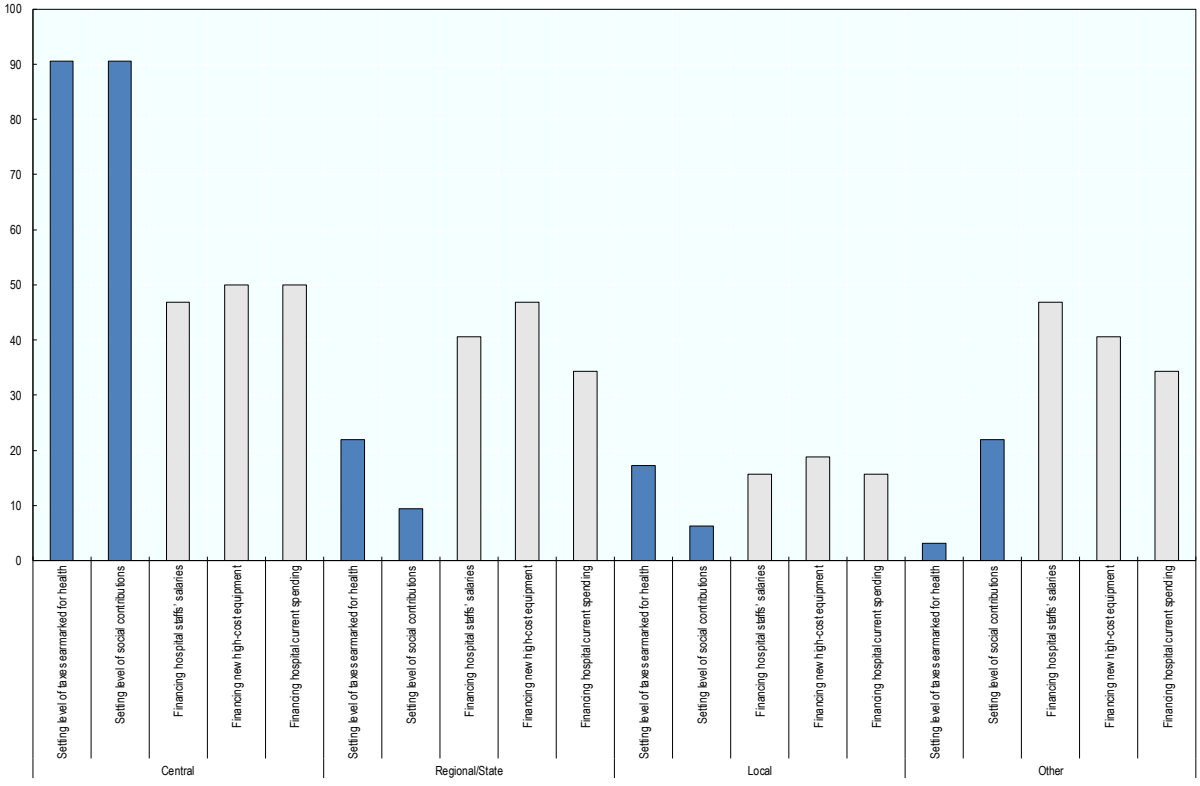
Figure 10 shows the responsibility of regional governments in key budgeting decisions in federal and unitary countries. In federal countries, regional governments have a high level of responsibility for key financing decisions especially concerning hospital decisions, such as financing new hospitals, and hospital maintenance.

Despite greater decision-making power in subnational governments, central government has much of the responsibility over key budgeting decisions. Some of these key budget decisions, like setting the level of taxes, and setting the total budget for public health care, can restrict the revenue-raising potential of regional governments. This creates a mismatch, where the central government has greater influence with regard to revenue-raising decisions, while regional governments are more often responsible for financing, especially concerning hospitals. This mismatch suggests that the traditional indicator of decentralisation, measured as the subnational expenditure share as a proportion of total expenditure, overestimates the true level of budget autonomy in some, mainly federal, countries.

When roles and responsibilities across politically elected governments are blurred or there are soft budget constraints, such a misalignment of decision-making powers can lead to inefficiencies and excessive borrowing. This issue may be enhanced if there is a high level of political decentralisation, but subnational actors lack spending autonomy. Research suggests that this can be overcome when the financial implications of spending decisions are internalised within a jurisdiction, which can be achieved by assigning revenue autonomy to sub- national governments (Asatryan, Feld.L.P. and Geys, 2012[10])

Figure 9. Responsibilities for key budgeting decisions in across levels of government (%)

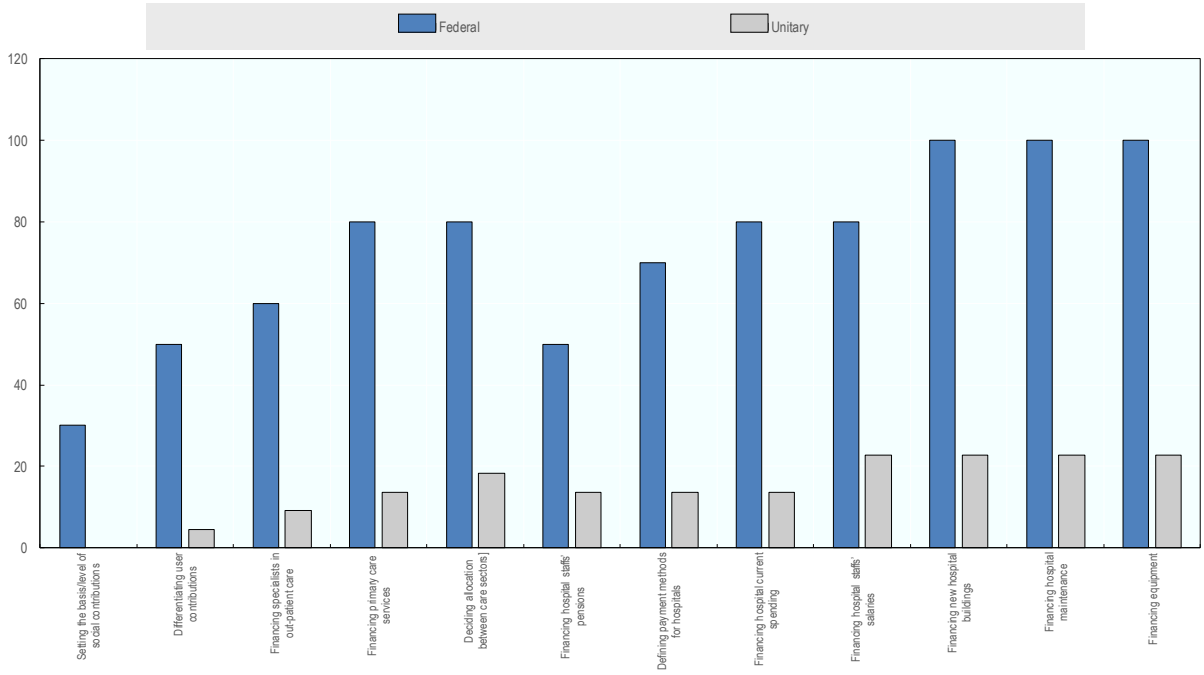
Proportion of respondents that stated it was the responsibility of central, regional, or local governments or other



Note: The graph shows the responsibility of key budgeting decisions. The darker bars show decisions concerning hospitals.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Figure 10. Regional government responsibility for key budgeting decisions, by federal and unitary countries (%)

Proportion of respondents that stated it was the responsibility of regional governments



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

4.3.3. Labour and input decisions in health care

Labour and input decisions include the hiring and firing of staff, determining working conditions, establishing training rules and planning of necessary hospital infrastructure. The responsibility for these decisions was more evenly shared across levels of decision-makers (Figure 11).

The hiring and firing of staff was the responsibility of the central government for 31% of respondents, the responsibility of regional governments for 31% of respondents, and the responsibility of the other entities, like hospitals, for 59% of respondents. Determining working conditions (salary scales, pension rules, and working hours) was often a shared responsibility across decision-makers, and was a central government responsibility, a regional government responsibility, and the responsibility of other entities, for 88%, 34% and 47% of respondents respectively. In Australia, the relevant employer determines working conditions but must do so in accordance with legislated conditions of the central and regional governments. In the Netherlands, health care providers are responsible for determining working conditions but must comply with collective labour agreements.

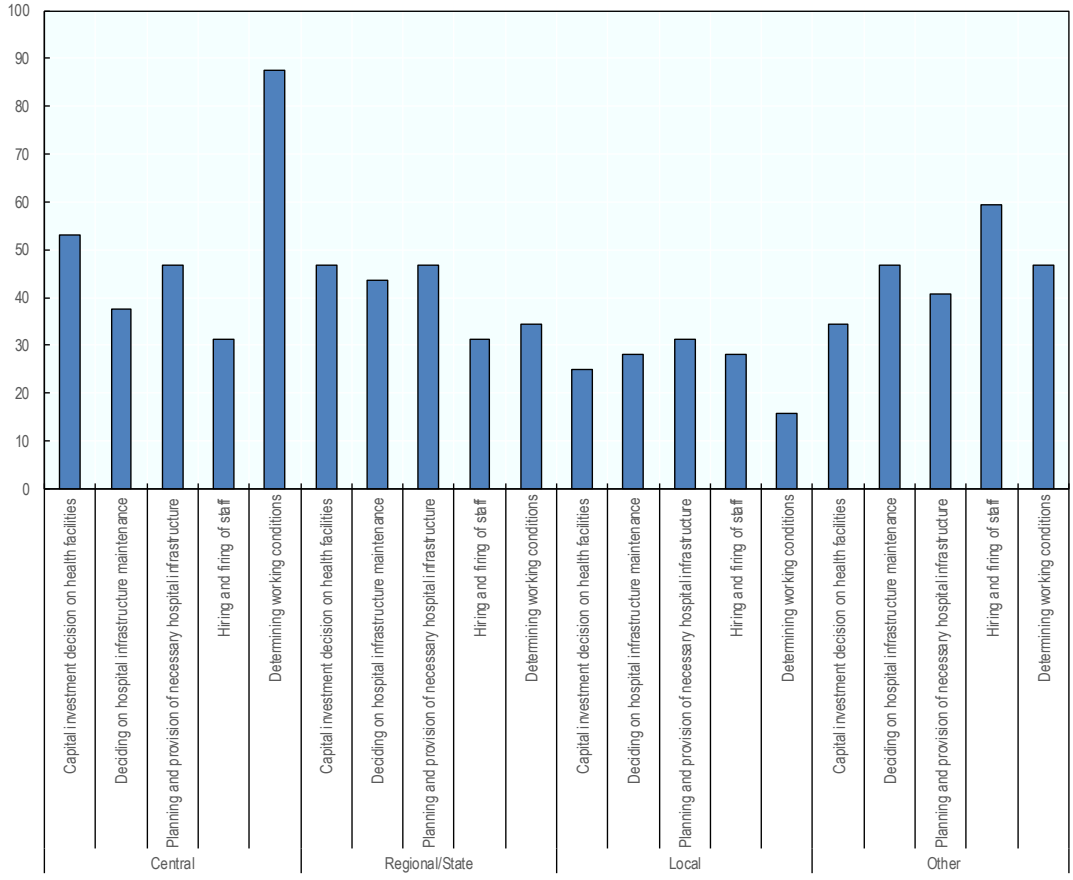
Setting remuneration methods for physicians was a central government responsibility, a regional government responsibility, and the responsibility of other entities for 78%, 28% and 31% of respondents respectively. This shared responsibility generally involves the central government establishing an overall framework for remuneration, with joint responsibility from sub-central decision makers like insurers, healthcare institutions or doctors' associations. In the Netherlands for instance, the national market authority provides the regulatory framework for remuneration, which is implemented with considerable discretionary power by private insurers. Independent physicians benefit directly from this and remuneration of employed physicians also depends on their employer's policy. Physician remuneration is also often the responsibility of regional governments in federal countries.

Local governments have little overall power regarding health care decisions, but were most likely to be responsible for input related decisions. In particular, these decisions include the planning and provision of necessary hospital infrastructure and infrastructure maintenance, and the hiring and firing of staff.

National accounts expenditure shares also suggest that subnational governments play a critical role as employers, and financing staff costs. Staff spending is the largest expense in subnational government budgets, representing on average 36% of expenditure in the OECD area, and ranging from less than 20% in New Zealand to more than 50% in Norway. On average in the OECD area, subnational governments undertook 63% of public staff expenditure in 2014 (OECD, 2018[5]). High budget shares for staff spending seem to reflect the fact that subnational actors in several countries have the responsibility, delegated from the central government, for the payment of public workers' salaries, including medical staff.

Figure 11. Responsibilities for labour and input decisions, across levels of government (%)

Proportion of respondents that stated it was the responsibility of central, regional, or local governments or other



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

4.3.4. Output and monitoring decisions in health care

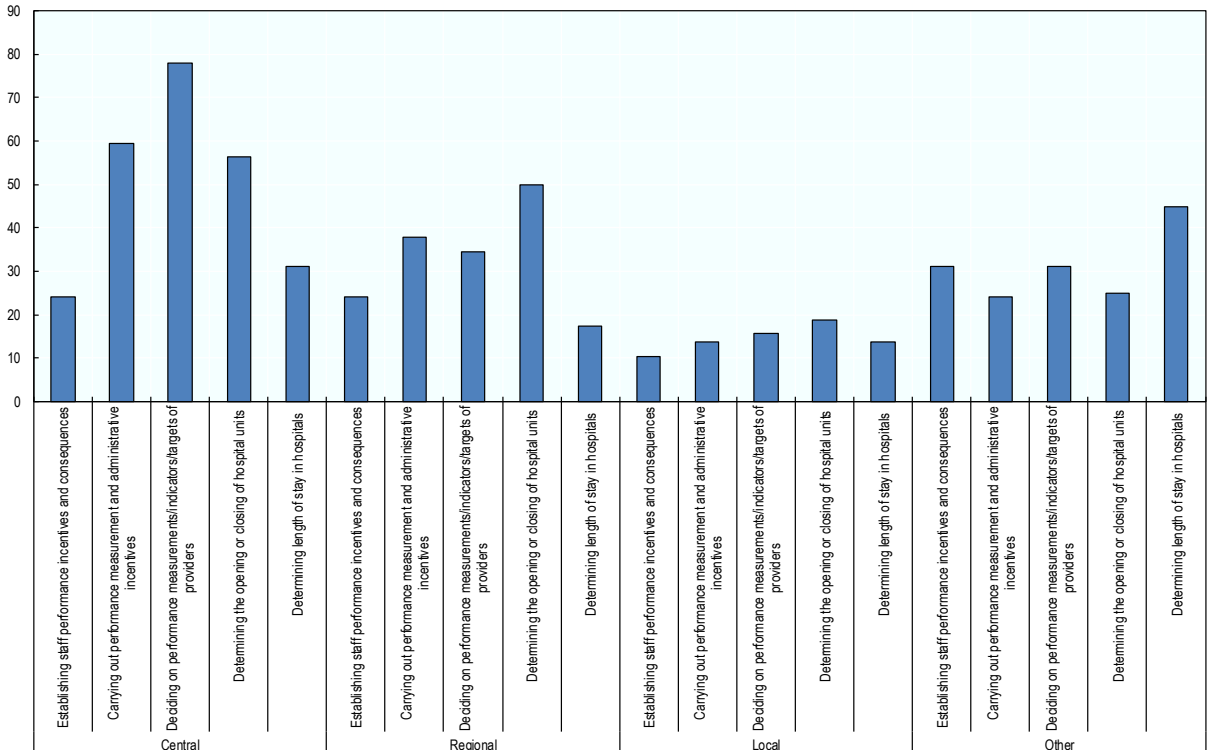
Key output and monitoring decisions in health care are shown in Figure 12, which includes the breakdown of responsibilities across levels of government. Output decisions, especially regarding hospitals, were split across decision makers. For example, determining the opening or closing of hospital units was a central government responsibility and a regional government responsibility for 56% and 50% of respondents, respectively. Determining the allotment of hospital beds across hospitals was the responsibility of the central, regional, and local governments for 50%, 38%, and 22% of respondents respectively, and the responsibility of other entities for 31% of respondents. Determining the size of health care districts was the responsibility of the central government for 47% of respondents, and the responsibility of regional governments for 38% of respondents

Monitoring decisions were more likely to be the responsibility of central government. Deciding on performance measurements, indicators and targets of service providers was a central, regional and local responsibility for 78%, 34% and 31% of respondents, respectively. Monitoring of service provision (does supply meet users' needs, and is access for users from different regions or different social groups ensured) was the responsibly of

central government for 78% of respondents and 34% and 16% for regional and local governments respectively.

Figure 12. Responsibilities for key output and monitoring decisions, across levels of government (%)

Proportion of respondents that stated it was the responsibility of central, regional, or local governments or other



Note: The graph shows the responsibility of key output and monitoring decisions. The darker bars indicate output decisions concerning hospitals.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

4.4. Shared responsibilities

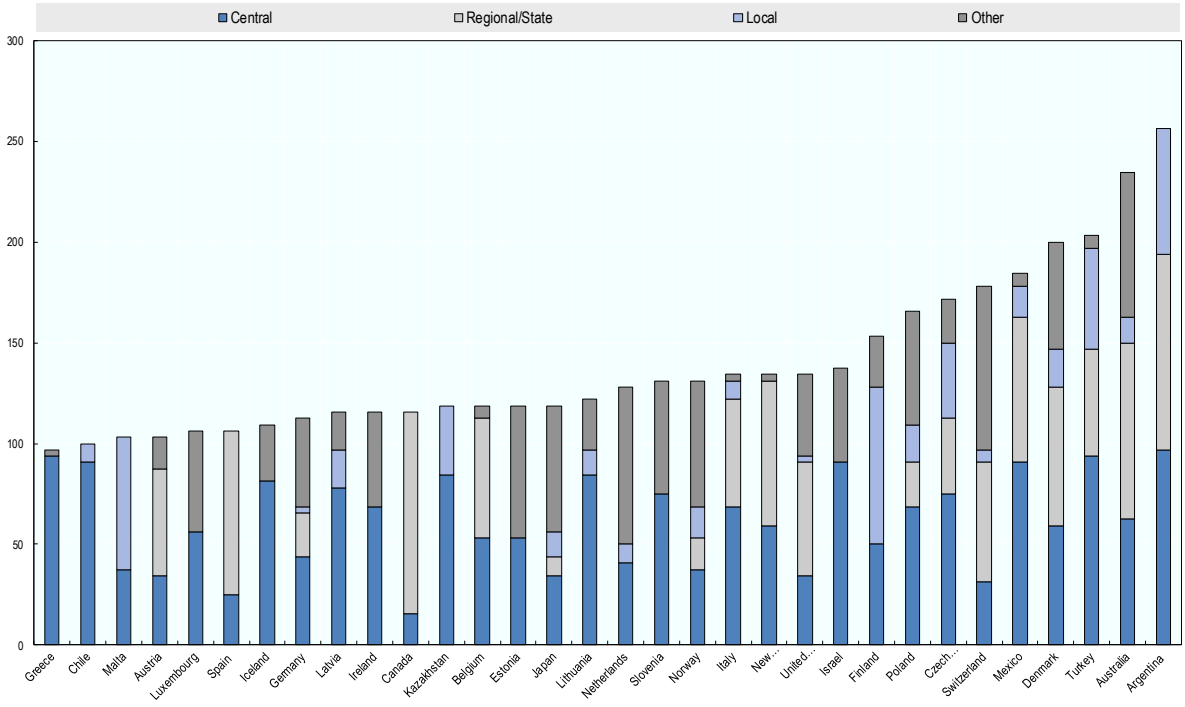
A shared responsibility is when two or more decision makers are responsible for the same decisions and is the result of multiple levels of government or authorities being responsible for the financing or policy making of service delivery. A high number of shared decisions, suggests the presence more complex frameworks and more overlapping responsibilities. This has the potential to generate inefficiencies in intergovernmental relations, and reduce transparency and accountability of public policies and government spending, if the division of competences is not clearly set.

Figure 13 shows the level of shared responsibilities in health care. Taller columns represent countries with a greater number of shared responsibilities in health care, including Argentina, Australia, and Denmark. Interestingly, Canada, Germany and Spain have low levels of shared responsibilities despite these countries being federal, where power is shared with subnational governments.

In Canada, health care is a shared responsibility between the central (federal) and subnational (provincial and territorial) governments. However, the provincial and territorial governments have most of the responsibility for delivering health care services. The federal government is responsible for some delivery of services for only certain population groups. The federal government's other roles include setting and administering national principles for the health care system under the Canada Health Act (CHA); providing financial support to the provinces and territories; health protection, regulation and consumer safety; disease surveillance and prevention; and, support for health promotion and health research. Publicly funded health care is financed by general revenue raised through federal, provincial and territorial taxation. Provinces may also charge a health premium on their residents to help pay for publicly funded health care services, but non-payment of a premium must not limit access to medically necessary health services.

Figure 13. Cumulative country responses

Cumulative number of responses ticked for each level of government



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Table 4 shows shared responsibility across areas of spending autonomy. In federal countries, policy decisions are most likely to be shared between decisions makers, with the average policy decisions being a shared responsibility in 37% of federal countries. In particular, setting public health objectives was a shared responsibility in 60% of federal countries. In Australia for example, broad public health objectives are set through the Council of Australian Governments Health Council, which includes representatives from each jurisdiction. Budgeting decisions were less likely to be a shared responsibility between decision makers in federal countries. Decisions such as financing hospital staff's pensions, financing hospital current spending, and financing specialist out-patient care, were not often shared across decision makers, as central government had less overall power.

Some key budgeting decisions such as setting the level of taxes that will be earmarked for health and setting the basis level of social contributions for health care were a shared responsibility for 40% of federal countries. In countries, where subnational governments have more responsibility for delivering health care services, revenue-raising and financing power may also be devolved to the subnational level. This is the case in Australia, Belgium, Canada, Italy, and Spain, where both central and subnational governments are responsible for setting levels of tax allocated to health care.

In unitary countries, policy decisions were least likely to be a shared responsibility between decision makers, as many of these decisions are made at the central level. Input decisions were often a shared responsibility between decision makers. Particularly determining working conditions (salary scales, pension rules, working hours) was a shared responsibility in 72% of unitary countries. This decision was often a shared responsibility between central or subnational governments and health care providers or trade unions.

Interestingly, looking across all areas of spending autonomy, decisions were on average a shared responsibility 31% of the time in federal countries and 32% in unitary countries. In some federal countries (Austria, Canada, and Germany), many decisions were not shared, however, this is due to central government responsibilities being lower overall. In contrast, in Australia, 87.5% of the decisions were shared across decision makers, with both national and subnational government having considerable decision-making power.

In unitary countries such as Mexico, Demark and Switzerland, over 65% of the decisions were shared. In Demark, financing decisions are made by both regional governments and the municipalities, who pay co-payments based on a fixed share of their citizen's use in the health care sector. In Mexico, many decisions are a shared responsibility between national and regional governments as each are responsible for delivery of hospital services.

Table 4. Average proportion of shared decisions (%)

	Average proportion of shared if federal	Average proportion of shared if unitary
Policy	37	23
Budget	27	34
Input	34	43
Output	30	26

Note: The figures show the proportion of shared responsibility across an average of key decisions in each area of spending autonomy. The breakdown of individual decisions is shown in Table A.A.2 in the Annex.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

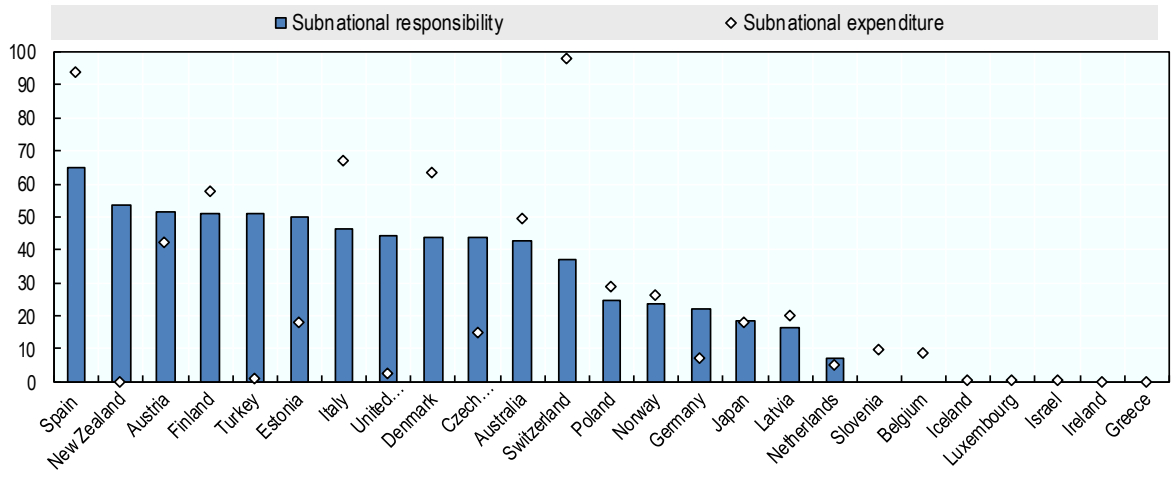
4.5. Comparing responsibility against expenditure

Figure 14 shows the level of responsibility of subnational governments in health care, against subnational health expenditure as a proportion of total health expenditure. The level responsibility is calculated as the number of times a country responded that regional or local level of government was responsible for a health decision, as a proportion of the total 'yes' responses, for each country. For the majority of countries, subnational expenditure on health is greater than the decision-making power of subnational governments. This indicates that expenditure shares misrepresent the actual spending power of subnational governments and the presence of barriers on decision-making ability.

In Italy, regional governments are responsible for the delivery of health care services. Regional governments receive ear5arked grants from central government to cover health

service provision. Earmarked grants limit the spending autonomy of subnational governments, compared to general purpose transfers, which give subnational governments greater flexibility. The Ministry of Health is also is responsible for key decisions such as defining the minimum statutory benefits package and designing and implementing a scale for user contributions. The central government is responsible for many decisions regarding hospitals, such as deciding on admission criteria and determining the length of stay in hospitals. Therefore, even though subnational expenditure on health in Italy accounts for 67% of total expenditure on health, this figure is misrepresentative of the true level of subnational decision-making autonomy. Survey results indicate that subnational governments in Italy are responsible for 46% of key health decisions.

Figure 14. Responsibility of subnational governments against expenditure for health (%)



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018). Expenditure data comes National Account Statistics (database), OECD (2018), http://dx.doi.org/10.1718/na-data-en.

A parallel paper explored the relationship between decentralisation (as defined in the survey used for this paper) and health care system performance, modelled as the interaction of health expenditure and life expectancy [COM/CTPA/ECO/GOV(2018)7]. A measure of the degree of decentralisation across levels of government was constructed from the survey data described in this section. For each decision where the government is involved, a score was attributed (0 for fully central decision, 6 for fully local). An overall score was computed as the simple average of sub-scores related to each decision.

This decentralisation index was then used as an input for a simultaneous equation non-linear regression model, together with several other policy variables. The two equations model health expenditure and life expectancy separately, and look at the impact of each policy driver (including the impact of more decentralised decision-making) on both equations. Higher decentralisation was associated with a positive impact on performance (higher life expectancy and lower expenditure), but the trend started marginally decreasing around 2.5 on the index, reaching the inversion point towards very high decentralisation levels (over 5). A limitation of this model, though, is that it cannot determine whether some decisions have a higher impact than others, since it uses a simple average of all parameters that form the decentralisation index.

5. Conclusions

The degree of subnational government spending power is generally calculated as the level of subnational expenditure share as a proportion of total government expenditure. However, due to barriers and restrictions in subnational spending, calculating expenditure shares can be misleading in the degree of subnational government autonomy. Examining responsibility in four areas of spending autonomy, policy, budget, input, and output and monitoring, can help to provide a clearer view of decentralisation in health systems.

Despite the trend towards decentralisation across OECD countries, central government still has considerable power across many decisions regarding the delivery of health services. This decision-making power is particularly strong in regard to key policy and budgeting decisions, but is weaker over decisions concerning the inputs and outputs of health care services. Regional governments have less responsibility, but are most likely to be responsible for input-related decisions, such as determining which services can be outsourced and deciding on the contractual status of staff. Overall, the decision-making power of local government in health care is limited. Decisions concerning hospitals were split more evenly across central and regional governments. However, in many countries, individual hospitals had autonomy over these decisions

While there is no conclusion on how responsibilities should be distributed across decision-makers, issues can potentially arise if there is a misalignment between levels of government. One possible source of misalignment is if the devolution of financing responsibilities to subnational governments is not accompanied with equal devolving of revenue-raising powers or alternatively additional resource transfers from central government. Moreover, when the responsibility for decisions is shared across multiple decision makers, this entails risk of overlapping and inefficiencies if the responsibilities are not clearly defined. Interestingly however, despite greater spending power of subnational governments in federal countries, the overall proportion of shared responsibilities for key health care decisions did not vary between federal and unitary countries.

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Annex A.

Table A A.1. Proportion of respondents that stated the key health care decision was the responsibility of central, regional, or local governments, or other entities

	Central	Regional/ State	Local	Other
Policy				
Determining the size of hospital/health care districts	47	38	13	16
Deciding on criteria for admission of patients to hospitals	56	28	6	28
Granting concessions for opening of private hospitals	59	34	3	6
Deciding on the various forms of service provision (public vs. private provision)	75	28	9	22
Setting remuneration methods for physicians	78	28	6	31
Determining the level and type of public funding for private hospitals (subsidies, other means of financial aid, e.g.., tax exemption for providers)	81	28	3	16
Setting minimum regulations/standards in hospitals (public and private)	88	31	3	9
Setting public health objectives	91	38	22	6
Regulating private hospital activity (e.g.., setting the rules for concessions and funding for private hospitals)	91	31	0	16
Setting the legal framework (e.g., a law establishing objectives, rights and obligations in hospitals)	97	22	3	0
Budget				
Deciding on budget allocation among hospitals within the same region or municipality	31	44	6	31
Financing hospital staffs' salaries and benefits	47	41	16	47
Financing new high-cost equipment	50	47	19	41
Financing hospital current spending	50	34	16	34
Financing the maintenance of existing hospitals	50	47	25	31
Financing specialists in out-patient care	53	25	13	41
Financing hospital staffs' pensions	56	25	3	34
Financing primary care services	56	34	22	31
Financing new hospital buildings	59	47	22	22
Deciding on budget allocation among regions, districts or municipalities	59	31	3	19
Deciding resource allocation between sectors of care	66	38	16	28
Defining payment methods for hospitals	75	31	9	25
Setting the total budget for public funds allocated to health care	88	31	16	3
Setting the level of taxes which will be earmarked for health care	91	22	16	3
Differentiation of user contributions according to social situation of users	91	19	6	13
Designing and implementing a scale for user contributions	91	19	9	9
Setting the basis and level of social contributions/premiums for health care	91	9	6	22
Labour and input				
Determining which services can be outsourced (services obtained from outside providers, such as cleaning or meals) and choosing external providers	25	38	22	53
Hiring and firing of staff	31	31	28	59
Deciding on hospital infrastructure maintenance	38	44	28	47
Deciding on contractual status of staff (e.g.., non-redeemable contracts)	41	25	22	53
Capital investment decisions for medical equipment	41	41	25	53
Planning and provision of necessary hospital infrastructure (e.g.., vehicles, buildings)	47	47	31	41
Capital investment decision on health facilities (hospitals, etc.)	53	47	25	34
Establishing rules for the training and education of staff	78	31	16	38
Determining working conditions (salary scales, pension rules, working hours)	88	34	16	47
Output and monitoring				

Determining length of stay in hospitals	28	13	16	47
Establishing performance incentives for staff and consequences for high/poor performance (if any)	28	25	13	34
Managing hospital/health care districts	34		19	13
Deciding whether performance assessment of staff must be used (if any)	47	41	16	34
Determining the allotment of hospital beds across hospitals	50	38	22	31
Determining the opening or closing of hospital units	56	50	19	25
Carrying out performance measurement and implementing administrative incentives (sanctions/rewards) associated with performance results as evaluated against targets (if any)	59	38	16	28
Monitoring of hospital service provision (does supply meet users' needs, is access for users from different regions or different social groups ensured?)	78	34	16	31
Deciding on the performance measurements/indicators/targets of service institutions/providers (if any)	78	34	16	31

Table A A.2. Proportion of shared responsibility across federal and unitary countries

	Proportion of shared if Federal	Proportion of shared if unitary
Policy		
Setting public health objectives	60	33
Setting the legal framework (e.g., a law establishing objectives, rights and obligations in hospitals)	20	17
Setting minimum regulations/standards in hospitals (public and private)	30	28
Deciding on criteria for admission of patients to hospitals	20	22
Regulating private hospital activity (e.g.., setting the rules for concessions and funding for private hospitals)	40	28
Determining the size of hospital/health care districts	50	11
Budget		
Designing and implementing a scale for user contributions	20	28
Differentiation of user contributions according to social situation of users (e.g., income, region, social status, etc.)	30	28
Financing hospital staffs' salaries and benefits	50	39
Financing hospital staffs' pensions	10	33
Setting the level of taxes which will be earmarked for health care	40	22
Setting the basis and level of social contributions/premiums for health care	40	22
Financing new hospital buildings	20	39
Financing new high-cost equipment	40	39
Financing the maintenance of existing hospitals	30	39
Financing primary care services	20	44
Financing specialists in out-patient care	10	33
Financing hospital current spending	10	39
Input		
Hiring and firing of staff	30	28
Determining working conditions (salary scales, pension rules, working hours)	40	72
Establishing rules for the training and education of staff	50	50
Deciding on contractual status of staff (e.g.., non-redeemable contracts)	30	28
Planning and provision of necessary hospital infrastructure (e.g.., vehicles, buildings)	30	44
Deciding on hospital infrastructure maintenance	30	44
Determining which services can be outsourced (services obtained from outside providers, such as cleaning or meals) and choosing external providers	30	33
Output and Monitoring		
Monitoring of hospital service provision (does supply meet users' needs, is access for users from different regions or different social groups ensured?)	40	44
Deciding on the performance measurements/indicators/targets of service institutions/providers (if any)	60	44
Carrying out performance measurement and implementing administrative incentives (sanctions/rewards) associated with performance results as evaluated against targets (if any)	40	28
Deciding whether performance assessment of staff must be used (if any)	20	28
Establishing performance incentives for staff and consequences for high/poor performance (if any)	20	6
Determining length of stay in hospitals	0	6

Performance measurement systems in the health sector and their budgetary implications

by

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Comments from Andrew Blazey and Wojciech Zielinski are gratefully acknowledged.

This article looks at the application of performance measurement systems in the health sector across OECD countries. The data comes from the 2017 OECD Survey on Performance Measurement Systems in the Health Sector and Responsibilities across Levels of Government. The results show that the majority of countries have national performance measurement systems in place, covering multiple aspects of the health system. Despite varying objectives, measurement systems are usually aimed at improving performance of the health system, rather than at containing costs.

JEL codes: H51, I11, I18

Key words: Performance, measurement, health system

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Foreword

National performance measurement systems exist across nearly all health systems in the OECD. Some focus on the efficiency or productivity of health care services, while others help improve the management of health care services or inform decisions regarding the resource allocation. This article looks at the use of performance measurement systems in the health sector across OECD and partner countries, focusing on the extent to which they affect budgeting and spending decisions.

The results show that the majority of OECD countries rely on performance measurement systems established at the central level that, in most cases, monitor the performance of providers of hospital and outpatient care. Systems vary markedly among countries, although some cross-country trends exist, including a focus on improving performance rather than cutting costs measures.

This article is based on data from the 2017 *OECD Survey on Performance Measurement Systems in the Health Sector and Responsibilities across Levels of Government*. An accompanying article, looks at the responsibilities in the health sector across levels of government.The survey forms part of the work programme of the OECD Network on Fiscal Relations across Levels of Government. The survey was answered by participants of the OECD Joint Network of Senior Budget and Health Officials. This Joint Network brings together government officials who work on the health budget and health financing, including representatives from ministries of finance, health and social security organisations. It provides a forum for government officials to openly discuss challenges and solutions to the fiscal sustainability of health systems.

Executive summary

Performance measurement systems in the health sector are used to collect data to monitor, analyse and manage health services. What governments wish to achieve will differ across countries, influencing the design and impact of these systems. Systems may also reflect the institutional arrangements of health systems, such as the level of decentralisation and the organisation of different levels of care.

Given that central governments are best placed to monitor the whole population, most performance measurement systems in the OECD are established and administered at the national level. This centralisation can help define the responsibilities for the overall co-ordination of measurement systems, ensuring a consistent approach for cross-country analysis. Systems usually monitor the performance of hospitals and providers of outpatient services, rather than providers of preventative care, or providers of medical goods. They also tend to cover multiple categories of providers, rather than only a part of the health system. The decision to establishing performance measurement systems is often driven by a wish to improve the quality of service delivery and monitor compliance with national standards. Performance measurement systems are less likely to be designed to meet objectives around cost-cutting or improving budget control.

The use of performance information in the health sector can have a variety of consequences. For service providers and subnational authorities, the public dissemination of performance results may lead to improved health outcomes, as providers aim to improve practices in response to poor results. Moreover, public dissemination adds an element of competition among providers, pushing them to improve standards to avoid being labelled as the worst performing.

Given that central governments often ensure the efficiently and equitably delivery ofhealth services,. they can use performance measurement systems to monitor subnational governments, such as regions or states, to ensure compliance with national standards. In addition, performance measurement systems have allowed countries to innovate in how they pay health care providers. By using performance measures, payment methods can be designed to create incentives for providers to increase their quality of care or to contain costs.

Overall, the impact of performance measurement systems at the national level to determine or adjust policies, budgets and performance targets across OECD countries is limited. As such, there is scope for a greater impact. For example, incorporating performance information into budgetary mechanisms can help direct spending towards the achievement of policy objectives and enhance the accountability of public spending. Performance data can also inform policy makers at the national level, guiding decisions on strategic planning by providing an overall assessment of health system performance and indicating areas for improvement. Countries should aim to apply performance results to decision making at the national level, to move towards a more evidence-based approach to budget setting and policy making.

Looking forward, countries should continue to develop and fine-tune performance measurement systems in the health sector. Caution should be taken however, as systems can create unintended consequences. Moreover, performance measurement systems are only useful to the extent they provide accurate and timely data. Therefore, countries should continue to evaluate the quality of data collected. Performance measurement systems can provide multiple benefits to a range of stakeholders in health systems. For policy makers and central government, measurement provides key information on the performance of health systems. For providers, it offers the opportunity to improve the quality of service.

1. Introduction

Health care systems differ across OECD countries, arising from variations in key institutional characteristics, such as financing arrangements or the level of decentralisation. These factors have an influence on the design and purpose of central performance measurement systems that cover the health sector. Most central governments establish performance measurement systems in the view that it is their role to ensure health services are delivered efficiently and equitably. Moreover central government is in a unique position which allows it to monitor the health of all citizens no matter where they live, and benefit from the positive impact that a performance measurement system can have on health care quality and public budgets.

This paper builds on a literature review that was presented at the 2017 meeting of the Network on Fiscal Relations across Levels of Government (Phillips, 2018[1]). The main aim of this paper is to summarise the results of a recent OECD survey. Part 1 of the survey focused on responsibilities across decision makers, while part 2 focused on performance systems in the health care sector. This paper concentrates on the results of part 2, with an accompanying paper analysing part 1. Participants of the OECD Joint Network of Senior Budget and Health Officials – government officials with responsibility for the health budget – answered the questionnaire. This Joint Network brings together government officials who work on the health budget and health financing, including representatives from ministries of finance, health and social security organisations. Over the years this Network has provided an effective space for government officials to openly discuss challenges and solutions to the fiscal sustainability of health systems.

This paper summarises performance measurement systems in the health sector across OECD and partner countries, focusing in particular on the extent to which they impact budgeting and spending decisions. Although each performance management system should reflect the specific features of the country and the objectives of the measurement, this paper provides some key insights on what institutional structures are commonly applied when monitoring or measuring the performance of sub-national service delivery, as well as general obstacles to implementing such systems.

The main trends from the survey results are:

- The majority of OECD countries tend to rely on centralised performance measurement systems to monitor the performance of hospital providers. Systems vary markedly between countries, although some trends across countries exist, including the observation that health performance systems are generally more geared towards improving performance rather than cost-cutting measures.
- Providers of ancillary services, retailers and other providers of medical goods, and providers of preventive care were much less likely to be monitored under a specific performance framework. Common reasons for the non-establishment of performance systems in these sectors, and in general, include a lack of capacity at the national level, a lack of available data and challenges to co-ordinate actors.

2. Questionnaire on responsibilities and performance in health systems

A recent survey was designed to collect information from OECD and partner countries on decentralisation and decision-making power, as well as the monitoring and measurement arrangements in health care, across levels of government. The questionnaire comprised approximately 70 questions, including checkboxes with optional comments sections and

multiline answer responses. The questionnaire was succinct to avoid a large administrative burden on participating countries. Respondents comprised government officials from ministries of finance and health who are directly engaged in their country's budget for health.

2.1. Background and definitions

A performance measurement system is defined as the systematic collection of information or data that is then used to monitor, analyse and manage health care services. The motives for performance measurement systems and the information collected will differ between countries and health care areas – some performance measurement systems focus on efficiency or productivity, whereas others provide a broader view of service delivery, measuring quality and equity of service delivery and also boosting transparency and accountability. Still others focus on the use of performance information to improve management of health care services and to improve alignment between budget allocations and policy priorities. Some examples of performance measurement systems that the survey was aimed at, include systems that:

- monitor access to different services across geographical areas of the population, or access by specific target groups;
- aim to measure and compare costs or outputs of goods/services/materials across providers of sub-national governments; or
- measure performance through qualitative mechanisms in the form of formal external inspections to ensure providers are meeting minimum national standards; surveys on user experience; and/or league tables that rank specific providers.

The health sector was disaggregated by the OECD's classification of six primary health care providers. The categorisation of health care providers is hospitals; residential long-term care facilities; providers of ambulatory health care; providers of ancillary services; retailers and other providers of medical goods; and providers of preventive care. More information on the categorisation of health care providers can be found in the System of Health Accounts 2011 (OECD/Eurostat/WHO, 2017[2]).

In the survey, sub-national governments were defined as sub-central levels of government. Regional governments are upper-tier municipalities including states, territories or provinces. Local governments are the lowest tier of government including counties, cities, districts, municipalities, councils or shires. In the context of countries with only two levels of government, the lower level was defined as local government.

Federal countries have constitutionally protected sub-national governments, which have their own parliament, government, and large competences. Public power is shared across governments and local governments are "creations" of the federated states in most federal countries. The classification of the participating countries into federal and unitary categories is shown in Table 1.

2.2. Scope of questionnaire and responses

The part of the questionnaire analysed in this report covers national performance measurement systems, and was further split into two sections. Section 1 asked respondents to provide detailed information about performance measurement systems across the health care sector that have been implemented by the national government, based on the OECD/Eurostat/WHO categorisation of health care providers. Examples of survey

questions include the objectives of the system (e.g. cost containment, asserting budget control, productivity improvements), the usefulness of different performance measurement practices, how the measurement system affected policy decisions at the national level, and potential consequences of the system for sub-national authorities and service providers. Section 2 included three questions on health care providers that were not covered under a national government performance measurement system, in order to understand the main obstacles of introducing such a system.

The survey was sent to countries in November 2017. All responses were received from participants by May 2018.

Countries were encouraged to provide information on all performance measurement systems that are used to monitor health care providers. For most countries, a single performance measurement system covered multiple health providers. Twenty-three countries provided details on existing national performance measurement systems, as shown in Table 1 below.

Japan and Norway provided information on two separate performance measurement systems; Australia and Luxembourg provided details on three performance measurement systems; and Chile provided details on four performance measurement systems. The Netherlands provided three separate responses to Part 2 from each organisation that is involved in performance measurement in the Netherlands.

The Czech Republic, Germany, Iceland and Malta stated that there were no national performance measurement systems currently in place, so they did not provide details about such systems.

Table 1. Country respondents classified into federal and unitary countries

Federal		Quasi-federal		Unitary	
Australia	XXX	Spain	X	Chile	XXXX
Belgium	X			Denmark	X
Canada	X			Estonia	X
Italy	X			Finland	X
Mexico	X			Greece	X
Switzerland	X			Japan	XX
				Latvia	X
				Lithuania	X
				Luxembourg	XXX
				Netherlands	XXX
				New Zealand	X
				Norway	XX
				Poland	X
				Slovenia	X
				United Kingdom	X
				Kazakhstan	X

Note: Multiple crosses implies that a country provided answers for multiple performance measurement systems.
Source: OECD/UCLG (2016), Subnational Governments around the world: Structure and finance.

3. Spending and institutional characteristics in health care

3.1. Organisation of health financing and coverage arrangements

Health care coverage arrangements vary across OECD countries, with coverage organised within three main types: national health systems (including those with distinct localised services), single health insurance funds or multiple health insurance funds/companies. In OECD countries with insurance-based systems, health insurance is compulsory in all countries except the United States.

Table 2 summarises the main source of basic health care coverage across OECD countries, based on results from the latest OECD Health Systems Characteristics Survey:

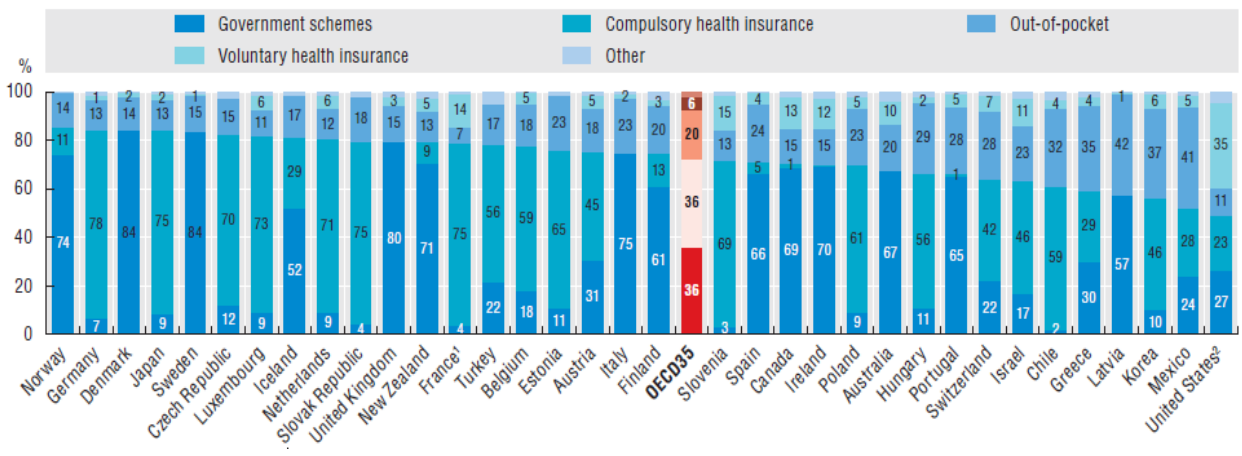
Table 2. Main source of basic health coverage across OECD and other surveyed countries

National health system (including those with distinct localised services)	Australia, Canada, Denmark, Finland, Iceland, Ireland, Italy, Latvia, New Zealand, Norway, Portugal, Spain, Sweden, United Kingdom
Single health insurance fund (single payer)	Estonia, France, Greece, Hungary, Korea, Lithuania, Luxembourg, Poland, Slovenia, Turkey
Multiple health insurance funds or companies	Austria, Belgium, Chile, Czech Republic, Germany, Israel, Japan, Mexico, Netherlands, Slovak Republic, Switzerland, United States

Source: OECD 2016 Health Systems Characteristics Survey, authors' analysis of survey results. Full results of this survey available here: https://qdd.oecd.org/subject.aspx?Subject=hsc.

Government schemes and compulsory health insurance (whether organised as single or multiple funds) together accounted for almost three-quarters of all health care spending in 2015, on average across the OECD (OECD, 2017[3]), shown on Figure 15 below. In Denmark, Sweden and the United Kingdom, central or sub-national governments financed 80% or more of all health spending. In Germany, Japan, France and the Slovak Republic more than 75% of health expenditures were paid through compulsory health insurance. Only in the United States, government or compulsory health insurance financed less than half of all health spending.

Figure 15. Health expenditure by type of financing, 2015 (or nearest year)



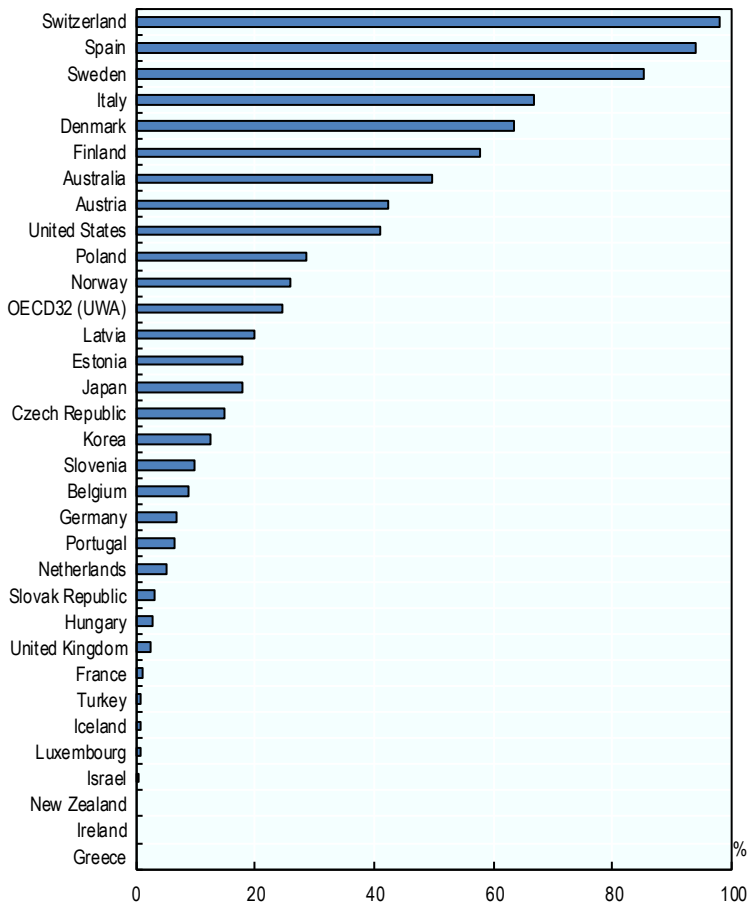
Source: OECD Health at a Glance 2017.

3.2. Decentralisation of health spending

Health represents the second largest sector of sub-national government expenditure after education, accounting for 18% of sub-national expenditure in 2015. However, there is significant variations across OECD countries in the role subnational governments (Figure 16). Health care spending remains highly centralised in many countries, including Greece, Ireland, New Zealand, Israel, Luxembourg, Turkey, and France. In contrast, sub-national government health spending exceeds 85% of total public health spending in Sweden, Spain, and Switzerland. Wide responsibilities for healthcare services and financing are decentralised to the municipal, regional or health district levels (OECD, 2018[4]).

Figure 16. Sub-national expenditure health

% of total public expenditure on health, 2015



Source: OECD (2018), Regions at a glance. Data from OECD (2018) National Accounts Statistics (database).

4. Performance measurement systems in health care

4.1. General results: What are the performance measurement systems in place

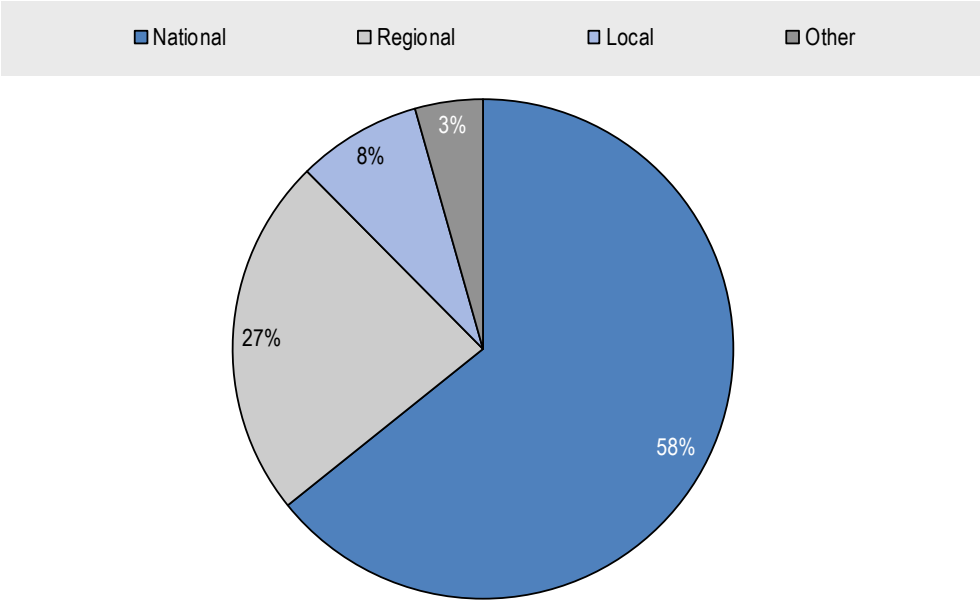
4.1.1. Responsibility of administering the performance measurement system

In most cases, the national government was responsible for administering the performance measurement system (Figure 17). Another common practice is that performance measurement system is a shared responsibility of national and regional governments, especially in federal countries. Regional governments were sometimes responsible for administering the performance measurement system, but it was very rarely the responsibility of local government.

A few countries reported on performance measurement systems not administered by a national, regional or local government. For example, Canada reported on a performance measurement system administered by the Canadian Institute for Health Information (CIHI), a non-government, and not-for-profit institution.

Figure 17. Responsibility of administering the performance measurement system

Proportion of responses where each level was responsible for administering the performance measurement system



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

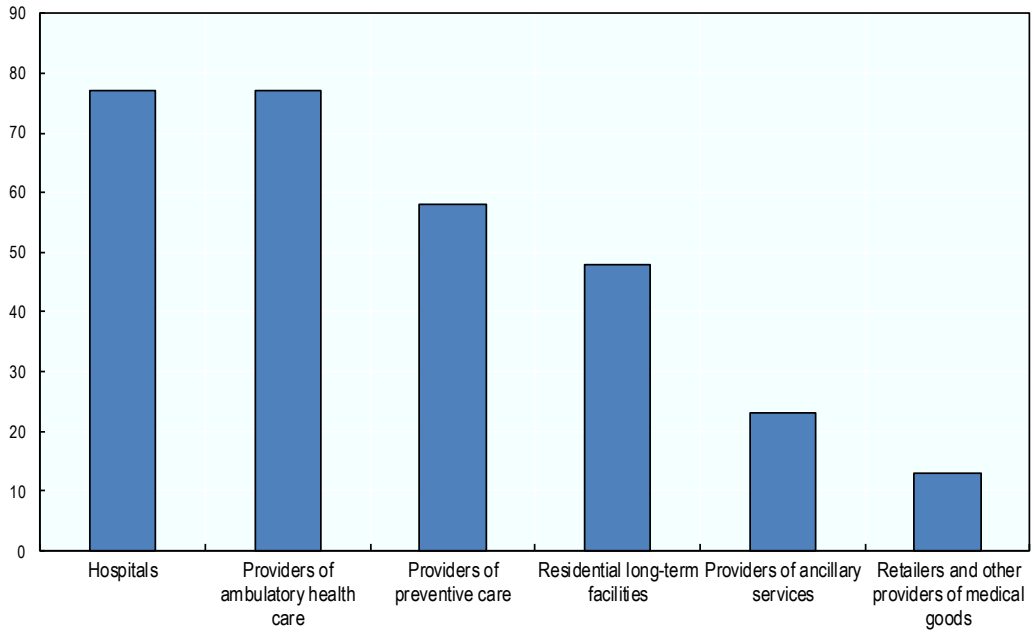
4.1.2. What does the performance measurement system cover

For the majority of countries that participated in the survey, central governments had established a performance measurement system to monitor services in the health sector. These services can be classified into six health care providers. The categorisation of health care providers is hospitals; residential long-term care facilities; providers of ambulatory health care; providers of ancillary services; retailers and other providers of medical goods; and providers of preventive care.

Hospital services and providers of ambulatory care were the main types of provider that was monitored through a performance measurement system (Figure 18). This was anticipated as expenditure on these types of services makes up the highest proportion of health expenditure for the majority OECD countries (OECD, 2018[5]). Providers of ancillary services (which include providers of medical laboratories and emergency rescue), and retailers and other providers of medical goods (which, for example, could include producers of lenses, orthopaedic products or prosthetic appliances) were the areas of health care that were least covered by a performance measurement system. The majority of performance measurement systems also covered multiple aspects of health service.

Figure 18. What does the performance measurement system cover?

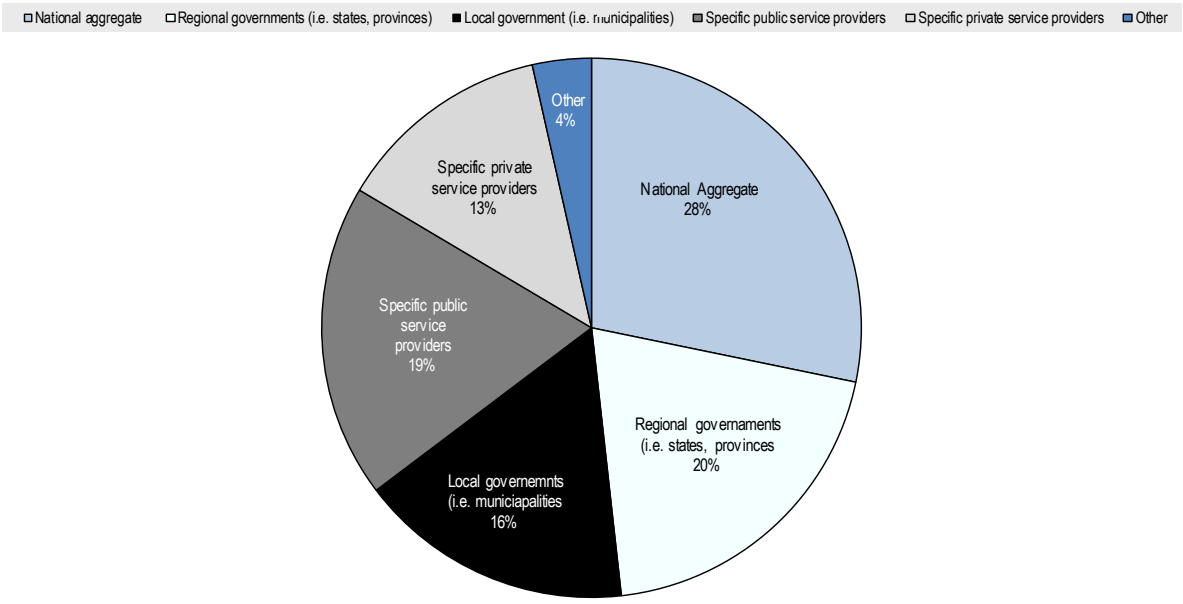
Proportion of responses where the following services providers are measured by the performance measurement system



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Figure 19 shows that performance systems were more likely to measure or monitor the services provided at the national aggregate level and the regional government level. Monitoring local governments' services was relatively less common, as the responsibility for monitoring this lower level would likely to be delegated to regional or local governments. Responses to the 'other' category shown in Figure 19 include more specialised types of health care facilities in Canada and Finland.

Figure 19. Main level that the performance measurement system aims to measure



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

4.1.3. Implementation of the performance measurement system

The benefits of performance benchmarking systems depend on how well they are used or implemented, in order to improve performance or reduce costs. The focus of the survey was on national performance measurement systems, however the systems surveyed are also used by regional governments, local governments, and service providers in over 30% of the performance systems (Table 3). In Norway, local governments use the performance measurement systems to provide information about costs and levels of different kind of services that the municipalities provide. They can compare costs and services in their municipality compared to others and use the information to plan their level of activity. Note that in the Netherlands, the health system is characterised by a private health insurance market. Here, private insurers use the data on the performance of providers in the process of contracting services.

Table 3. Is the performance measurement system used by other entities to improve performance or reduce cost

Regional government	Canada, Chile*, Denmark, Finland, Italy, Japan, New Zealand, Norway*, Poland, the United Kingdom
Local government	Canada, Chile*, Denmark, Finland, Japan*, the Netherlands, Norway*, the United Kingdom
Service providers	Canada, Chile*, Estonia, Italy, Luxembourg, New Zealand, Norway, the United Kingdom

Note: * means that Australia, Japan and Norway provided answers for two separate performance measurement systems. Chile provided details for four performance measurement systems.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

4.2. Focus of performance measurement systems

4.2.1. Objectives of the performance measurement system

Health performance measurement systems vary in their objectives, with some focused on transparency and accountability, others on budget allocations and cost containment, or improving policy and service delivery. Figure 20 summarises the objectives of the performance measurement systems, showing the proportion of responses which noted different goals as being a primary objective of the system.

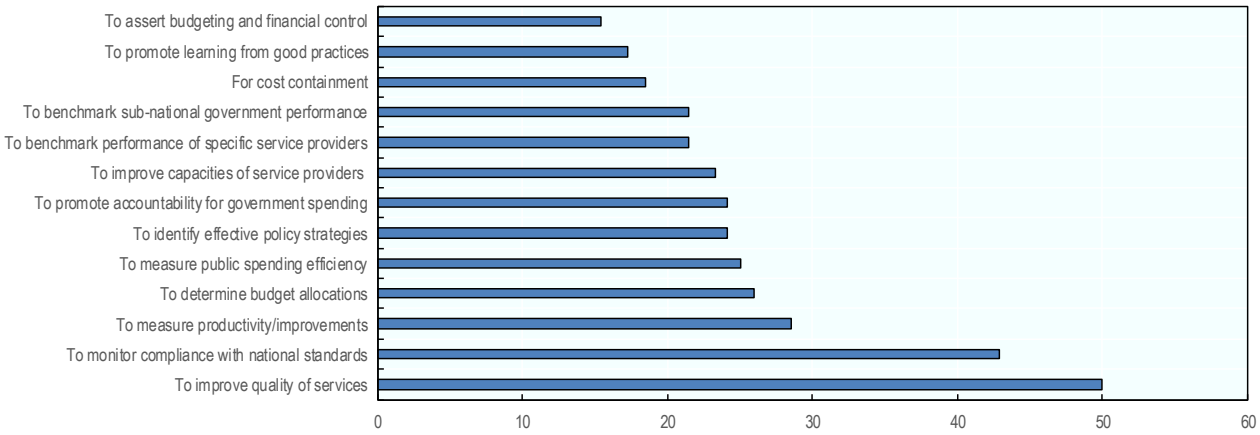
Objectives surrounding budget control and cost containment were the focus of only a limited number of performance measurement systems, with budget allocations being noted as the primary objective for 27% and 11% of systems in unitary and federal countries respectively. These countries included Chile, Greece, Italy, Luxembourg, the Netherlands, and Poland. The majority of these performance measurement systems focused the measurement of indicators to guide and inform the allocation of funds between geographic areas or service providers. Details of a performance measurement system in Chile are given in Box 1 Performance measurement systems aimed at budget allocations were also commonly associated with objectives such as cost containment or asserting budgeting and financial control. However, these objectives were less likely to be a primary objectives and were often reported to be a secondary objective or as an objective that could not be ranked.

Instead, performance measurement systems were more likely to focus on transparency and accountability, or improving policy or health care service delivery. In particular, improving the quality of service and measuring productivity were objectives in over 65% of the performance measurement systems. Performance systems in unitary countries were also often aimed at monitoring compliance with national standards, which should be well aligned with benchmarking frameworks in which the central government plays the dominant role (Phillips, 2018[1]).

Benchmarking the performance of specific service providers or sub-national governments, and learning from best practice were also the objective of many performance measurement systems. For example, Australia, Canada, Italy, and New Zealand have developed a performance measurement system with indicators that are designed to track the performance of sub-national governments, who have responsibility for delivery of health care services. This allows them to benchmark their performance to hold them accountable for providing high quality services but also to achieve wider objectives such as improve the quality of care. These objectives were especially important in federal countries. This is not surprising as benchmarking and peer learning will be more amenable to sub-national governments with greater autonomy in terms of revenue power, administrative responsibilities and political influence.

Other objectives listed included to improve transparency, promote freedom of choice, and to allow consumers to make more informed decisions about their use of health services. Chile, Estonia, Lithuania, Luxembourg and Kazakhstan, reported on performance measurement systems that facilitate the use of pay-for-performance schemes for various forms of service providers.

Figure 20. Responses regarding the national government's objectives of the performance measurement system



Note: Other possible survey response options to this question were 'secondary objective', 'an objective but I don't know how to rank it' and 'not an objective'. Note there have been some minor wording changes in the Figure above.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Box 1. 'H indicators' - Chile

The 'H indicators' cover hospitals, providers of ambulatory care and providers of preventative care. These are a set of annual indicators associated with the measurements of the institutions' strategic products. The institutions refer to those under the responsibility of the Ministry of Health, including the national public health insurance fund and regional health services. Strategic products are the goods and services (in other words outputs) which serve the institution's strategic objectives. For example strategic outputs include the promotion of health, preventative campaigns for diseases such as HIV/AIDS, influenza and cancer and sanitary regulation. These indicators are classified into either process (activity), intermediate results (milestone) or product (output) indicators which cover quality, efficiency or economic dimensions. There are 49 indicators across seven institutions. These indicators form part of a bigger frame of management tools and a performance budgeting framework that associate the fulfilment of management objectives with a monetary incentive for the employees.

4.2.2. Health initiatives as a useful component of performance measurement system

Some patterns emerge concerning the effectiveness of different mechanisms whereby performance systems lead to improved performance of the health sector (Figure 21). Central governments generally found public league tables/ratings, and the monitoring of health access across the population or specific target groups, to be a useful mechanisms in over 75% of the performance measurement systems, to monitor and improve performance in the health sector. The publication of performance information of hospitals or providers, including through league tables, is important in ensuring the transparency and accountability of government spending and decision-making. It is also intended to have an

impact on improving provider performance and encouraging consumer choice. Benchmarking through league tables can offer interesting comparisons. This can encourage better performance through peer pressure. In theory it could also help people choose among different health service providers – although there is little evidence that such public information has this effect in health (Rechel et al., 2016[6]).

Minimum national standards were also found to be a very useful component of performance measurement systems. Minimum national standards can be applied to service providers to establish the minimum national expectations. This should encourage providers to work towards achieving the standards if not already met, and therefore increase the quality of service delivery over time.

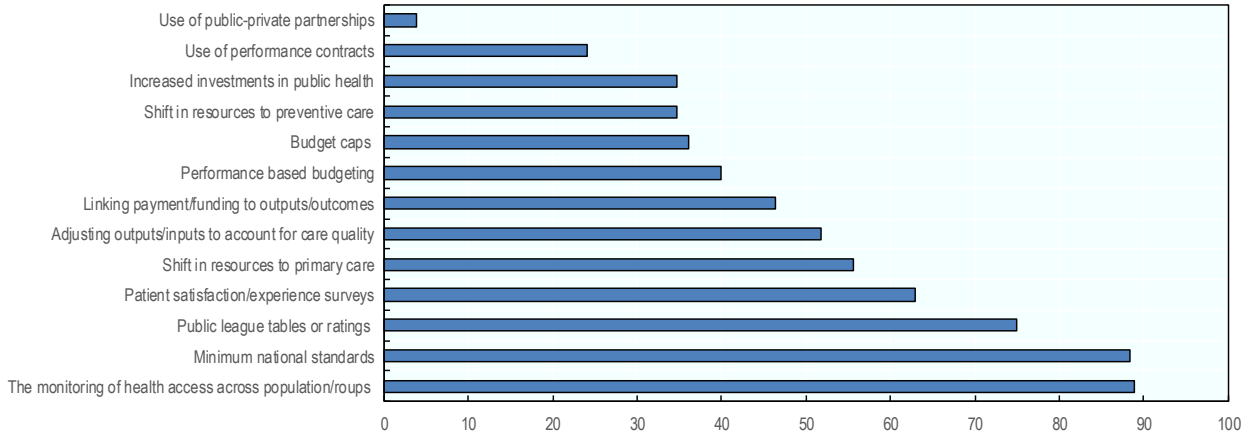
Patient satisfaction and experience surveys were seen as useful components of a performance system by just over half of the respondents. This performance mechanism could be more widely adopted, as standardised surveys of patients and relatives can help measure hospital performance against explicit standards. Patient-reported experience and outcome measures, such as whether patients feel they were adequately involved in important decisions about their care, and whether the patient is free of pain after an operation, are important for monitoring and understanding the more qualitative aspects of service delivery, especially with the increasing focus on patient empowerment and satisfaction.

By comparison, the use of public-private partnerships and performance contracts were generally not a component of performance systems. Performance budgeting was more frequently a component but only Chile (Box 1), Greece, and Spain stated that performance budgeting was a 'very useful' component of their performance measurement systems. Performance budgeting involves incorporating performance information into the budget-setting process in order to inform and guide budget allocations. This type of budgeting replaces traditional budgeting methods, by shifting the focus away from inputs, to the achievement of policy objectives or outcomes.

There were very few mechanisms that were used by governments that were deemed 'not useful', suggesting that the performance systems that were reviewed were relatively targeted in their approach. Furthermore, the mechanisms used did not vary markedly between federal and unitary countries. However, unitary countries were more likely to use mechanisms such as minimum national standards; budget caps; policies that shifted resources to primary or preventive care; and policies that increased investment in public health. This is likely due to budget control being more centralised in unitary countries, which allows unitary central authorities to make decisions regarding the allocation of funding to priority areas.

Figure 21. Responses regarding the usefulness of health initiatives for a national government's performance measurement

Proportion of responses where the following health initiatives are noted as a 'very useful' or 'somewhat useful'



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Box 2. Australia's National Healthcare Agreement guidelines

In Australia, under the National Healthcare Agreement (NHA) guidelines, league tables and comparative charts are available for regional governments (but are not required by service providers), but data are also disaggregated by other variables (e.g. Indigenous status, gender) which offers a further point of comparison. The NHA is an agreement between the central government and regional governments that outlines the role and goals of Australia's health system; the roles and responsibilities of the parties; policy and reform directions proposed to achieve desired outcomes; and accountability requirements. The accountability requirements include reporting against specific performance indicators and performance benchmarks that are outlined within the specified outcome areas (better health; better health services; social inclusion and indigenous health; and sustainability of the health system). The NHA indicator set outlines 33 performance indicator topics and 7 performance benchmarks, which are reported on annually. The indicators draw on population-level data (usually survey data) and data derived from information captured by health services or within payment systems (administrative by-product data). The health services data is used both for performance reporting related to a particular sector/service (e.g. waiting times for elective surgery), and for broader-based reporting on the effectiveness of the health system as a whole or other parts of the health system (e.g. potentially preventable hospitalisations).

4.3. Impact of the performance measurement system

4.3.1. What is the effect of the performance measurement system at the national level

Performance measurement systems affected policy at the national level – in terms of determining or adjusting policies, budgets and performance targets. However, this impact was, in most countries, only 'occasionally' rather than 'frequently or always' (Table 4 and Figure 22). Exceptions to this were in Chile, Finland, Italy, Japan, Norway, New Zealand, and Spain, where performance measurement systems were typically seen as having more effect on decisions at the national level, although some of these countries had multiple performance systems, and only selected ones had this effect.

The effects of the performance measurement systems at the national level were also greater in unitary countries than in federal countries. This is especially true in terms of the performance measurement system affecting budget allocations at the national level. Federal countries have constitutionally protected sub-national governments with greater decision power. The performance measurement systems may instead have an effect at the sub-national level.

Performance measurement systems were seen by survey respondents to have an impact on budget allocations at the national level in five countries; Chile, Italy, Finland, Lithuania, and Luxembourg. In Chile, one performance measurement system (H indicators – Box 1) has impact on the allocation of resources between the institutions under the Ministry of Health. The other system (PRAPS), describes a mechanism for the prospective payment of primary care, in the case that resource adjustments need to be made due to an overrun in planned expenditure. Similarly, in Lithuania, resources adjustments are made to primary health care providers in the form of a pay-for-performance scheme. In Luxembourg, the budget allocations are made by the statuary health insurance between hospitals based on the results of the performance measurement system (Box 3). In Italy, additional resources are offered to regional governments depending on the fulfilment of predefined goals captured by a set indicators (Box 4). In Finland, no detail was given as to the effect on budgets at the national level.

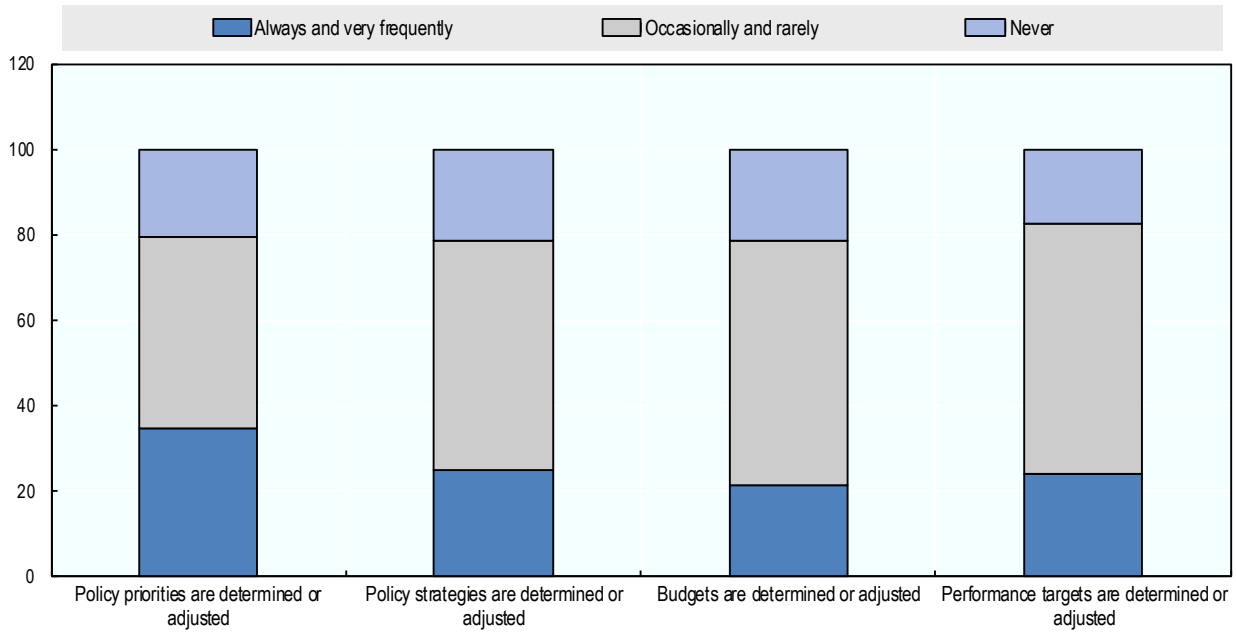
Table 4. The effect of the performance measurement system at the national level

	Policy priorities are determined or adjusted	Policy strategies are determined or adjusted	Budgets are determined or adjusted	Performance targets are determined or adjusted
Australia*	-	-	-	-
Belgium	o	o	o	O
Canada	o	o	o	o
Chile*	X	X	X o	X
Denmark	o	o	o	o
Estonia	o	o	o	o
Finland	X	X	X	o
Greece	o	o	o	o
Italy	X o	o	X	X
Japan*	X o	X o	o	o -
Kazakhstan	-	-	-	o
Lithuania		o	X	o
Luxembourg*	-	-	X -	o
Mexico	o	o	-	o
Netherlands*	o	o	o	o
New Zealand	X	o		X
Norway*	X	X	o	X
Poland	X	o	o	o
Spain	X	X	o	o
Switzerland	-	-	-	-
United Kingdom	o	o	o	o

Note: X=always or very frequently, o=occasionally or rarely, - =never. * Reflects multiple performance measurement systems used in this country. Multiple symbols reflect the different performance measurement systems.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Figure 22. The frequency of the effect at the national level

Proportion of responses (%)



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Box 3. Hospital financing in Luxembourg

For Luxembourg, the main source of financing for health comes from the single payer fund, Caisse National de Santé (CNS). Luxembourg reported on three performance measurement systems, administered by the CNS. One of these systems exclusively measures the performance of hospitals. Every two years the government sets a global budget envelope for hospital expenditure, which is then divided annually by the CNS between the hospitals. Budget allocations among hospitals are determined through annual negotiations between CNS and the individual hospitals. An evaluation committee sets the quality and performance criteria, captured by the performance measurement system. A premium is paid to the hospital on the fulfilment of this criteria.

4.3.2. Impact of the performance measurement system for sub-national government

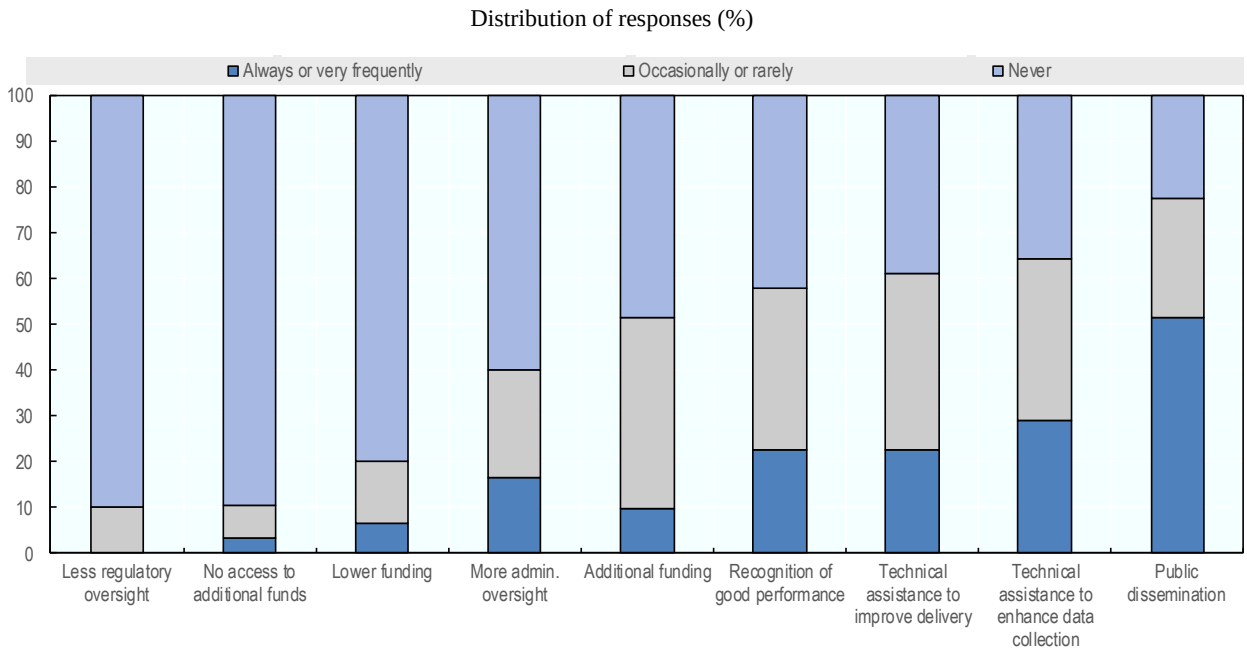
Central governments can utilise rewards and sanctions on sub-national governments, to incentivise service providers to improve performance and meet certain standards. There are two main types of explicit reward/sanction systems for sub-national governments: financial and administrative. Figure 23 illustrates the distribution of country responses regarding the effects performance systems in health care can have on regional or local governments. The possible response options for the survey questions were ‘always’; ‘very frequently’; ‘occasionally’; ‘rarely’; and ‘never’ with regard to their occurrence.

The public dissemination of performance information is a common aspect of the health performance systems. The public dissemination of information exerts reputational effects that generate pressure for accountability and reform (OECD, 2009[7]). Competition aims to improve government behaviour, as providers aim to improve their performance to avoid being labelled as poor or failing organisations. Other common consequences of health performance systems are the formal recognition of good performance and technical assistance for enhancing data collection and utilisation.

Uncommon consequences include rewards to sub-national governments through the relaxation of budget rules, financial sanctions through withdrawal of funding or lower funding, and financial sanctions through no access to additional funds. Some consequences are more common in unitary countries, namely, technical assistance to governments to improve service delivery and increased administrative oversight of sub-national governments.

Countries with performance measurement systems that frequently had impacts on sub-national government include Chile, Italy, and New Zealand. These performance measurement systems are designed specifically to track the performance of regional or local governments. Further details of the Italian performance measurement system are given in Box 4.

Figure 23. Responses regarding the consequences of the performance system for sub-national authorities



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Box 4. Monitoring of regional health services in Italy

Italy's National Health Service is regionally based, with the central government sharing responsibility for health care with the country's 19 regions and two autonomous provinces. At the national level, the government exercises a stewardship role, controls and distributes the tax-financed health budget, and defines the national benefits package (known as the 'Essential Levels of Care' or LEA) that must be guaranteed to all citizens and foreign residents. The "Griglia LEA" is a performance measurement system aimed at monitoring regional government's provision of essential levels of care (LEA). Monitoring covers four levels of care; prevention, outpatient, hospital, and emergency care. As of 2013, the Griglia LEA consisted of 32 indicators. Indicators are associated with goals, and achievement of goals by regional governments allows them to access the full fund for health care. Regions that do not fulfil goals are subject 'Realignment Plans', which subscribe specific actions of improvement.

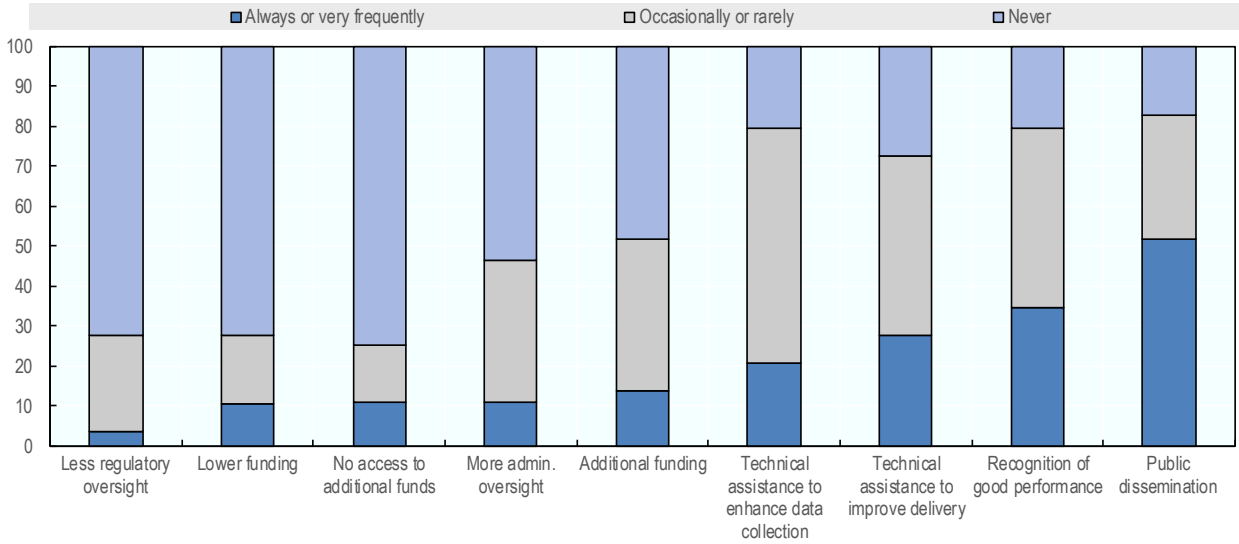
4.3.3. Impact of the performance measurement system for service providers

With regard to the potential impact for specific service providers, the public dissemination of performance information, formal recognition of good performance and technical assistance are again common consequences of health performance systems (Figure 24). Some consequences are more common in unitary countries, namely, technical assistance to governments to improve service delivery and rewards for service providers through the relaxation of regulatory oversight. The public dissemination of performance information is also used more in unitary countries. Furthermore, federal countries are more likely to provide public information on performance of regional governments rather than on service providers.

Overall, there were more impact for service providers than for sub-national governments, showing that performance measurement systems were more focused on providers rather than specific regions. In particular, Lithuania, the Netherlands, Greece, Luxembourg, Italy, and Estonia had performance measurement systems in place that provided more incentives for service providers.

Figure 24. Responses regarding the consequences of the performance system for service providers

Distribution of responses (%)



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Box 5. Use of performance measurement systems in provider payment models

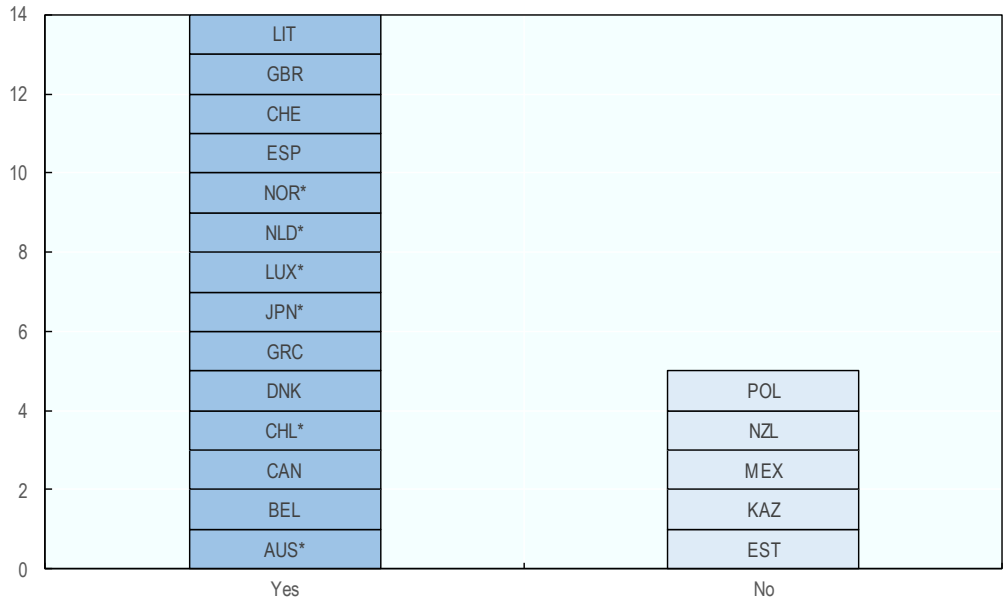
Performance measurement systems may also be used in payment models between the purchasers and provider of health care services. One such model are pay-for-performance schemes. Here, providers are wholly or partially funded on the basis of their performance, and therefore creating an incentive to meet targets or performance measures. Chile, Estonia, and Lithuania reported on performance measurements systems that are used for pay-for-performance schemes that provide financial rewards specifically to providers of primary health services on the fulfilment of performance targets. Kazakhstan uses a similar type of pay-for-performance mechanism that covers providers of ambulatory care. Luxembourg (Box 3) uses its performance measurement system to pay hospitals a performance based premium. Greece uses their performance measurement systems for DRG (diagnostic-related groups) payments to hospitals. DRG payments reimburse hospitals for services based on a classification system of treatments and services. The performance measurement system indicates the hospital resources and treatment services consumed for chronic patients.

4.4. Performance measurement system evaluations and challenges

4.4.1. Does the performance measurement system undergo routine evaluations?

75% of performance measurement systems reported undergo routine evaluations or will do in the future (Figure 25). Australia, Chile and the Netherlands, the evaluation is carried out on a yearly basis, whereas in Canada, the system is evaluated every 5 years. In Belgium, the system goes through international evaluation through a peer review event.

Figure 25. Responses regarding whether performance measurement systems undergo routine evaluations (or will in the future)



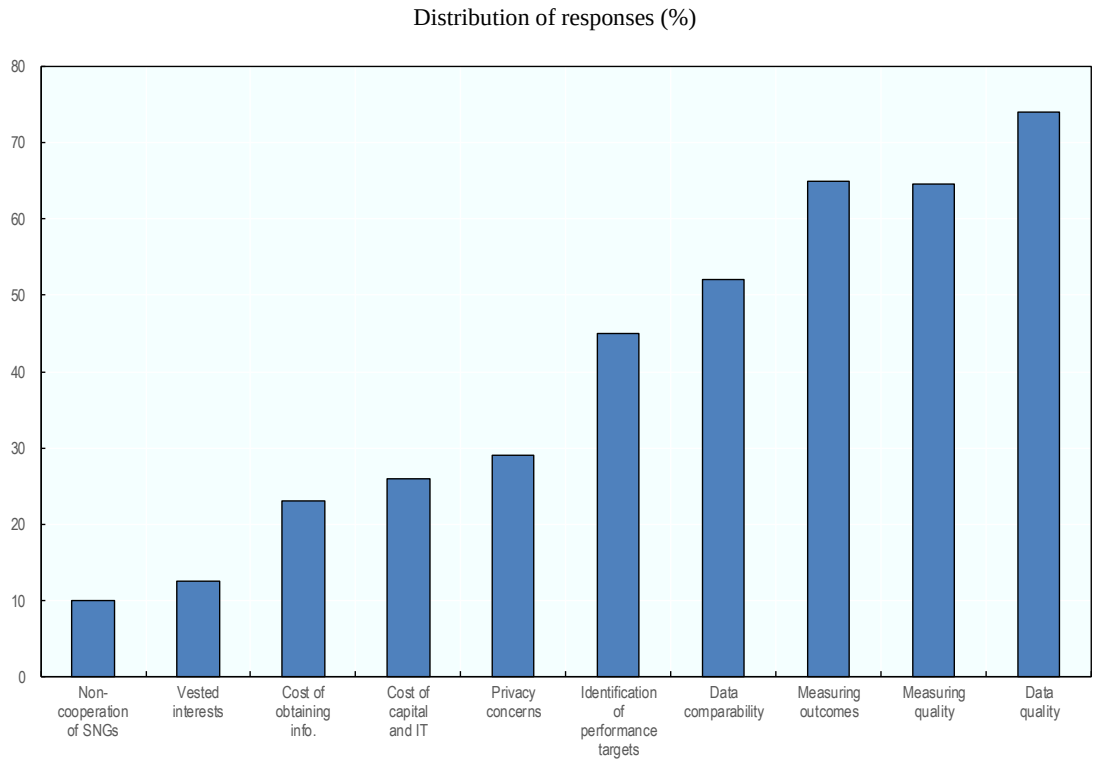
Note: * implies that the country replied yes for all the health performance measurement systems.
Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

4.4.2. Challenges for performance measurement systems

Countries identified some difficulties that have been encountered in assessing health service delivery (Figure 26). The most common challenges for performance measurement systems are of a technical nature such as the quality of data, the comparability of data (including the standardisation of coding) and measuring service outcomes and service quality. Other issues such as vested interests, the non-co-operation by sub-national governments and cost concerns were identified as much less problematic in developing a performance measurement system. This is encouraging as it should be an incentive to progress with the development of a performance measurement system, as improving systems is just a matter of improving the design of performance indicators and better data, rather than a question of a lack of interest or co-operation, which may require more efforts to change.

Despite the decentralised nature of many health systems, no countries identified the presence of a regional indicator system as the reason for a lack of national system in place.

Figure 26. Responses regarding the difficulties in assessing health service delivery



Source: OECD survey on performance measurement systems in the health sector and responsibilities across levels of government (2018).

Hospitals were the most common health care providers to be monitored under a national performance system. Providers of ancillary services, retailers and other providers of medical goods and providers of preventive care were the least likely to be monitored. Common reasons for the non-establishment of performance systems in these sectors include a lack of capacity at the national level, a lack of available data and co-ordinating the actors is too difficult. For a few countries, the establishment of a performance system is currently under discussion.

5. Conclusion

The majority of central governments have taken on the role of ensuring the equitable and efficient delivery of health care systems through establishing a performance measurement system. Government systems are different across OECD countries, varying mainly in their objectives and the potential consequences for levels of government or service providers. Most were focused on monitoring the performance of hospitals and providers of ambulatory care. Providers of ancillary services, retailers and other providers of medical goods, and providers of preventive care were much less likely to be monitored under a specific performance framework.

The design of a performance measurement system should depend on its functions and objectives. Many performance measurement systems, were focused on the objectives of improving the quality of service delivery, monitoring compliance with national standards, or monitoring productivity and efficiency. Other objectives of the system, like learning

from good practices, cost-containment, promoting accountability, were less common. The survey also gave a valuable insight into usefulness of different initiatives that were used in performance measurement systems, with the most important being the monitoring health access across populations/groups and setting minimum national standards.

The impacts of the performance measurement systems at the national level were limited. Some focused on the allocation of resources between service providers or sub-national authorities based on performance measures, however this allocation did not represent a significant share of the overall budget. Instead, the impacts for service providers and sub-national authorities was mainly the public dissemination of performance results and recognition of good performance.

Although performance measurement systems can lead to unintended consequences, such as gaming resulting in lower health outcomes (Mannion and Braithwait, 2012[8]), establishing a national performance measurement system can provide many benefits to health systems and help to address issues around fiscal sustainability. Increasing the quality of services through monitoring and public dissemination of performance results will not only improve health outcomes but can help to improve the efficiency and tackle wasteful spending. Strengthening budgetary mechanisms by incorporating performance information can direct spending towards the achievement of policy objectives and enhance accountability of public spending. Moreover, reforming provider payment methods to focus on performance can create the right incentives for cost-containment and delivery of high quality care (OECD, 2015[9]). Many countries identified challenges in the area of measuring outcomes and quality, but also as regards data quality and compatibility. It clearly shows that data management and a right construction of key performance indicators are the areas where improvements are needed.

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Budgeting practices to improve health system performance: An OECD survey of countries from the Latin American and Caribbean region

by

Chris James, Ivor Beazley, Luciana Rosato and Caroline Penn

This article presents the main findings of two OECD Surveys of Senior Budget and Health Officials conducted in the Latin American and Caribbean region. The surveys help to understand the approaches to budgeting, and take account of the prominent role of agents in the health system across the region, including social health insurance agencies and sub-national governments. The focus, however, is on the application of performance-orientated reforms to budgeting, and the extent to which countries in the region have adopted such reforms to improve the efficiency of health expenditure to achieve universal health coverage. The findings point to the use of performance and results-based budgeting in the region, along with new models of provider payment systems integrating performance measures.

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Keywords: Budgeting, performance, health sector, Latin America and Caribbean,

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Foreword

Most countries in the Latin America and Caribbean region are pursuing universal health coverage. Although reforms and objectives vary among countries, most rely on increases in publicly funded health expenditure. In this context, effective communication between national health and budgetary authorities can ensure the efficient allocation of resources, whilst maintaining fiscal sustainability.

This article presents the main findings of two OECD Surveys of Senior Budget and Health Officials conducted in the Latin American and Caribbean region, and in particular on the use of performance-related budget reforms to improve the efficiency of health expenditure. The findings highlight the use of performance and results-based budgeting in the region, along with new models of provider payment systems integrating performance measures. They also showed that the presence of social insurance agencies can create a disconnect between the central government budget process and health expenditure. Moreover, operational management issues related to monitoring health expenditure often lead to under-spending the health budget.

The OECD Joint Network on the Fiscal Sustainability of Health Systems was set up to help bridge the divide between health and finance officials. Since 2015, the Joint Network has worked with non-OECD countries, including through the Latin America and Caribbean regional network. In partnership with the Global Fund to Fight Aids, Tuberculosis and Malaria, the World Health Organization, and the Pan-American Health Organization, the OECD held two regional network meetings, bringing together health and budget officials from over fifteen countries.

In 2015, the OECD Joint Network carried out a *Survey of Budget Officials on Budgeting Practices for Health*, adapted specifically for Latin America and the Caribbean (LAC), to gather data for carrying out comparative analysis and benchmarking of good practices in budgeting for health in the LAC region and comparing this with OECD countries.

Following this, in 2018, the OECD undertook a *Survey of Budgeting Practices to Improve Health System Performance* to inform the dialogue between health and finance ministries in LAC countries, as well as facilitate peer-to-peer learning among countries based on comparisons of budgeting practices, in particular the use of performance-based budgeting tools.

The OECD Working Party of Senior Budget Officials studies performance budgeting practices as a tool to improve the efficiency and effectiveness of resource allocation and public sector management.

Country codes

AR	Argentina
BS	Bahamas
BLZ	Belize
BR	Brazil
CL	Chile
CO	Colombia
CR	Costa Rica
EC	Ecuador
SV	El Salvador
GTM	Guatemala
HND	Honduras
MX	Mexico
PY	Paraguay
PE	Peru
UY	Uruguay

Acronyms

ASSE	Administration of State Health Services in Uruguay (*Adminstración de los Servicios de Salud del Estado)*
CONASEMS	National Council of Municipal Health in Brazil (*Conselho Nacional de Secretarias Municipais de Saúde*)
CONASS	National Council of Health Secretaries in Brazil (*Conselho Nacional de Secretários de Saúd*e)
ESSALUD	Social Health Insurance in Peru (*Seguro Social de Salud*)
IAMC	Collective Medical Assistance Institutions in Uruguay *(Instituciones de Asistencia Médica Colectiva)*
INEI	National Statistics and Informatics Institute in Peru (*Instituto Nacional de Estadística e Informática)*
JUNASA	National Health Board in Uruguay (*Junta Nacional de Salud*)
MIDIS	Ministry of Development and Social Inclusion in Peru (*Ministerio de Desarrollo e Inclusión Social*)
PIAS	Comprehensive Health Assistance Programme in Uruguay (*Plan Integral de Atención en Salud*)
PMAQ	Primary Care Quality Improvement and Access Programme in Brazil (*Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica*)
PRAPS	Reinforcement Programmes of Primary Health Care in Chile (*Programa de Reforzamiento de la Atención Primaria de Salud)*
PRODEV	Programme to Implement the External Pillar of the Medium Term Action Plan for Development Effectiveness (from IDB)
SIS	Integrated Health Insurance in Peru (*Sistema Integral de Salud*)
SNS	National Health Insurance in Uruguay (*Servicio Nacional de Salud*)

Executive summary

In their efforts to achieve universal health coverage, countries in the Latin American and Caribbean (LAC) region have recognised the need to redesign budgeting practices. This observation follows the trend of OECD countries to integrate performance information into the budget cycle and to reform decision-making processes to focus on measurable results, a process known as performance budgeting. Performance budgeting has the potential to deliver a wide range of benefits, including a stronger alignment between decisions on budget allocations and government priorities, and greater clarity on the purpose of public spending. Performance budgeting can also help ministries of health justify demands for resources, by providing evidence to support budget proposals. The introduction of performance reforms has been frequently associated with efforts to improve health sector efficiency and performance.

Performance budgeting practices are widespread across LAC, with the health sector often at the forefront of reforms. Frequently, reforms include spending reviews and performance agreements. Spending reviews allow countries to review expenditure by identifying opportunities to increase the efficiency of health spending, while performance agreements between purchasers and providers in a health system can help define expectations and strategic goals, by setting output-orientated targets for agencies and service delivery units.

In practice, countries across the OECD have experienced mixed results with performance budgeting. For those that have had the most success, the benefits have come from continuous innovation and evaluation over a number of years. Introducing performance budgeting can place administrative burdens on central government, particularly the monitoring and reporting requirements. The experience in the LAC region indicates that the frameworks in place are perceived as somewhat effective at increasing the efficiency of public spending and containing costs. This should encourage countries to continue developing tools to achieve incremental improvements, where possible identifying and addressing the challenges

As in other regions, the challenges of performance budgeting in LAC come down to the measurement and collection of key performance indicators in the health sector. Effective performance measurement requires quality data across multiple levels of the health system, while being relevant to stakeholders at a national level.

Beyond budgetary mechanisms, reforms to provider payment systems can help drive health system performance. LAC countries continue to rely on traditional provider payment methods for primary and secondary levels of care. This includes payment mechanisms in OECD health systems that bring perverse incentives to over-provide (e.g. fee-for-service) or under-provide (e.g. capitation) health services. OECD countries have therefore experimented with innovative payment mechanisms, such as bundled payment systems or adaptations of traditional methods, bringing improvements to the quality of care. Other developments include add-on payments to providers to reward performance, known as pay-for performance, which are increasingly used across LAC, particularly for primary care.

However, implementing reforms and realising the efficiency gains in the LAC region often proves difficult due to the fragmentation in health systems. Most countries have co-existing financing schemes supporting different socioeconomic groups with different benefits packages attached to a specific network of service providers. These systems require co-ordination and exchanges of data among institutions and across levels of government to administer healthcare resources in an efficient way.

Looking forward, countries in LAC should continue reforms that move towards a results-orientated health system. However, the reforms should follow a bottom-up approach, ensuring that measurement systems are in place to produce accurate and timely data on the performance of the health system. Without the benefit of data, there is a risk of unintended consequences and decision making based on misinformation.

1. Introduction and Background

In recent years, many countries in the Latin America and Caribbean (LAC) region have set an objective to reach universal health coverage. In the context of these countries, where governments typically spend much less on health as a share of GDP than in OECD countries, universal health coverage will typically require increased public health spending. In this effort, the relationship between health and finance officials with regard to health spending is pivotal. Effective communication between national health authorities and budgetary authorities can ensure the efficient allocation of resources to attain health policy objectives whilst also avoiding unnecessary expenditures.

The OECD Joint Network on the Fiscal Sustainability of Health Systems was set up to help bridge the divide between health and finance officials. Since 2011, this Joint Network has brought together officials from health and finance ministries with the aim of establishing inter-ministerial dialogue, promoting common understanding between the main actors, and identifying and disseminating good practices in managing health sector budgets. The Joint Network organises meetings between health and finance officials from participating countries and conducts studies and surveys to inform dialogue. Since 2015, the Joint Network implemented two surveys in the Latin American and Caribbean region. This report uses results from both surveys to build an understanding of the budgeting practices in the region.

1.1. Survey on Budgeting Practices for Health

In 2015, the OECD carried out a *Survey of Budget Officials on Budgeting Practices for Health*, adapted specifically for Latin America and the Caribbean. Its main aim was to obtain an internationally comparable set of data that will allow for comparative analysis and benchmarking of good practices in budgeting for health in the LAC region and compare this with OECD countries. The survey targeted officials working in Central Budget Authorities who focus on health issues. Health Ministries and social health insurance institutions also collaborated for some questions.

Thirteen countries responded to the survey: Argentina, Belize, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guatemala, Honduras, Mexico, Paraguay, Peru, and Uruguay. Findings from this 2015 survey guided the direction of the 2018 Survey of Budgeting Practices to Improve Health System Performance (see below).

1.2. Survey of Budgeting Practices to Improve Health System Performance

In 2018, the OECD Secretariat initiated a *Survey of Budgeting Practices to Improve Health System Performance* to inform the dialogue between health and finance ministries in LAC countries, as well as facilitate peer-to-peer learning between countries based on comparisons of budgeting practices, in particular the use of performance-based budgeting tools in the region. The topics include the use of performance budgeting frameworks, performance agreements and indicators, and spending reviews. This acts as a follow-up to the 2015 Survey of Budget Officials on Budgeting Practices for Health, which revealed a significant increase in the use of performance budgeting tools, shifting the attention from inputs and processes towards healthcare outcomes and results. Despite the progress made, there is space to improve the way performance information is used to inform budget allocation decisions.

The survey was completed by 12 countries: Argentina, Bahamas, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, Paraguay, Peru, and Uruguay.

2. Approaches to budgeting

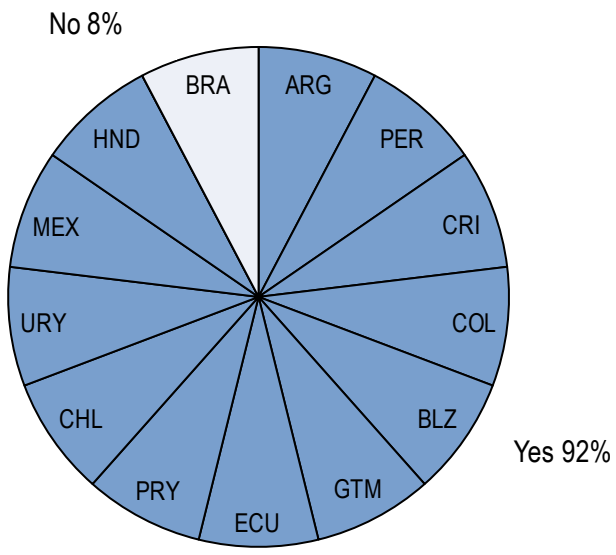
2.1. Budgeting for health in Latin America and the Caribbean

2.1.1. Fragmentation in both financing and service delivery limits the efficiency of health systems

One of the key characteristics of health systems in LAC countries is their fragmentation, both in terms of financing and service delivery. Most LAC countries have multiple health financing schemes in place, covering different segments of the population, and attached to a specific network of service providers. Such fragmentation can create challenges to co-ordinate, monitor and enhance efficiency in health systems.

Due to the large amount of subsystems operating in the LAC region, health expenditure is not always fully included in the central government budget, with almost all countries having a separate budget for the social health insurance system (Figure 1). In some countries (e.g. Peru) the budget for social health insurance is financially independent from the public budget for health. Whereas in other countries (e.g. Uruguay, Colombia, México, Argentina, Chile, Ecuador and Costa Rica) the social health insurance system relies on transfers and subsidies from the central budget.

Figure 1. Separate budget for the social health insurance institutions



Source: OECD (2015), Survey of Budget Officials on Budgeting Practices for Health in LAC countries

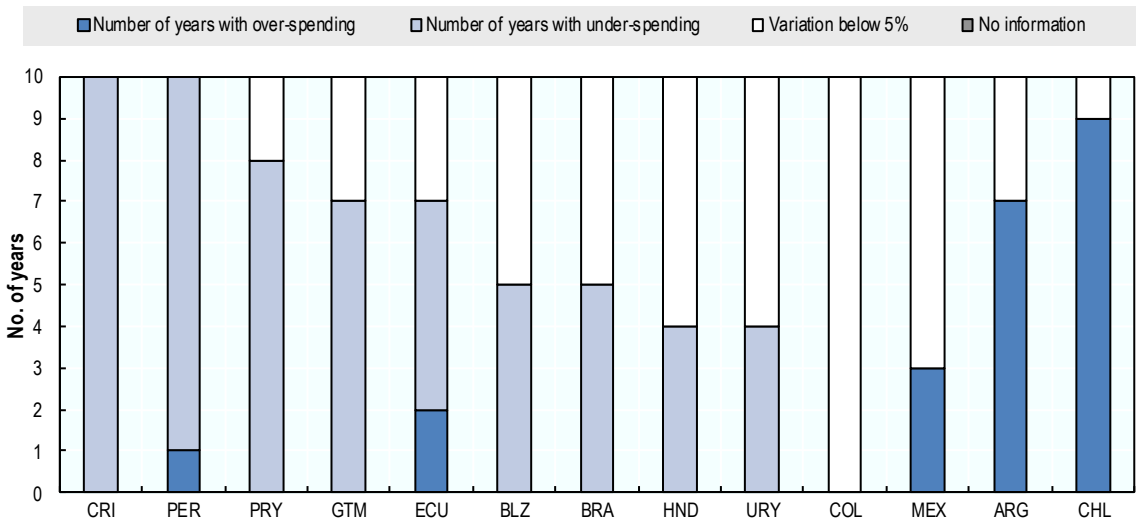
In general, the budget for social health insurance institutions does not require a separate legislative approval process, but in some countries requiring the approval of a distinct public entity. Only 55% of the surveyed countries include information of the health insurance system in the central budget process, making it difficult to have crosscutting policies to meet heath objectives across the system as whole.

2.1.2. Underspending of budgets is common, due to issues in operational management

Most LAC countries reported to have a mechanism in place to monitor budget execution in the health sector. This includes the introduction of automatic reporting on central government health expenditure, using electronic systems, to have immediate online information. In most countries, this process is timely, with information on central government health expenditure available with less than a month of delay. However, health expenditure information from the social health insurance systems tends to have longer delays, and in some cases, is not available.

Despite such reporting and monitoring systems, the LAC countries surveyed tend to have lower expenditure levels than the ones initially programmed in the central public budget, with more than half of countries reporting under-spending in at least five of the last ten years (Figure 2). Operational management issues in the health sector explain much of this under-execution of budgets. In particular, government officials stressed weak health budget planning, the release of funds late in the year, narrow definitions of spending categories, conditions attached to transfers within the health sector, complexities and duration of procurement processes, and low supply of qualified human resources as the main reasons behind under-execution of budgets.

Figure 2. Number of years with over or under-spending in health between 2004 and 2013



Source: OECD (2015), Survey of Budget Officials on Budgeting Practices for Health in LAC countries

2.1.3. Fiscal sustainability of health expenditure

Most LAC countries have mechanisms to ensure that publicly funded health expenditure stays within the initially allocated amounts, as part of a cost containment strategy. The majority of LAC countries surveyed also have systems in place to ensure that new legislative proposals concerning public health expenditures accounts for the full cost of the initiative, by including cost estimates in the short, medium and long-term.

While in some countries budget authorities receive economic evaluations of the expected health benefits from new policy proposals suggested by the Ministry of Health, these are not a major factor in the prioritisation of policies. Around 50% of budget agencies noted

that they received economic evaluations (cost benefit or cost effectiveness analysis) from Health Ministries for all or some policy proposals. However, they also noted that these assessments count "to a lesser extent" in their assessment of policy proposals

Most budget agencies in the LAC region have a multi-year vision of health spending, including estimates for public spending for more than one year in the budget document. However, long-term projections (more than five years) are not common in the region. Less than 30% of countries surveyed reported to have such type of projections and are not always produced on a regular basis.

2.1.4. Decentralisation of health care services and financing is one of the major challenges that many LAC countries have faced in the past years

In the last two decades, most LAC countries undertook decentralisation reforms, meaning sub-national governments (SNGs) play some role in health-care spending and financing. The level of autonomy and responsibility that sub-national government have in the health sector varies among the different countries surveyed. With some countries reporting that central governments are ultimately responsible for funding health care expenditures, while in others, sub-national governments have more autonomy for health spending, where the central government has no influence.

3. Performance budgeting for health in the LAC Region

3.1. Introduction to performance budgeting

This section examines the extent to which LAC countries use performance budgeting. The OECD describes performance budgeting as "the use of performance information to inform budgeting decisions whether as a direct input to budget allocation decisions or as contextual information and/or inputs to budget planning, as well as to instil greater transparency and accountability throughout the budget process, by providing information to the public on performance objectives and results" (OECD, 2019[1]).

Important elements or characteristics of performance budgeting include the following:

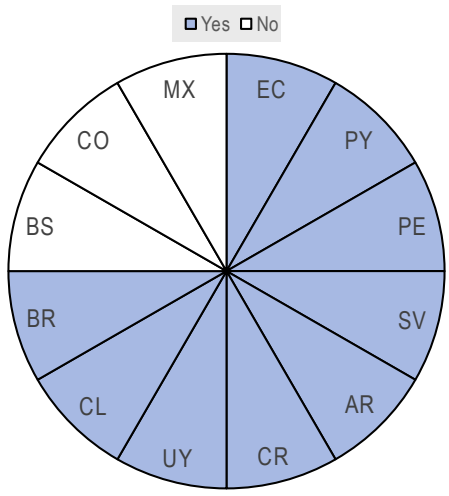
- Setting clear and realistic objectives for performance budgeting;
- Linking the performance budget to strategic goals of government;
- Adapting performance budgeting to the complex and varying needs of policy makers;
- Managing performance information;
- Creating the infrastructure to support performance budgeting;
- Ensuring systematic evaluation and oversight of performance;
- Incentivising performance-oriented behaviour and learning.

The implementation of effective performance budgeting frameworks could have a multitude of benefits for the institutions involved. In particular, performance budgeting offers the chance for governments to strengthen the links between government policy priorities and budget allocation decisions, thereby boosting the chances that the government will be successful in delivering on important pledges. At the same time, experience shows that performance budgeting is more effective when it is applied as a reform that supports, rather than leads, broader government efforts to improve performance.

3.2. Performance budgeting frameworks for health are frequently used, but have a limited impact on the allocation of resources

The use of performance budgeting frameworks in health can help allocate resources more efficiently, based on planned objectives and measurable results. In 2018, all countries except the Bahamas, Colombia, and Mexico reported having a performance budgeting framework for health in place (Figure 3). The performance budgeting framework in Mexico has been discontinued as of 2017.

Figure 3. Countries with performance budgeting frameworks for health



Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

Six out of the 9 countries in the survey that are currently using performance budgeting frameworks for health, stated that these frameworks were only partially applied to the Ministry of Health, as indicated in Table 1 below. In Peru, these frameworks were also applied to local governments.

Table 1. Level of system that performance budgeting framework is applied

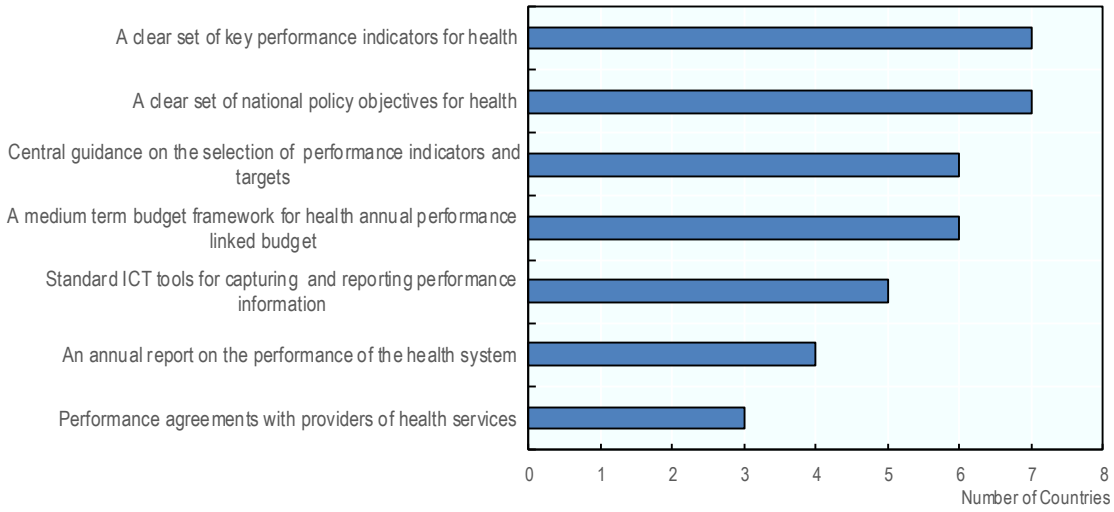
	Ministry of Health	Social Health Insurance Agencies	Sub-national Governments	Service Delivery Agencies (Hospitals, Clinics, etc.)
Argentina	(+)	(+)	(+)	(+)
Brazil	(+)			
Chile	(+)	(+)		(+)
Costa Rica	(+)			
Ecuador	(+)			
El Salvador	+	+	NA	+
Paraguay	(+)	(+)	(+)	(+)
Peru	+	NA	+	
Uruguay	+	NA	NA	(+)

Note: +: Comprehensively applied; (+): Partially applied; NA: Not Available
Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

Although the application of these performance frameworks vary from country to country, a clear set of key performance indicators and a clear set of national policy objectives in

health were the most cited elements of performance frameworks among LAC countries (Figure 4). Performance agreements with providers of health services was the least commonly cited element of a performance framework used amongst countries.

Figure 4. Elements of performance frameworks in place



Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

Despite many countries having a performance budgeting framework in place, their impact on the allocation of resources is still limited. In Uruguay, while performance budgeting is applied to the Ministry of Public Health and the Administration for Social Health Services, there is no direct link between performance information and the allocation of budgetary resources. In Ecuador, the allocation of resources remains historical, meaning resources are assigned based on the previous fiscal year. However, in El Salvador, along with Argentina, governments plan to use performance budgeting as a planning tool, to better reflect performance information in future budgets. In Peru, the performance budgeting framework is applied to the Ministry of Health and the Ministry of Finance, and considers the five strategic programmes outlined in the 2008 Budget Law, before being implemented by the central, regional, and local governments. Box 1 provides further information on the process in Peru.

While several countries in the LAC region have performance budgeting frameworks in place, several continue to lack monitoring and implementation systems. Among the countries that have begun to adopt monitoring systems for performance budgeting, reporting is still limited to health expenditures included in the central public budget. This is a prevalent problem in the region since several LAC countries face fragmentation throughout their various forms of health systems.

Box 1. Elaboration of performance budgeting frameworks in Peru

The development of performance budgeting frameworks in Peru is carried out primarily by the Ministry of Economy and Finance, the Ministry of Health, and several public entities. As part of the performance budgeting framework, budget programmes are subject to monitoring by the Ministry of Economy and Finance, which includes performance and impact evaluations. Additionally, performance-based incentive mechanisms are in place for the transfer of additional resources. The monitoring of performance indicators is conducted annually by the Institute of Statistics and Informatics (INEI) through surveys and the use of administrative databases.

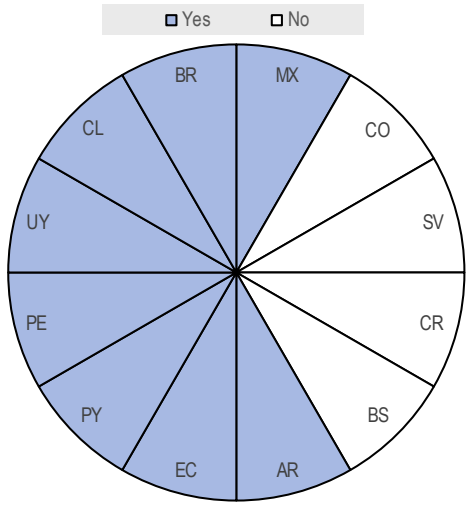
The Ministry of Health currently has nine budget programmes, each reflecting sector priorities. These programmes are executed at both central and sub-national levels, although performance budgeting frameworks are mostly applied to local governments. The Ministry of Health is also responsible for monitoring of performance indicators.

3.3. Just over half of surveyed countries use performance agreements, most commonly applied to public health providers

Another performance budgeting tool through which governments can promote efficiency, performance monitoring and accountability are explicit performance agreements. Agreements can be between different levels of government or between purchasers and providers of care. In some cases, individual performance agreements are formed between a government agency and senior individuals, rather than the agency they manage. These are akin to contracts between the purchasers and providers of healthcare, and typically break down overall strategic goals into programme elements, setting specific, often detailed, operational, procedural and output-oriented targets for each agency and service delivery unit. Performance is generally evaluated on an annual basis.

Over half of the survey respondents reported the use of performance agreements in the health sector (Figure 5). The Ministry of Health and the Central Budget Authority agree upon the performance indicators and targets specified in the agreements in these countries.

Figure 5. Countries subjecting health implementing agencies to performance agreements



Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

The most common type of performance agreement used by countries was performance agreements with health service delivery units within the government sector (Argentina, Chile, Ecuador, Mexico, Peru, Paraguay, and Uruguay) (Table 2). Peru uses performance agreements between central and regional governments, with the terms of compliance established and performance indicators outlined. Uruguay uses performance agreements for institutions that are not part of the annual budget process, but who may receive subsidies on the fulfilment of the conditions outlined in the performance agreements.

Table 2. Types of performance agreement utilised

Type of Performance Agreement	Country
Performance agreements between central and local government in relation to block grants, targeted transfers, subsidies etc.	Argentina, Brazil, Mexico, Peru
Performance agreements with the private sector and non-profit organisations in relation to contracts to deliver health services	Uruguay
Individual performance agreement with senior executives responsible for managing health services	Argentina, Chile, Ecuador
Performance agreements with health service delivery units within the government sector (e.g. hospitals, primary care clinics etc.)	Argentina, Chile, Ecuador, Mexico, Paraguay, Peru, Uruguay
Other (i.e. Ministry of Development and Social Inclusion, SIS, Commission of Management Commitments)	Peru, Uruguay

Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

3.4. Performance targets and indicators are used for strategic planning and expenditure forecasts, but rarely for new policies or to identify cost savings

Performance targets and indicators are a natural component of performance budgeting frameworks and agreements, as well as other purposes, utilised to track the progress of spending and the achievement of agreed strategic goals.

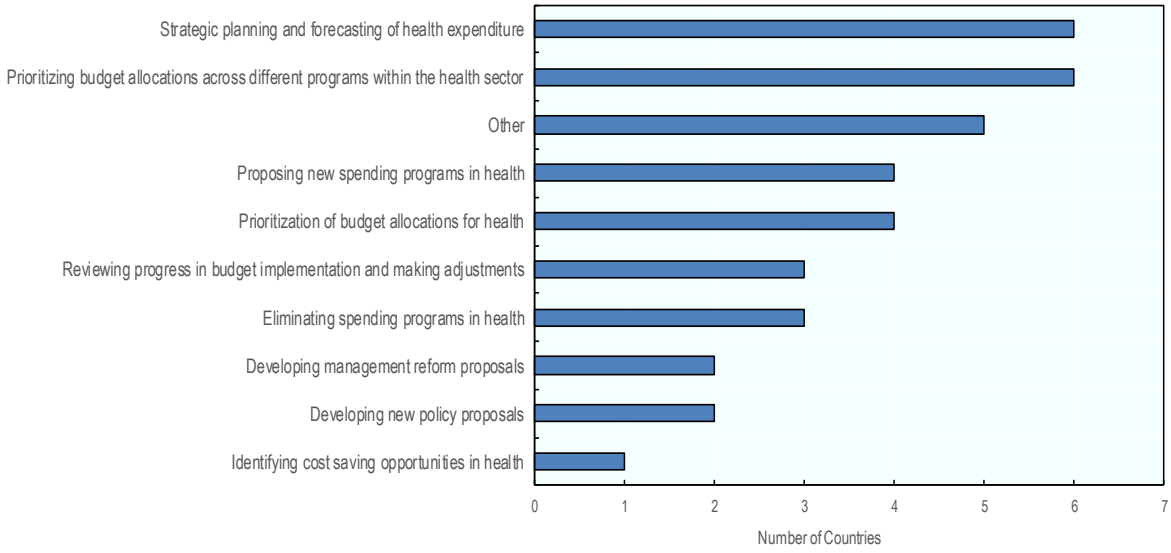
All surveyed countries, other than the Bahamas, use performance targets and indicators. The most commonly cited agency for determining performance indicators was the Ministry of Health (Argentina, Brazil, Chile, Ecuador, Mexico, Peru, Paraguay, Uruguay), followed by the Central Budget Authority (Brazil, Chile, Ecuador, Mexico, Peru). In Brazil, a combination of agencies agree upon these performance indicators, including the legislative branch of government, central government (i.e. the Presidential administration or Prime Minister's office or cabinet), sub-national governments, and the national health insurance agency. This process is further explained in Box 2.

Box 2. Setting performance indicators and targets in Brazil

In Brazil, the Ministry of Health has established the Primary Care Quality Improvement and Access Programme (PMAQ). The aim of this programme is to improve access and quality of primary care services. The main use of the performance indicators are for strategic planning, forecasting of health expenditure, reviewing progress in budget implementation, developing management reform proposals, and improving the work process of municipal teams engaging in PMAQ. Representatives of the municipal governments (CONASEMS) and state governments (CONASS) are also involved in the final approval of the format and development of the PMAQ. It is not mandatory to use the PMAQ to pay for performance, but among the programme's guidelines is to develop a culture of negotiation and contracting to encourage better management of resources. One of the central elements of PMAQ is the establishment of a performance agreement for primary care. Primary care teams are rewarded with additional resources based on performance in terms of increased access and improved quality of care.

Performance indicators and targets are widely used in the health sector, but most commonly for strategic planning and forecasting of health expenditure. Indicators are rarely used to develop management reform proposals, develop new policies, or identify cost saving opportunities in health (Figure 6).

Figure 6. Purpose of performance targets and indicators



Note: Countries who responded "Other" are explained in text.
Source: 2018 Survey of Budgeting Practices to Improve Health System Performance.

Some countries have made progress in incorporating performance indicators into the budget process. In Peru, indicators guide the transfer of additional resources and prioritise areas with insufficient funding, with the condition of meeting performance targets. In El Salvador, performance targets strengthen the links between planning and budgeting, with a medium-term vision to improve budget allocation and performance.

In Uruguay, targets act as an additional tool of accountability presented before Parliament. In Brazil, performance targets are used to facilitate and improve the work process of municipal teams engaging in the Primary Care Quality Improvement and Access Programme, a programme designed to promote performance budgeting. In Chile, performance indicators aim to improve financial management.

Performance targets and indicators can also facilitate adjustment of expenditures to address the population's most pressing health concerns. This depends however, on the responsiveness to indicators of poor performance. In the surveyed countries, the most common response to poor performance is to make information public (Argentina, Brazil, Chile, Colombia, El Salvador, Paraguay, Peru, and Uruguay). In Chile, programme managers face financial penalties in the form of salary cuts. In Brazil, municipality resources are adjusted, based on a set of indicators that is subject to fulfilling a minimum set of targets. This process is carried out through a series of external and internal evaluations.

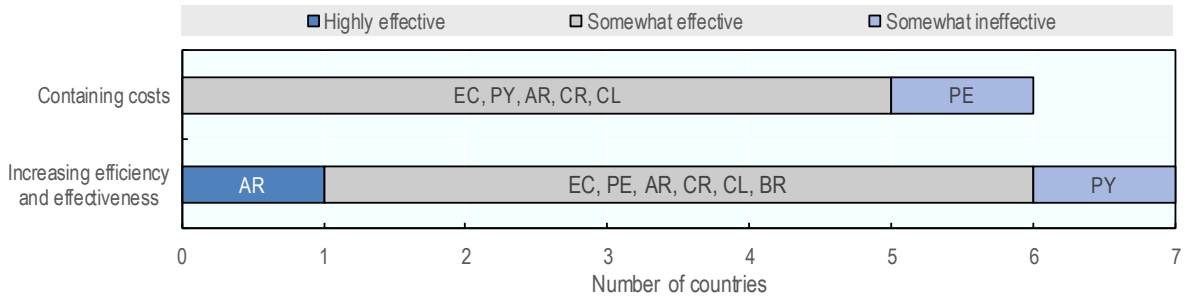
In many countries however, poor performance is without consequence (Colombia, Ecuador, and Peru). Note that in Peru, this lack of consequence for poor performance relates to regular budget allocations, but additional resources conditional on performance are only transferred if performance targets are met.

3.5. Performance budgeting is perceived to be somewhat effective, but the constraints must be addressed to further develop systems

Figure 7 shows the perceived effectiveness of performance budgeting for cost containment and increasing efficiency and effectiveness in health systems. Across most countries, performance budgeting was seen to be a somewhat effective tool. Only Peru and Paraguay highlighted that frameworks are ineffective in their responses. However, in Peru, the system does not necessarily aim at containing costs, instead it identifies inequalities in service provision and so spending has grown to close gaps.

This is encouraging as performance budgeting frameworks are only valuable to the extent to which they improve effectiveness and efficiency of public expenditure and contain costs. Introducing performance budgeting can place substantial administrative burden onto central government, particularly in terms of monitoring and reporting requirements. Therefore, consideration must be made to the trade-off between the potential benefits and level of effort when implementing performance budgeting. Results indicate that frameworks are largely perceived to be effective, but there is space to develop them further, by addressing some of the issues that are discussed below.

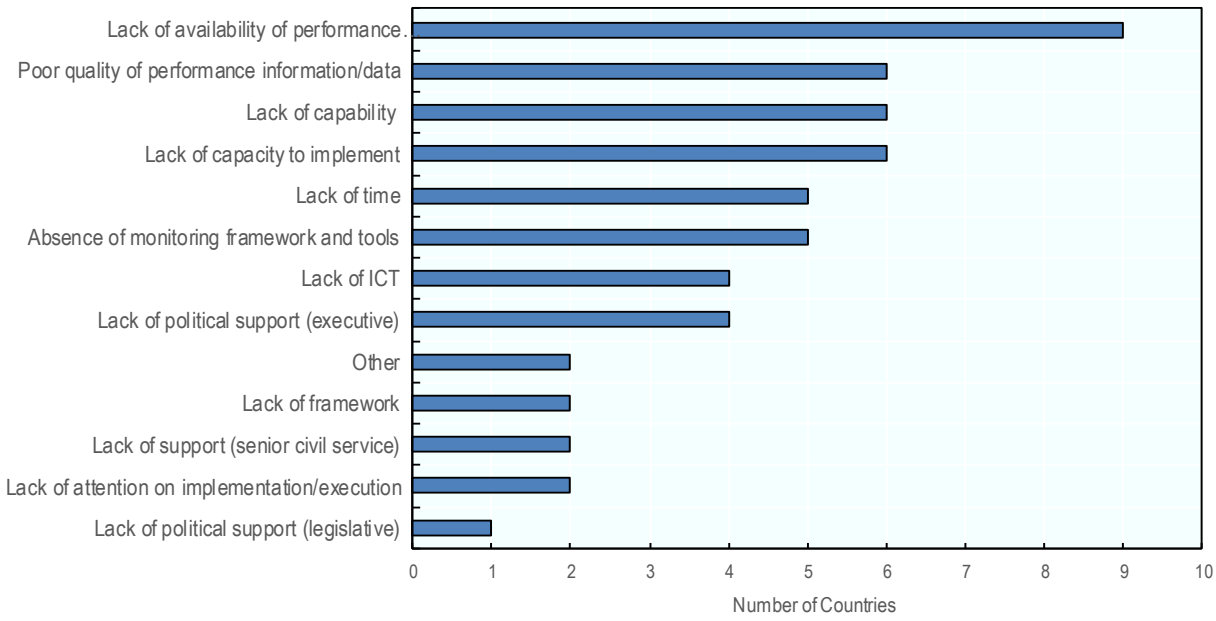
Figure 7. Effectiveness of performance budgeting tools



Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

Figure 8 highlights the main constraints countries referenced in using performance-based budgeting tools effectively. The main limitations cited by countries for not effectively using performance-based budgeting tools were lack of availability of performance information and data, poor quality information and data, and lack of capability (technical expertise or methodological data). Obtaining political support was not considered a limitation by many countries. This is promising as introducing a performance culture within government can be difficult, whereas technical aspects of performance data can be improved through incremental developments and training.

Figure 8. Constraints cited by countries in using performance-based budgeting tools effectively



Note: Refer to Annex for table with specific countries.
Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

Furthermore, Peru stated that the main limitations to using performance-based budgeting tools effectively is its lack of wider scrutiny. In particular, making the budgeting process more transparent to citizens would encourage a more effective use of the tools and information available. Peru recognises that this approach must go hand in hand with

political and technical support at all levels, including central and sub-national levels, however, there is still a need for improved quality of information and performance indicators within some budgeting programmes.

El Salvador faces constraints in terms of identifying suitable programmes, which are both relevant to public health priorities and suitable as the mechanism to receive budget allocations. Brazil was the only country to mention gaming as one of the constraints against the effective use of performance-based budgeting tools.

3.6. Spending reviews for health are used to reallocate spending and identify cost savings, but inadequate data impedes their effective use

In OECD countries, one of the most important performance budgeting tools used to monitor progress are spending reviews. Spending reviews are the process of identifying and deliberating proposed savings options, based on the systematic scrutiny of baseline expenditure. A spending review generally has two main objectives:

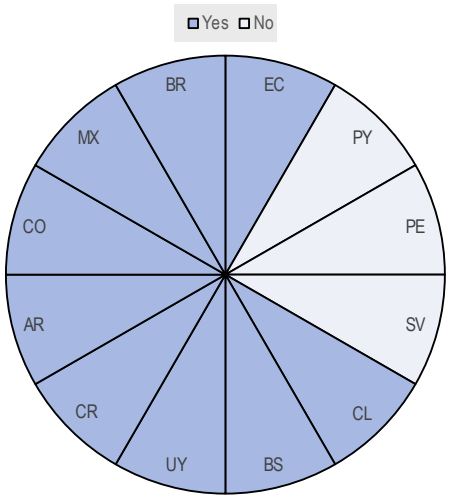
- to provide the government with improved control over the level of aggregate expenditure and/or
- to improve expenditure prioritisation.

Spending reviews can be used as a tool to improve efficiency and effectiveness of public spending, or to create fiscal space by reallocating and/or reducing public expenditure for programmes or organisations. Unlike the traditional annual budget process that focuses on incremental spending increases and new investment, spending reviews critically examine accumulated expenditure commitments with a view to eliminating wasteful spending and thereby creating additional fiscal space. Spending reviews differ from other types of evaluation by looking not only at programme effectiveness and efficiency under current funding levels, but also examining the consequences for outputs and outcomes of alternative funding levels.

Spending reviews in health can be carried out as part of a government-wide or comprehensive spending review, a spending review of the whole of the health sector, or as of a specific part of the health sector.

Results from this survey reveal that 9 out of the 12 countries that responded have conducted spending reviews of health expenditure. These countries include Argentina, Bahamas, Brazil, Chile, Colombia, Costa Rica, Ecuador, Mexico, and Uruguay (Figure 9). Mexico undertook an annual spending review of health expenditure up until 2016, however, since then, they are not currently considering any future spending reviews. All countries conducting spending reviews with the exception of Brazil and Mexico, identified reallocating health expenditures and identifying cost savings as the main objectives for these reviews.

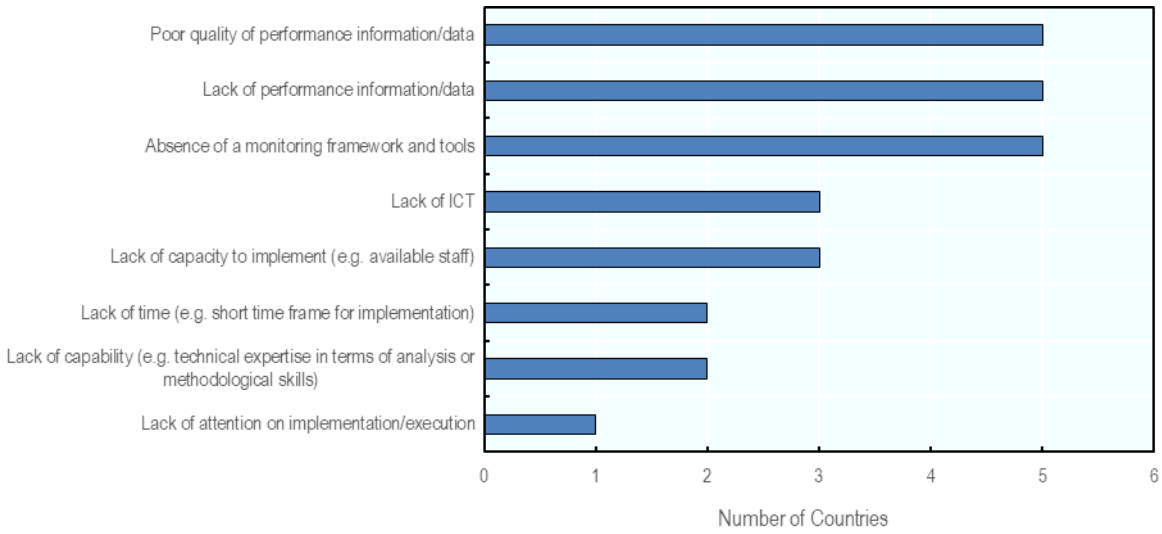
Figure 9. Countries that have carried out spending reviews



Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

The main barriers to ensuring the completion of spending review identified by countries included absence of monitoring frameworks and tools, lack of performance information and data, and poor quality of available performance information and data. The need for better data monitoring and quality is a common challenge faced by LAC countries using performance budgeting tools. Figure 10 shows these and other barriers countries face when conducting spending reviews for health.

Figure 10. Main barriers to ensuring completion of spending reviews



Note: Refer to Annex for table with specific countries.
Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

The success of spending reviews is reliant on the availability of relevant data for monitoring purposes. This requires political co-operation across levels of government within the health sector, as well as between the Ministries of Health and Finance, to accurately account for

expenditures. If carried out correctly, spending reviews can reveal overlaps in budgeting practices and areas where there has been ineffective use of resources, thereby helping to modify future budget proposals (Kinsey, 2018[2]). The method of conducting spending reviews in Argentina is detailed in Box 3 below.

Box 3. Process of spending reviews in Argentina

Spending reviews in Argentina have been carried out since 2017. Spending reviews take into consideration both the current government priorities and the budget plan, which then encompasses a system of evaluation known as PRODEV. PRODEV is used to analyse five pillars of the management cycle: 1) planning, 2) budget, 3) public financial management, 4) management of programmes and projects, and 5) monitoring and evaluation. The aim of these spending reviews is primarily to identify cost savings, reallocate health expenditures, and expand health expenditures. These spending reviews are part of a government-wide, comprehensive spending review.

4. Provider payment methods and experiences with pay-for-performance

4.1. Main purchasers and providers of health services

To better understand and evaluate performance budgeting systems, the 2018 Survey also set out to capture information on different financing arrangements. This includes an overview of the main purchasers and providers of health services, followed by a closer look at the provider payment methods used.

In terms of the main purchasers of services, in 5 out of 12 countries – Argentina, Bahamas, Brazil, El Salvador and Paraguay – government is the main purchaser of services across all levels of care. Meanwhile, in Chile and Costa Rica, social health insurance schemes are the main purchaser. In Uruguay, an autonomous body of the Ministry of Public Health, the National Health Board (JUNASA), is responsible for administering the national health insurance.

In countries like Colombia, Ecuador, Mexico, Peru and Uruguay, different types of purchasers co-exist. For example, in Mexico, both the Ministry of Health and social security system finance services. In Peru, health services are purchased by the Comprehensive Health Insurance scheme, SIS, and by the Social Health Insurance agency, ESSALUD. In Colombia, the *Empresa Promotora de Salud* is the main purchaser of primary care services in the country and is responsible for registering affiliations to the Social Security System and acquiring the contributions necessary for patients to receive their health benefits.

It is also important to note that households are important purchasers of care, via direct out-of-pocket payments. Table 3 shows the main purchasers of care according to level of service across countries, based on survey responses, with further country-by-country details given after.

Table 3. Main purchasers of care according to level of service

Country	Primary Care	Inpatient Secondary Care	Outpatient Secondary Care
Argentina	GOV	GOV	GOV
Brazil	GOV	NA	NA
Bahamas	GOV	GOV	GOV
Chile	SHI	SHI	SHI
Colombia	Mixed	Mixed	Mixed
Costa Rica	SHI	SHI	SHI
Ecuador	Mixed	Mixed	GOV
El Salvador	GOV	GOV	GOV
Mexico	Mixed	Mixed	Mixed
Paraguay	GOV	GOV	GOV
Peru	GOV	GOV	SHI
Uruguay	SHI	SHI	SHI

Note: GOV-Government schemes, SHI-Social Health Insurance Schemes, NA-Not Available.
Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

In terms of health service provision, primary care services are predominantly provided by publicly owned facilities in 10 of 12 surveyed countries. The exceptions are Ecuador and Uruguay. In Uruguay, an important share of primary care services are provided in outpatient departments of private hospitals. In Ecuador, primary care services are offered in Public Health Centres that take the form of a combination of public primary care clinics, outpatient departments of public hospitals, and private solo practices.

Outpatient specialist services were primarily split between public multi-specialty clinics Argentina, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, and Paraguay; as well as outpatient departments of public hospitals Bahamas, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Mexico, and Peru. Hospital services were provided by a mix of publicly owned hospitals, and private (not-for-profit and for-profit) hospitals in all surveyed countries.

4.2. Use of provider payment methods

A range of provider payment methods can be used to pay health providers. *Capitation payments* are based on the number of patients registered, rather than the type of service or treatment delivered. Providers are therefore incentivised to keep average costs low. This can help contain costs, but potentially at the risk of reduced quality. Providers may also be more inclined to take on healthier patients and offer less diagnostic tests and procedures in order to maintain lower costs, although this can be offset by weighted capitation approaches (e.g. by age). *Fee-for-service* is a reimbursement method that pays providers based on the type of services delivered to the patient. Compared to capitation payments, fee-for-service incentivises providers to increase the quantity of services they provide. This may for example lead them to offer excessive and unnecessary medical procedures. *Case payments*, notably based on diagnosis-related groups, pay providers a set amount per patient seen, adjusted to reflect case-mix (and therefore the likely cost of treatment).

A *line item budget* for providers itemises individual expenses, for example salaries, drugs and maintenance. This limits the flexibility of providers to reallocate resources between line items, as this often requires the approval of budget institutions. Under a *global budgeting system*, government agencies predetermine the total amount of resources providers can use throughout the budgeting cycle. Compared to line item budgeting, global budgets give providers greater flexibility in spending decisions.

Methods used in LAC countries are summarised in Table 4. For primary care providers, the survey revealed that in LAC countries, the most common methods of payments is global budgeting and capitation payments, though Bahamas, Brazil and Mexico primarily used line item budgeting. Furthermore, in Brazil the payment of primary care services is a shared responsibility between the state and municipalities. Respondents also cited that global budget and line item budgeting were the most frequently used for health care providers of outpatient secondary care services, followed by fee-for-service.

For outpatient secondary care, global budgeting payments were the most common method used among countries, followed by fee-for service and line item payments. Outpatient-secondary care in Uruguay use care goals as part of a pay for performance mechanism, used alongside capitation.

For inpatient (acute) care, fee-for-service is the most common payment method used in public hospitals, applied in Chile, Colombia, Costa Rica, Ecuador, El Salvador, and Peru. However, global budgets were used in El Salvador and Mexico; Costa Rica and Uruguay identified capitation payments as the main method of payment for public hospitals. In private hospitals, fee-for-service was the most common payment method used.

Table 4. Main provider payment method used across different levels of care

Country	Capitation	Fee-for-service	Case Payment	Line Item	Global Budget
*Argentina		Outpatient-Secondary; Inpatient Public Inpatient-Private	Inpatient-Private		Primary
Bahamas	Primary			Primary; Outpatient-Secondary; Inpatient-Private	
*Brazil				Primary	
*Chile	Primary	Outpatient-Secondary Inpatient Public			
Colombia	Primary	Inpatient Public; Inpatient-Private			Outpatient-Secondary
Costa Rica	Primary; Inpatient Public	Inpatient-Private.			Outpatient-Secondary
Ecuador		Primary; Inpatient Public; Inpatient-Private		Outpatient-Secondary	
El Salvador					Primary; Outpatient-Secondary; Inpatient Public
Mexico		Inpatient-Private	Inpatient-Private	Primary; Outpatient-Secondary	Outpatient-Secondary ; Inpatient-Public
Paraguay					Primary; Outpatient-Secondary
*Peru	Primary	Outpatient-Secondary; Inpatient Public; Inpatient-Private			
*Uruguay	Primary; Outpatient-Secondary Inpatient Public; Inpatient-Private				

*Note: * is used to depict countries currently using Pay-for-Performance Schemes*
Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

4.3. Pay-for-performance in LAC countries

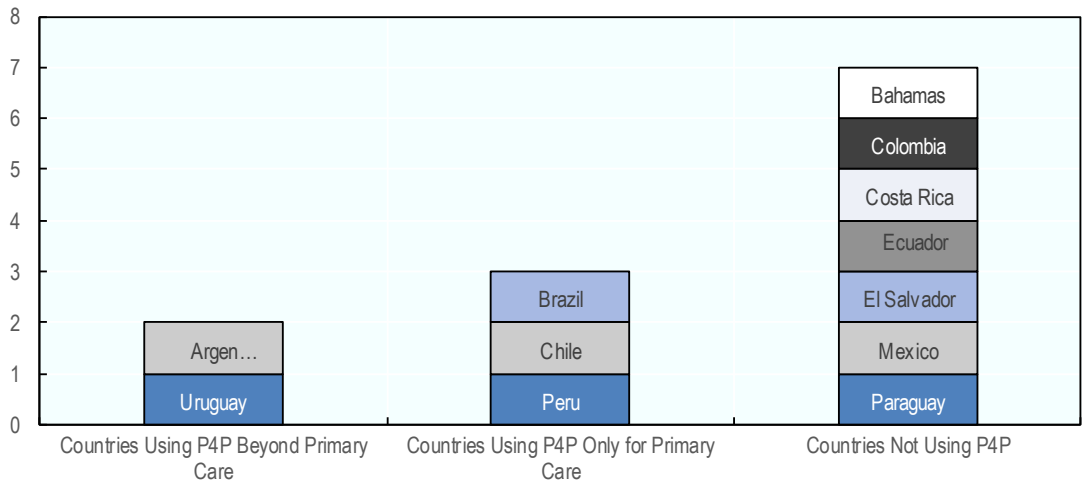
4.3.1. Application of Pay-for-performance schemes

The use of pay for performance, or P4P, is a common performance tool developed in order to enhance efficiency in health services and improve provider performance. P4P links financing practices with health policy objectives by relying on economic incentives to set goals and targets. If successfully implemented, P4P mechanisms can serve as a motivation for providers to offer higher-quality care. However, the effectiveness and use of P4P varies according to the different levels of the health system.

Critics of P4P schemes identify that incentive-based programmes have been unsuccessful in improving quality of care due to its over-emphasis on economic rewards and failure to account for non-financial motivations (see, for example, (Gondi, Soled and Jha, 2018[3]). Imperfect metrics, methodological constraints, and gaming behaviour, can also undermine the effectiveness of P4P schemes.

Survey results showed that among the 12 countries who provided responses, Argentina, Brazil, Chile, Peru, and Uruguay were the only countries to report P4P mechanisms in place. Among these 5 countries, Brazil, Chile, and Peru applied P4P methods at primary levels of care only, as shown in Figure 11 below.

Figure 11. Countries Applying P4P



Source: 2018 Survey of Budgeting Practices to Improve Health System Performance

The way in which these P4P mechanisms operate varies distinctly from country to country. In Peru, the SIS (*Seguro Integral de Salud*, or comprehensive health insurance) implemented pay for performance approximately five years ago, involving resource transfers to SIS affiliates linked to the fulfilment of coverage goals, social outcomes and management indicators, agreed up by the Ministry of Development and Social Inclusion, the Ministry of Economy and Finance and regional governments.

Additionally, the *Fondo de Estimulo al Desempeño* (Performance Stimulus Fund) was implemented three years ago and is directed at regional services. Indicators measure the coverage of key interventions across populations, and are linked to existing budget programmes. Payment accounts for 2% of the total allocated budget for public spending on health on average, and is used in over 8 000 primary care establishments throughout the

country. Although Peru identified efficiency gains from P4P, they also acknowledged the need for more developed measurement and evaluation systems. Such systems are vital for the successfulness of P4P mechanisms, so that providers undergo regular evaluation and monitoring in order to adapt to areas of poor performance, organisational priorities, and respond to changes in provider input.

In Brazil, P4P mechanisms have been in place since 2011, orientated around seven key goals. In summary, these goals primarily focus on improving the coverage, quality, and efficient management of primary care, as well as encouraging the provision of more patient-centred practices. Unlike other countries engaging in P4P schemes, the Ministry of Health is not involved directly in these payments, instead municipal managers have the autonomy to choose whether to use P4P with participating teams from municipalities or simply to use the payments for primary care actions. Studies reveal that 39 000 Family Health Strategy teams participate in PMAQ and are located throughout the country (Macinko, Harris and Rocha, 2017[4]).

Additional published research from Brazil shows that P4P has resulted in changes in the management regarding the work process of these teams. Since its debut, "PMAQ has led to an increase in federal investment for infrastructure and performance incentives in primary care from BRL 770 million in 2011/12 to BRL 4.2 billion (about USD 1.2 billion) in 2014/15" (Macinko, Harris and Rocha, 2017[5]). These studies also argued that P4P has had an inductive role in increasing the quality and access of primary care services offered by teams participating in P4P programmes.

In Chile, P4P is used for primary care providers. Through the Reinforcement Programmes of Primary Health Care (PRAPS), agreements are signed between the Health Service and municipalities to determine the goals that must be met within programmes approved by the Ministry of Health. These "Health Goals" are a set of 8 goals and 10 indicators that range from improving psychomotor development recovery, increasing dental coverage in adolescents and pregnant women, and effective diabetes and hypertension coverage, among others (Ahumada et al., 2016[6]). When goals are unfulfilled, the programmes are then reassessed by the Ministry of Health. Funding through PRAPS compliments per capita mechanisms.

In Uruguay, P4P methods were introduced in 2007 following the creation of the National Health Insurance (SNS). Four main goals have been identified for providers to benefit from P4P payment methods. The focus of these goals ranges from child and women's health, promoting agreed priority health interventions, reforming human resources in the health sector, and financing annual variable salary lines. Providers include those of primary care services, outpatient services and hospital services contracted by SNS, and accounts for on average 7.3% of their total budget. Overall, this is around 3.5% of publicly funded health expenditure but accounts for 6% of the expenditures of the National Health Insurance Fund.

Argentina has been using P4P mechanisms for primary care, outpatient care and public hospitals for 10 years. Performance-related payments currently make up 1-2% of the provincial health budget; however, development is currently underway to expand payments in the future so that more of the total budget is allocated in this way. The set of indicators and targets used is also being revised, which currently focus on purely service quality criteria.

5. Conclusions: the future of performance budgeting in the LAC region

As countries in the Latin American and Caribbean region strive for universal health coverage, and with the backdrop of a changing demographic profile, their health financing systems will need to adapt to remain sustainable over the medium and long term. It is evident from the results of both the 2015 Survey of Budget Officials on Budgeting Practices for Health and the 2018 Survey of Budgeting Practices to Improve Health System Performance that several LAC countries are moving towards more performance-oriented health financing.

Performance budgeting practices are already widespread across government in LAC countries. As in most OECD countries, the use of performance budgeting tools, including spending reviews and performance-linked financing is more frequent in the health sector than in many other sectors. Meeting the sustainable development goal of universal access to health care only serves to exaggerate the need for efficiency and a strong focus on results. However, the task of applying the principles and practices of performance budgeting is complicated in many LAC countries by the fragmented nature of health delivery systems and health financing arrangements. These systems require co-ordination and exchange of data between institutions and across levels of government to allocate and administer healthcare resources in the most efficient way possible.

Results from the survey revealed the extensive efforts in the LAC region to introduce and improve existing performance budgeting tools. The most frequently used tools were spending reviews, performance agreements, and performance budgeting frameworks. In general, survey respondents indicated that the benefits of performance budgeting have been somewhat felt, and highlighted examples from Brazil, Chile, Peru and other countries suggest that these tools can be used to improve efficiency and help achieve important health objectives. Efforts to develop the impact of performance budgeting require better monitoring and evaluation practices, as well as a greater emphasis on improving the quality of data collection.

Although only 5 of the 12 countries reported using pay-for-performance schemes, they all have developed this practice extensively. Once again, the majority of countries stressed a greater need for evaluation systems to enhance such schemes. Moving forward, countries should look to diminish the emphasis on economic incentives and look towards incentivising other forms of capital, such as social, cultural and symbolic capital, to engage providers to deliver high quality care.

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Annex B.

Table A B.1. Constraints cited by countries in using performance based budgeting tools effectively

	Lack of avail. of perf. Info./data	Poor quality of perf. Info./data	Lack of capability	Lack of capacity to implement	Lack of time	Absence of monitoring framework and tools	Lack of ICT	Lack of political support (exec.)	Other	Lack of attention on implementation	Lack of framework	Lack of support (senior civil service)	Lack of political support (leg.)
Argentina	X		X			X							
Bahamas		X	X	X	X	X	X			X			
Brazil		X							X	X			
Chile	X							X			X		
Colombia			X	X		X		X					
Costa Rica	X	X	X	X		X	X					X	
Ecuador	X	X					X						
El Salvador					X	X			X				
Mexico	X			X	X								
Paraguay	X	X	X	X	X		X				X		X
Peru	X	X	X					X	X	X		X	
Uruguay		X		X	X			X					

Source: 2018 Survey of Budgeting Practices to Improve Health System Performance.

Table A B.2. Main barriers to ensuring completion of spending reviews

	Lack of performance. Info./data	Poor quality of performance Info./data	Lack of capability	Lack of capacity to implement	Absence of monitoring framework and tools	Lack of ICT	Lack of attention on implementation	Lack of framework	Lack of Time
Argentina	X		X		X				
Bahamas	X	X	X	X	X		X		X
Brazil						X	X	X	
Chile	X					X			
Colombia		X			X				
Costa Rica		X		X		X			
Ecuador	X	X		X	X				
El Salvador									
Mexico	X								X
Paraguay									
Peru									
Uruguay	X	X			X	X			

Source: 2018 Survey of Budgeting Practices to Improve Health System Performance.

Health Financing and Budgeting Practices: Key findings from the Asia, Oceania, and Central, Eastern and South-eastern European regions

by

Ana Maria Ruiz, Kholood Farran, Karolina Socha-Dietrich, Ivor Beazley, Chris James and Caroline Penn

This article presents the findings of the OECD Survey of Senior Budget Officials on Budgeting Practices from a 2017 survey covering the Asia and Oceania, and Central, Eastern and South Eastern European regions. The survey is part of the ongoing engagement between health and budget officials in the OECD's regional networks and provides an comparable set of data to analyse and benchmark good practices in health budgeting. The results of the survey point to an increasing use of budgeting tools from developed countries and support continued engagement to improve budget activities and to meet future challenges of health systems.

JEL codes: H51, I13, I18

Keywords: Budgeting practices, health sector, Asia, Europe

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This report was approved by the OECD Joint Network of Senior Budget and Health Officials at the 3rd Health Systems Joint Network Meeting for Central, Eastern and South-eastern European Countries and prepared for publication by the OECD Secretariat

Foreword

Ensuring effective and fiscally sustainable health spending by governments is a challenging task. Good governance and co-ordination between finance and health ministries is essential to ensure sound policy choices. Ministries of finance are striving for effective budgetary discipline, while ministries of health focus on keeping people healthy and treating the sick. A better understanding of each institution's priorities and constraints, and co-ordinated actions, can help achieve both goals.

To help facilitate such dialogue, a Joint OECD Network of Senior Budget and Health Officials was established in 2011. The network brings together representatives from ministries of finance and health, and social security organisations. The network also closely collaborates with the World Health Organization, the Global Fund to Fight AIDS, the Asian and Inter-American Development Banks, and the World Bank.

This article presents the results of the 2017 survey of the Network from Asia, Oceania, and Central, Eastern and Southern Eastern Europe (CESEE). The survey, adapted to cover issues relevant for low- and middle-income countries, is based on the Network's 2013 *Survey of Budget Officials on Budgeting Practices for Health* in 27 OECD countries. The survey targeted officials working in central budget authorities that focus on health, as well as officials in ministries of health who deal with health financing and budgetary issues. The survey produced an internationally comparable set of data to analyse health budgeting practices across different regions of the world and benchmark these against OECD best practices. It includes a broad spectrum of topics covering the budget process, including budget planning and formulation, expenditure monitoring and reporting frameworks. The survey also provides information on the institutional frameworks and budgeting instruments applied across countries. The results of the survey point to an increasing use of budgeting tools from developed countries and support continued engagement to improve budget activities and to meet future challenges of health systems.

Glossary

Budget	A comprehensive statement of Government financial plans including expenditures, revenues, deficit or surplus, and debt. The budget is the Government's main economic policy document, indicating how the Government plans to use public resources to meet policy goals.
Capital expenditure	Investments in physical assets such as buildings and equipment that can be used for a number of years.
Capitation payment	A health care provider payment method in which all providers in the payment system are paid a predetermined fixed rate for each individual registered or enrolled with the provider for a fixed period to provide a defined set of services.
Case-based payment	A hospital payment method that pays hospitals a fixed amount per admission or discharge depending on the patient and clinical characteristics.
Central Budget Authority	A public entity, or several co-ordinated entities, responsible for the custody and management of all (or the majority) of public funds. It is often the Central Government Ministry of Finance or Treasury, or a specific part of these. The CBA is responsible for putting together the budget and dispensing resources to line ministries. The CBA has the leading role in maintaining aggregate fiscal discipline, ensuring compliance with the budget laws and enforcing effective control of budgetary expenditure. This Authority regulates budget execution but does not necessarily undertake the treasury function of disbursing public funds.
Central government	The national, central, or federal government, as it may be defined differently across countries. It does not include sub-national governments or social security health insurance institutions.
Compulsory private insurance	A financing arrangement under which all residents (or a large group of the population) are obliged to take out health insurance with a health insurance company or health insurance fund, meaning that the purchase of private coverage is mandatory. The insurance is established by an insurance contract between the individual and the insurer.
Development assistance for health	Flows of official financing earmarked for health from donor government agencies or multi-lateral institutions to recipient countries that are concessionary in nature and may include a grant element.
Discretionary spending	Public expenditure that is governed by annual or other periodic appropriations, rather than by formulas or criteria set forth in authorising legislation.
Extra-budgetary funds	Special funds owned by the Government, that are not part of the budget and that receive revenues from earmarked levies, possibly in addition to other sources such as fees and contributions from the general revenue fund.
Fee-for-service payment	A health care provider payment method that pays providers for each individual service provided. Fees are fixed in advance for each service or group of services.
Financing agents	Institutional units that manage one or more financing schemes: they collect revenues and/or purchase services under the rule of the given health care financing scheme.
General government spending	Consists of central, state and local governments, and social security funds.
General government (excluding social security) expenditure on health	Expenditures incurred by central, state/regional and local government authorities, excluding social security schemes. Included are non-market, non-profit institutions that are controlled and mainly financed by government units.
General government revenues	All compulsory funding sources (central government, sub-national governments and social security funds together).
Government health care financing scheme	A financing arrangement with automatic entitlement for all citizens/residents, or for a specific group of the population (e.g. lower income) defined by law/government regulation. This scheme is funded through government budget revenues (primarily taxes).
Grants/transfers	Payments from a government level to another, whether they are earmarked or general purpose, discretionary or mandatory.
Health debt	The accumulation of financial obligations by government for the specific purpose of financing health deficits (see below).
Health deficit	When annual health expenditures exceed annual revenues dedicated to health and recourse is sought to the government budget or other financing mechanisms for supplementary funding. This is generally only observed in countries with social insurance based financing.
Health budget overrun	When annual health expenditures exceed the initially budgeted health allocation, and thus requires voting supplementary budgets.
Health budget under-spending	When annual health expenditures fail to meet the initially budgeted health allocation.

Health expenditure	The definition of 'health expenditure (or spending)' used in this document is consistent with that in the OECD's System of Health Accounts and can be found here: http://stats.oecd.org/Index.aspx?DataSetCode=SHA
Health purchaser	Purchasing agents as defined in the System of Health Accounts, i.e. the "institutional units" that operate "financing schemes".
Health technology assessment	An approach used to determine the inclusion of medical procedures, medicines, medical devices and high cost equipment in entitlements and benefits packages. HTAs normally incorporate the medical, social, ethical and economic implications of funding such items.
Line-item budget	The allocation of a fixed amount to a health care provider for a specified period to cover specific input costs (e.g. personnel, medicines, utilities).
Mandatory health spending (entitlements)	Public expenditure that is governed by formulas or criteria set forth in authorising legislation, rather than by periodic appropriations.
Out-of-pocket payments	Payments borne directly by patients, including cost-sharing arrangements and any informal payments to healthcare providers
Public procurement	The process of identifying what is needed; determining who the best person or organisation is to supply this need; and ensuring what is needed is delivered to the right place, at the right time, for the best price and that all this is done in a fair and open manner.
Social security funds	Social insurance programmes imposed and controlled by a government unit and covering the community as a whole, or large sections of the community. They generally involve compulsory contributions by employees or employers or both, and the terms on which benefits are paid to recipients are determined by a government unit.
Social health insurance scheme	A financing arrangement to ensure access to health care for specific population groups through mandatory participation and eligibility based on a payment of a non-risk related contribution by or on behalf of the eligible person (e.g. contributions paid by employers and or employees for health).
Spending review	The process of developing and adopting savings measures, based on the systematic and in depth scrutiny of baseline expenditure.
Sub-national government	All levels of government below the central government level (i.e. includes both regional/state and local governments).
Voluntary coverage arrangements	Arrangements that include voluntary private health insurance (commercial or non-for-profit) and other voluntary insurance schemes (e.g. organised by members or "communities", non-government organisations, etc.).

Executive Summary

Improving the capacity of national health authorities to engage effectively with national budget authorities is essential to establish the level of funds to be provided, ensure the quality and efficiency of health public spending and determine the flexibility with which funds can be used. Efficiency in health expenditure requires good practices throughout the budget cycle to ensure alignment between expenditure and public needs.

Many non-OECD countries in the Asia and Oceania region and in Central, Eastern and South Eastern Europe are making commitments to achieve universal health coverage (UHC). In a context of ageing populations, slowing global economic growth rates, and growing demand from citizens for access to quality healthcare, the UHC goal places considerable pressure on public budgets, and requires a careful strategy for achieving the equitable expansion of health coverage while ensuring fiscal sustainability.

The arrangements that countries in the two regions use to finance health care systems fall into broad classifications of government schemes, social health insurance schemes, or a combination of both systems covering different segments of the population. In spite of diverse financing arrangements, most countries report that the central government budget contains the majority of public expenditure on health. Moreover, aspects such as transfers from general government revenue to social insurance agencies, and subsidies for specific population groups can blur the lines between different financing arrangements. Therefore, ensuring sound budget practices helps maximise the benefits realised from public resources for health.

The results of the surveys indicate the use of a well-developed set of budgeting procedures and tools across both regions. Many countries include projections of expenditure for more than one year in the budget, which allows for medium-term planning. However, many countries fail to make long-term revenue and expenditure forecasts when planning a budget; such forecasts would support discussions on future scenarios and challenges. Contrasting the experiences of OECD countries, there is no prevailing trend of under- or over-spending of the health budget in the regions, indicating effective expenditure monitoring and reporting mechanisms.

Countries within the surveyed regions should continue the trend of ensuring there is flexibility within budgetary systems, where ministries of health have responsibility for resource allocation and the supervision of expenditure. This can help to ensure a greater alignment of expenditure with policy priorities, and increase the knowledge capacities in health authorities.

Over recent decades, the governments of OECD countries have taken steps to integrate performance information into the budget cycle, in efforts to reform the decision making process from focusing on inputs, towards more measurable results. The introduction of performance reforms is often linked to efforts to improve health sector efficiency and performance. This practice is seen less across the Asia and Oceania, and Central, Eastern and South Eastern European regions, particularly among non-OECD countries. However, some countries reported the use of performance agreements, involving the use of performance indicators in strategic planning and setting allocations for health programmes. Further work in this area can help identify the level of engagement in the regions in adopting performance budgeting frameworks. In particular, addressing the challenges countries are facing in the early stages of development.

Establishing co-ordination mechanisms between a central budget authority and a ministry of health is still a challenge for many countries within the regions, with many having informal mechanisms or no mechanism at all. A sound co-ordination mechanism is essential for promoting the dialogue between central budget authorities and ministries of health. In order to better integrate both perspectives, many OECD countries have formal bodies comprising officials from both institutions (and sometimes social security entities) to discuss possible solutions to fiscal sustainability challenges in health and ensure effective policy choices (OECD, 2015).

Looking to the future, countries in the Asia, Oceania, and Central, Eastern and South Eastern European regions should build on the progress made in developing budget practices. This article shows that a regional comparison of countries' budget practices can provide useful examples to help improve budget outcomes. When combined with an open dialogue between budget and health authorities, this can help countries to move towards universal health coverage, within the constraints of each country's fiscal position.

1. Introduction

As part of the expansion of the work programme of the OECD Joint Network of Senior Health and Budget Officials on Fiscal Sustainability of Health Systems, the OECD carried out a Survey of Budget Officials on Budgeting Practices for Health, adapted specifically to cover issues relevant for low- and middle-income countries. This will help improving the dialogue and mutual understanding between health and finance officials within the regional network.

The scope of the survey covers a wide range of budgeting issues, including:

1. Basic characteristics of health systems
2. Health budget formulation
3. Health budget execution, purchasing and provider payments
4. Budget monitoring
5. Fiscal sustainability
6. Budgeting for social insurance funds/agencies
7. Management of development assistance for health
8. Decentralisation

This report discusses the main findings within each region, in particular, noting areas where budgeting tools can be further developed.

2. Health Financing and Budgeting Practices in Asia and the Oceania

2.1. Background

In 2015 countries in Asia adopted the Sustainable Development Goals (SDGs), committing to 'ensure healthy lives and promote well-being for all at all ages' (SDG No. 3). Furthermore, an increasing number of the countries in the region are making commitments to achieving universal health coverage (UHC) by 2030. The UHC goal places considerable pressure on public budgets, and requires strategic planning to ensure expansion of health coverage, while achieving a stable fiscal position.

This report summarises the key results from the survey in Asia and Oceania. The survey was sent to all participating countries of the 1st Health Systems Joint Network Meeting for Asia and Oceania that was held in Tokyo on 15-16 May 2017. The survey has been answered by 11 countries (Australia, Indonesia, Japan, Lao People's Democratic Republic, Myanmar, New Zealand, Papua New Guinea, South Korea, Philippines, Thailand, and Vietnam). Results obtained from the survey offer a unique panorama of budgeting practices for health in the region, and when possible allow for comparisons with OECD member countries.

Table 5. ISO codes 1

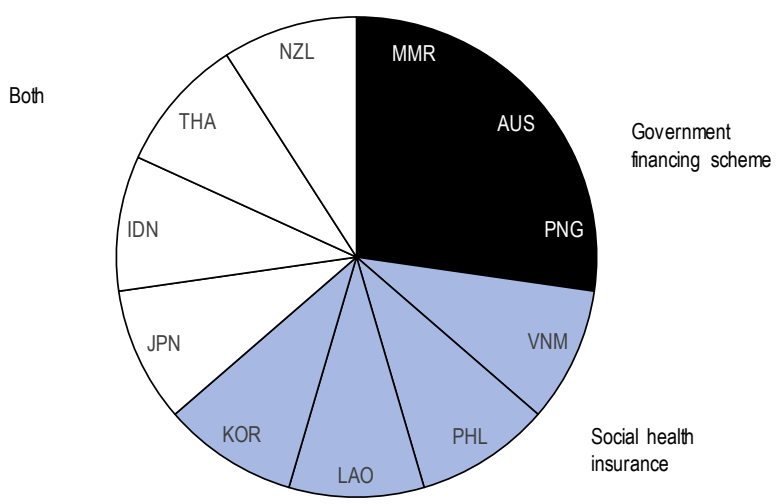
AUS	Australia
IDN	Indonesia
JPN	Japan
LAO	Laos
MMR	Myanmar
NZL	New Zealand
PNG	Papua New Guinea
PHL	Philippines
KOR	South Korea
THA	Thailand
VNM	Vietnam

2.2. Institutional framework

2.2.1. Main health financing scheme

Health financing schemes vary across countries, with some systems predominantly organised around government schemes, others through social health insurance schemes, or a combination of both systems covering different segments of the population. Australia, Myanmar, New Zealand and Papua New Guinea have a government-financed scheme, funded through government budget revenues (mainly taxes) that covers a 100% of the population. Thailand, Indonesia and Japan have a government financing scheme and a social health insurance scheme that cover different segments of the population. Similarly, besides having a government health financing scheme, New Zealand also has a social insurance scheme managed by a separate entity, called the Accident Compensation Corporation (ACC), covering all injuries and occupational illnesses.

Figure 1. Main healthcare financing scheme



Source: OECD (2017), Survey on Budgeting Practices for Health in Asia and Oceania (Question 2)

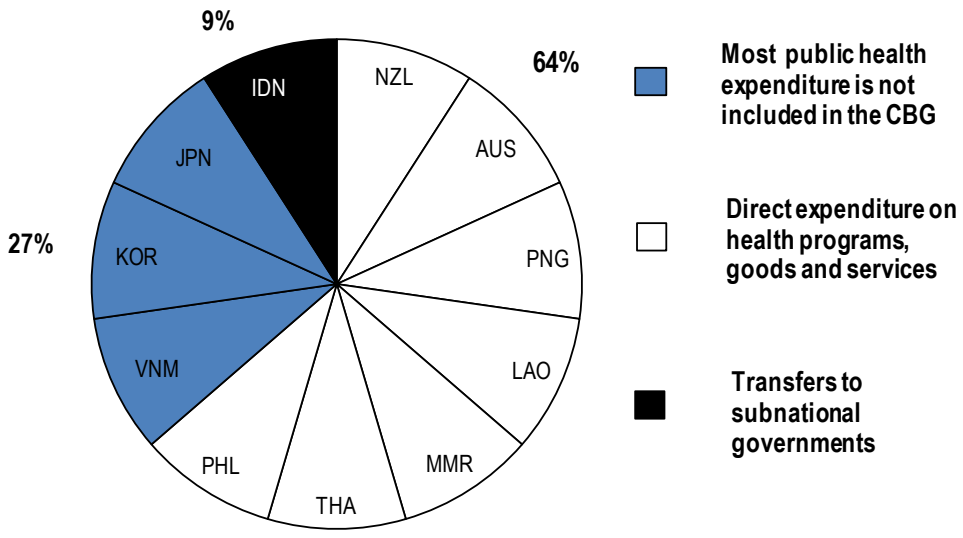
2.3. Approaches to budgeting

2.3.1. Most public expenditures are included in the central government budget

Budgeting practices for health differ depending on the type of health system in place, including the way health expenditures are incorporated in different public budgets (central, sub-national, and health insurance funds). When health expenditures are included in the central budget process, these expenditures go through the regular formulation process led by the Central Budget Authority (CBA) and are discussed by the parliament during the central budget approval phase.

Most public health expenditures are included in the central government budget for nearly all surveyed countries in Asia and Oceania. In most cases, public health expenditures are included in the central government budget as direct expenditure on health programmes, and goods and services. Only in Indonesia does health expenditure consist of mostly transfers to social security institutions. South Korea, Japan, and Vietnam have reported that most of their public health expenditures are not included in the budget of the central government. Instead, there is a separate budget process for the health insurance system where most health revenues and expenditures are directly included (Figure 2).

Figure 2. How is public health expenditure included in the central government budget?



Notes: 1. Myanmar chose 2 answers: "They are mainly direct expenditure on health programs, goods and services" and "They are mainly transfers to subnational governments"; 2. Although Japan has answered that "Most public health expenditures are included in the central government budget" the central government budget includes only part of the health expenditure and not most of it.
Source: OECD (2017), Survey on Budgeting Practices for Health in Asia and Oceania (Question 7 and 7a)

Most countries in the region reported not to have a separate budget for health, and for those that do, information about the social security budget is included in the general budget documentation. However, half of surveyed countries reported that the budget of the health insurance system is not submitted for legislative approval, either as part of the central budget process or with a different parallel approval process. Challenges arise for budget agencies where social security spending not subject to legislative review or occurs on a

different timeline to the government budget, as it is likely to cause a disconnect between budgets for health spending, and for the government at large (OECD, 2015[1]).

Most surveyed countries with social health insurance schemes have transfers from the central government to the social health insurance system, on behalf of either a non-contributing group, or a general subsidy to the scheme.

2.3.2. Detailed budget allocations are usually delegated to the Ministry of Health and Social Security Institutions

Aligned with recent trends in OECD countries, less than half of these countries include budget allocation by individual health facilities (e.g. hospitals, clinics, health centres), and specific diseases (e.g. cancer, HIV, malaria, etc.). In addition, in the majority of surveyed countries these categories are used for informative (non-binding) purposes. Only in Japan, Indonesia and Thailand do the categorisations of spending form the basis of budget appropriations.

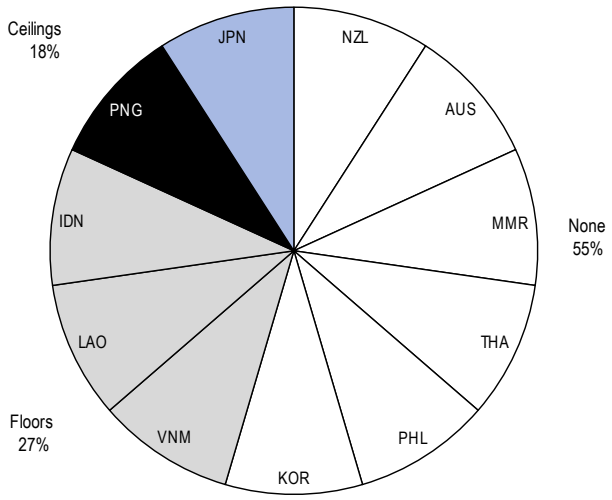
A number of countries have budget allocations based on results. In Thailand, the entire budget system is performance-based. In the case of New Zealand, some funding allocations are based on achieving certain targets such as elective surgery, while in Vietnam this is the case for budget allocations for leprosy and mental illness treatment in hospitals.

2.3.3. Despite existing plans to increase publicly funded health coverage, countries do not set specific floors for the growth of health expenditure

Targets for coverage/spending or ceilings for spending as well as medium-term projections are other crucial tools that allow verifying whether objectives have been achieved and controlling health expenditure. Their effectiveness depends, however, on how far health-specific as compared to purely economic factors are used in determining them. Moreover, their meaningfulness is dependant by the timeliness and reliability of information available to the key institutions responsible for health financing.

With the exception of Australia and New Zealand, all surveyed countries have a specific plan to increase publicly funded health coverage in the coming years, which would generally imply increases in public spending on health. Despite such plans, more than half of the countries reported that they do not set specific floors for the growth rate of central government budgeted health expenditure (Figure 3). When establishing targets or ceilings for central government health expenditure growth, decisions take into account economic and health factors, including estimated GDP growth, and health coverage targets.

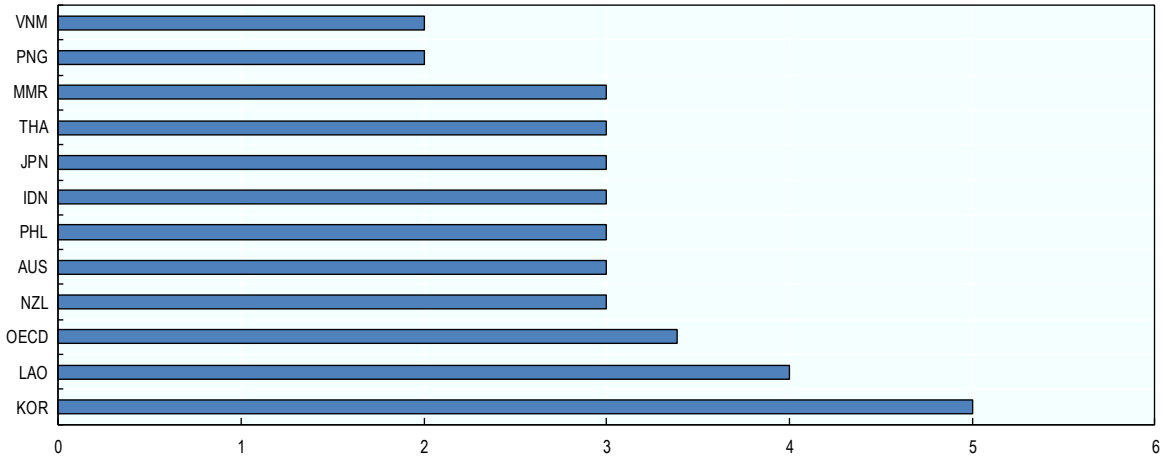
Figure 3. Limits imposed during the budget process to the health expenditure growth rate



Source: OECD (2017), Survey on Budgeting Practices for Health in Asia and Oceania (Question 11)

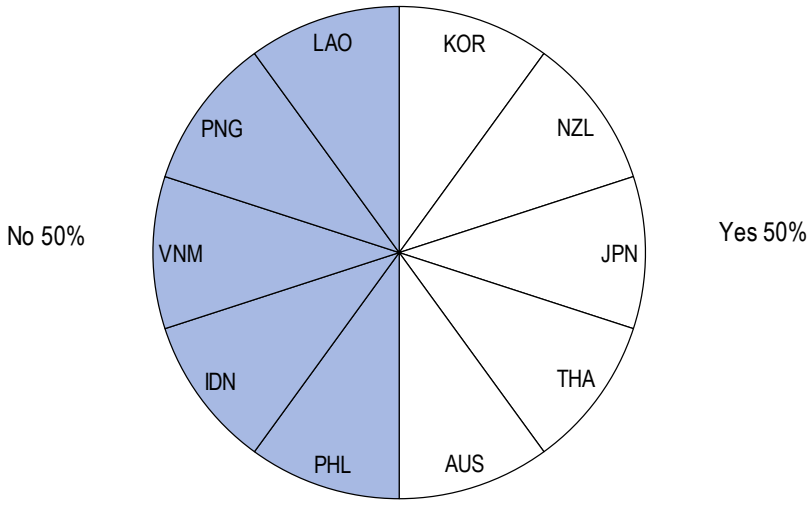
With most countries seeking to target a budget trajectory as well a fiscal position in a certain year, it has become important for budget agencies to have a multi-year vision of health spending. Most surveyed budget agencies have a multi-year vision of health spending, including estimates for public spending for more than one year in the budget. While the majority of countries provide three-year estimates, it ranges from two to five years (Figure 4). In more than half of these countries, the Ministry of Health has the prime responsibility of conducting forecasts. Non-OECD countries surveyed contrast with the practice in OECD countries, with only Thailand producing long-term projections for health care expenditure.

Figure 4. Years of estimates for health spending in the budget



Source: OECD (2017), Survey on Budgeting Practices for Health in Asia and Oceania (Question 38)

Figure 5. Countries with long-term projections for health care expenditure

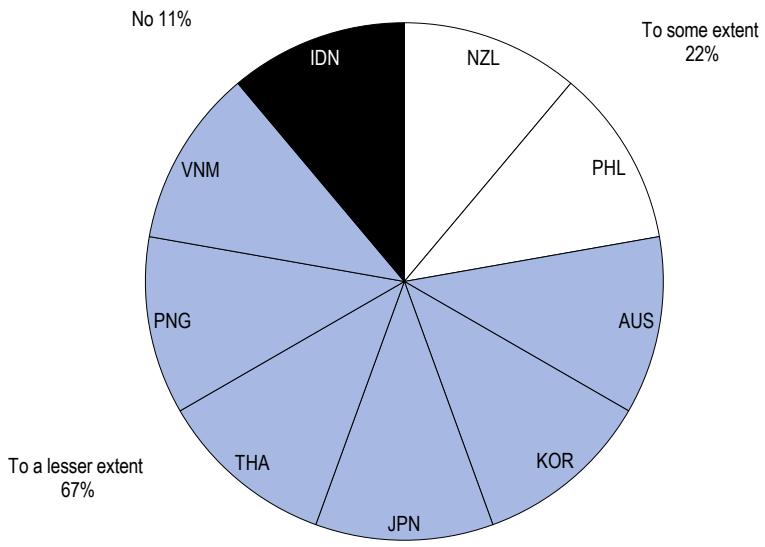


Note: Myanmar did not answer this question
Source: OECD (2017), Survey on Budgeting Practices for Health in Asia and Oceania (Question 39)

2.3.4. Economic evaluations are not considered valuable in the prioritisation of policies

Most budget agencies noted to receive economic evaluations (cost benefit or cost effectiveness analysis) from Health Ministries for all or some policy proposals. However, the majority of countries (67%) noted that assessments count 'to a lesser extent' in their assessment of policy proposals. This trend is similar in OECD countries, where 70% of countries received economic evaluations but only 30% them to a 'large' or to 'some extent' (OECD, 2015[2]). Similarly, in 80% of surveyed countries, budget authorities receive evaluations of the impact of health policies on equity, but in 50% of countries these analysis are not fully used by the CBA during the assessment of policy proposals.

Figure 6. Assessment of health policy proposals (based on economic assessments of the expected benefits) by the CBA



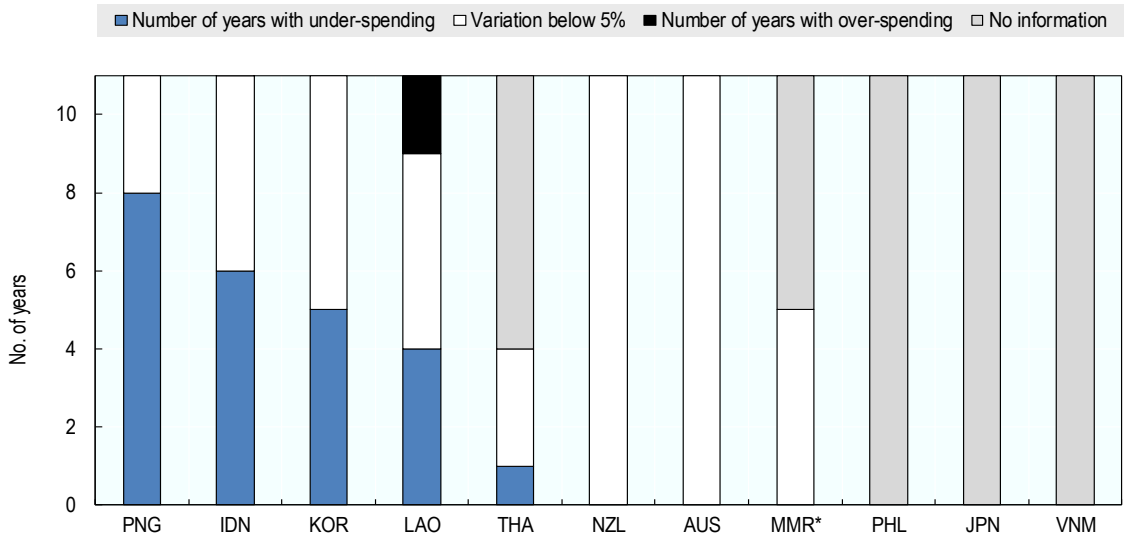
Note: Myanmar did not answer this question
Source: OECD (2017), Survey on Budgeting Practices for Health in Asia and Oceania (Question 36a) 37a)

2.3. Budget execution

2.3.1. Budget overruns and underspending are not common

In OECD member countries, budget overruns in health remain common and often lead to deficit or unplanned savings requests to spending units at the end of the year. Within the Asia and Oceania survived countries, most have reported to have at least 2 of the last 10 years without overspending or underspending (variations of less than 5%). Four countries reported to have underspending in at least 2 of the last 10 years (Papua New Guinea, Indonesia, South Korea, Lao DPR) and only Lao DPR reported to have at least 2 years of overspending during the same period. Operational management issues in the health sector (e.g. excessive bureaucratic procedures, narrow definitions of spending categories, and strings attached to transfers within the health sector) are one of the main reasons behind under execution.

Figure 7. Number of years with over or under-spending in health between 2005 and 2015



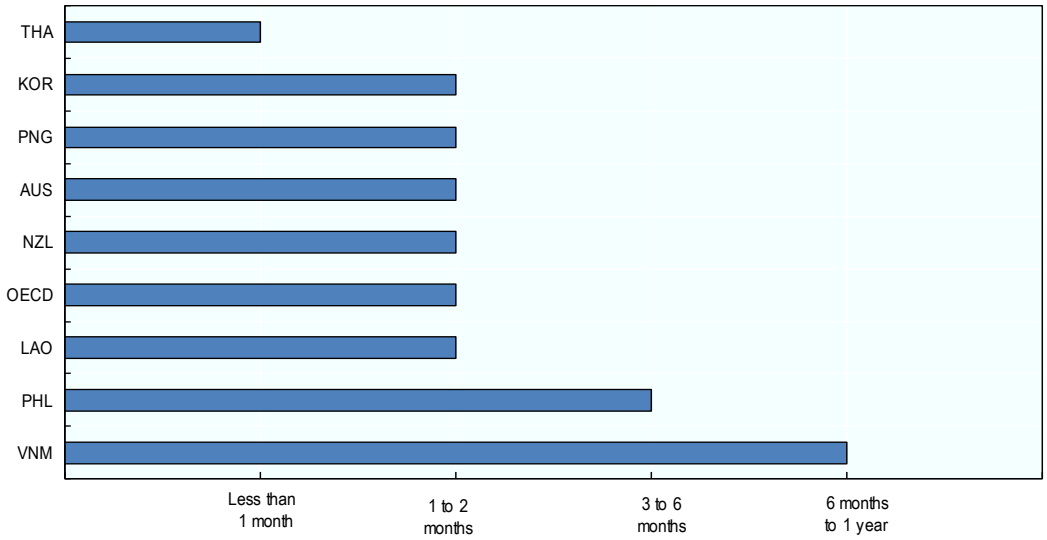
Notes: Figures compare the initial budgeted expenditure with actual expenditure in a given year. Variations below 5% were not considered as under or over-spending. Myanmar has a budget year that goes between two calendar years.
Source: OECD (2017), Survey on Budgeting Practices for Health in Asia and Oceania (Question 27)

2.4. Budget monitoring and performance

2.4.1. There is space to improve the timeliness of monitoring systems

A reporting and monitoring system is vital to oversee budget execution in the health sector and to avoid budget overruns and underspending. In most surveyed countries, the central budget authority receives information from 1 to 6 months after the spending occurs (Figure 8). In the case of Vietnam however, the information is available with up to a one-year delay. In most cases, the delays are caused by a combination of reporting delays by the Ministry of Health, sub-national governments, or reporting delays by health care providers, rather than the lack of appropriate technology to process data, or insufficient administrative capacity.

Figure 8. Delay in reporting health expenditure to central budget authority



Source: OECD (2017), Survey on Budgeting Practices for Health in Asia and Oceania (Question 25)

2.4.2. Performance agreements and use of performance information

Around 64% of surveyed countries reported to have performance or service agreements with implementing agencies/authorities in the health sector. The Ministry of Health along with the executive branch of the government (president or a line ministry) are the main actors for deciding the performance indicators used to implement such agreements.

Nearly all countries reported on the use of performance information in the health sector for multiple areas of decision-making. Some of the most common uses of performance information include setting allocations for the health programmes, proposing new programmes in health and use for strategic planning/prioritisation. The most common consequences when performance targets are not met is to increase monitoring efforts in the future, making poor performance public, and negative consequences on leader's evaluation. It is rare that countries adjust the budget, eliminate programmes, or provide more training to the assigned staff.

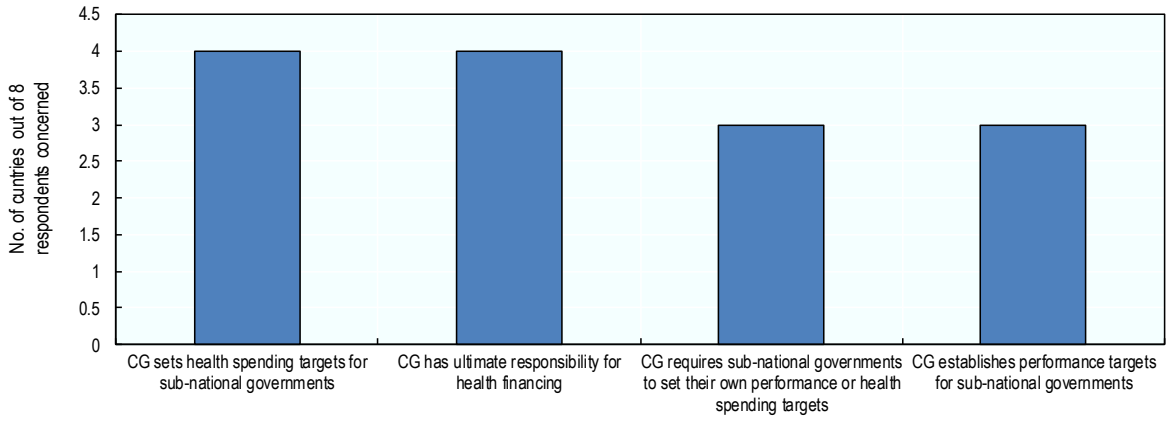
2.5. Decentralisation

2.5.1. Sub-national governments play an important role

In 80% of surveyed countries, sub-national governments play an important role in health care financing and/or provision, with different degrees of autonomy and responsibility. In most countries where sub-nationals play an important role, the central government earmarks transfers to sub-national governments based on a formula.

The type of influence exercised by central governments over the overall sub-national governments health spending varies among the Asia and Oceania surveyed countries. Half of surveyed countries concerned reported that central governments are the lender of last resort should sub-national governments fail to meet their obligations for financing health care, and that the central governments are ultimately responsible for funding health care expenditures (Figure 9) This percentage is similar in OECD member countries, where 40% of surveyed countries have such responsibility in the central government.

Figure 9. Type of influence that central government (CG) have over overall health spending by sub-national governments



Source: OECD (2017), Survey on Budgeting Practices for Health in Asia and Oceania countries (Question 62)

3. Health financing and budgeting practices in Central, Eastern and South Eastern European (CESEE) Countries

3.1. Background

Government revenues are key to achieving the goal of universal health coverage for countries in Central, Eastern and South-Eastern Europe. Many countries in the region are aiming to increase public spending on health in the future. However, rigidities and subdivisions in public finance systems often prevent the optimal use of such resources. Delayed budget execution and rigid public finance rules that limit the budget flexibility given to frontline health providers have adverse effects on service delivery. Health providers do not always have the necessary delegated authority to manage budgets effectively.

This report summarises the key results from the survey in the Central Eastern and Southern Eastern European (CESEE) region. The survey was sent to all participating countries of the 2nd Health Systems Joint Network Meeting for CESEE Countries that was held in Tallinn on 1-2 December 2016, including Malta that was invited as a partner country. The survey was answered by 12 countries (Armenia, Azerbaijan, Czech Republic, Estonia, Georgia, Greece, Kazakhstan, Kyrgyzstan, Lithuania, Malta, Slovakia, and Republic of Slovenia) between March and May 2017.

Table 6. ISO codes 2

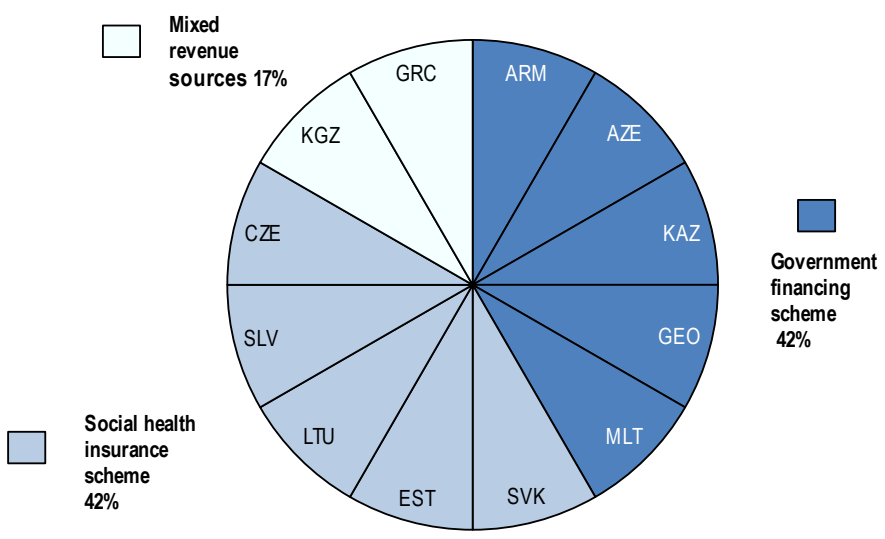
ARM	Armenia
AZE	Azerbaijan
CZE	Czech Republic
EST	Estonia,
GEO	Georgia
GRC	Greece
KAZ	Kazakhstan
KGZ	Kyrgyzstan
LTU	Lithuania
MLT	Malta
SVK	Slovakia
SLV	Republic of Slovenia

3.2. Institutional framework

3.2.1. Health financing arrangements

Across the survey countries in the CESEE region, 42% have a government financing scheme funded through government budget revenues (mainly taxes), 42% have a social health insurance scheme with public and private administrators, and 16% have mixed revenue sources, with increasing reliance on government budget transfers to health insurance funds (public or private) within a publicly financed system (Figure 10).

Figure 10. Main healthcare financing scheme



Source: OECD (2017), CESEE Survey on Budgeting Practices for Health (Question 2)

A number of surveyed countries that are former Soviet states, namely Armenia, Azerbaijan, Georgia, Kazakhstan, and Kyrgyzstan, have implemented or are planning to implement structural reforms in the health sector. In particular, some countries are moving towards a health insurance system.

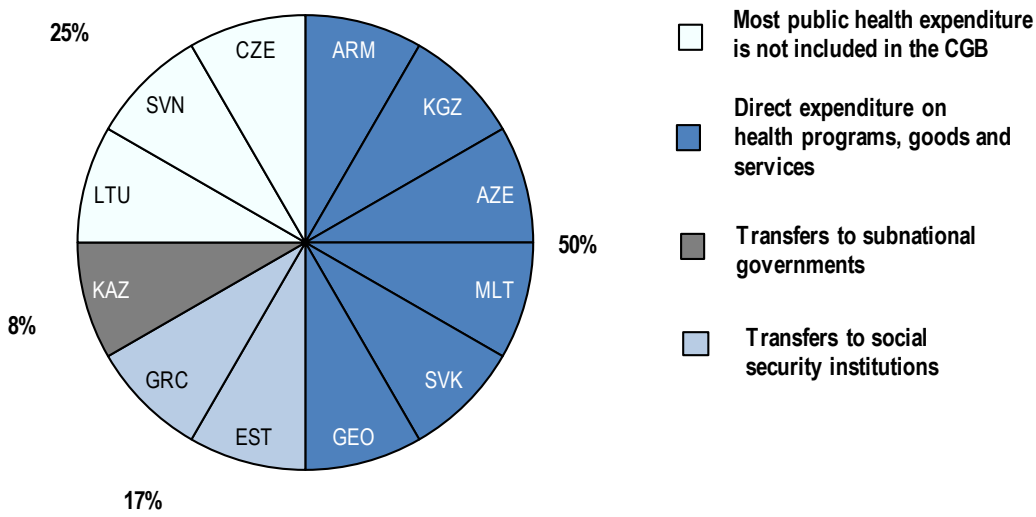
3.3. Approaches to budgeting

3.3.1. Most health expenditures are included in the central government budget

Depending on the type of health system in place, budgeting practices for health differ, and affect the incorporation of expenditure in the different public budgets (central, sub-national, and health insurance funds, when applicable). In the majority of the CESEE countries surveyed, most types of health expenditures are included in the central budget process either as direct expenditure on health programmes, goods and services, as transfers to social security institutions, or as transfers to sub-national governments.

The remaining 25% of surveyed countries reported that most of their public health expenditure is not included in the budget of the central government. These countries have a separate budget process for the health insurance system, where most health revenues and expenditures are directly included.

Figure 11. How public health expenditure is included in the central-government budget?

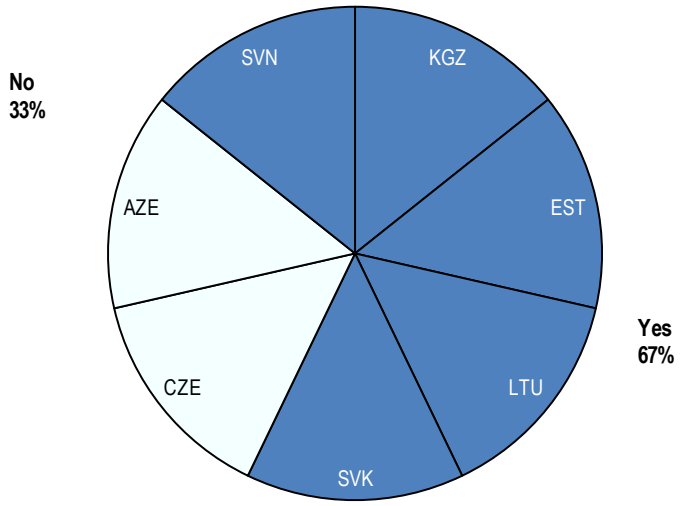


Source: OECD (2017), CESEE Survey on Budgeting Practices for Health (Question 7 and 7a).

3.3.2. Social health insurance budgets are well integrated into the budgeting process

Most surveyed countries (75%) with a social health insurance scheme have a separate budget to manage its resources. Despite this, negotiations with the central budget authority play a major role when preparing the social health insurance agency budget. Moreover, most surveyed countries reported that the budget of their health insurance system requires approval by parliament, either as part of the central budget process or with a different parallel approval process (Figure 12).

Figure 12. Is the health insurance agency budget submitted to the legislature?



Notes: This question was only answered by countries that have a social health insurance scheme.
Source: OECD (2017), Survey on Budgeting Practices for Health in CESEE countries (Question 41.a)

All CESEE countries surveyed have transfers from the central government to the social health insurance system. Most of these transfers are insurance contributions paid by the government on behalf of some non-contributing groups (e.g. retirees, children below a certain age, students, soldiers, and unemployed).

3.3.3. Budget allocation mechanisms in place limit flexibility

The central budget authorities of OECD member countries tend to leave the allocation of spending and its scrutiny to a combination of Ministries of Health and social insurance agencies. This marks a shift towards 'top-down' budgeting practices, where the executive determines aggregate public finance targets (spending and revenue levels) given medium- term fiscal objectives and prevailing economic conditions. The detailed allocation decisions are then usually delegated to the individual line ministries. This shift towards a supervisory role is evident in the extent to which budget agencies do not allocate budgets on the basis of achieving specific health objectives nor towards sub-categories within health spending (OECD, 2015[1]).

Budget allocations mechanisms within the health sector of the CESEE countries surveyed differ from OECD trends; the majority of the CESEE countries surveyed include specific budget allocation by healthcare functions (e.g. curative care, medical goods, preventive care, etc.), individual health facilities (e.g. hospitals, clinics, health centres), and specific diseases (e.g. cancer, HIV, malaria, etc.). In the majority of surveyed countries, these categories form the basis of appropriation, and only a few countries use them for informative (non-binding) purposes. This approach limits the flexibility of health sector institutions, from the level of the Ministry of Health down to the level of individual providers, to adjust spending strategies as health needs and health technology evolve. In consequence, this rigidity might create obstacles for timely adoption of initiatives enhancing efficiency.

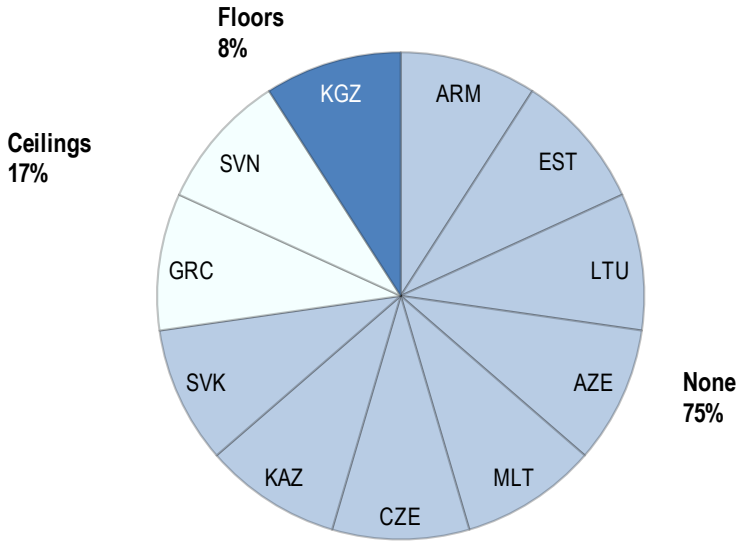
Only two countries allocate the budget based on results. In the case of Lithuania, part of the allocations to primary health care are based on results, while in Georgia, this type of mechanism is used for all healthcare programmes.

3.3.4. Most countries aim to increase publically funded health coverage

The majority of the CESEE countries surveyed reported to have health systems that cover 100% of the population. These coverages, however, may only include a segment of basic services and provisions. Consequently, two thirds of the surveyed countries have a specific plan to increase publicly funded health coverage in the coming years, which would generally imply increases in public spending on health. In particular, most countries have a plan to increase population coverage, service coverage and financial protection.

In contrast, 75% of the CESEE countries surveyed reported that they do not set specific floors or ceilings for the growth rate of central government budgeted health expenditure (Figure 13). Despite existing plans to increase publicly funded health coverage in the region, only Kyrgyzstan reported to have floors for the growth rate of central government budgeted health expenditure. In a similar way, only two countries reported to have ceilings. When setting floors and ceiling for health expenditures, economic factors are more important (such as historical budgets, GDP growth, and objectives for fiscal position), rather than considerations of health policy.

Figure 13. Targets and ceilings imposed on the health expenditure growth rate



Source: OECD (2017), Survey on Budgeting Practices for Health in CESEE countries (Question 11)

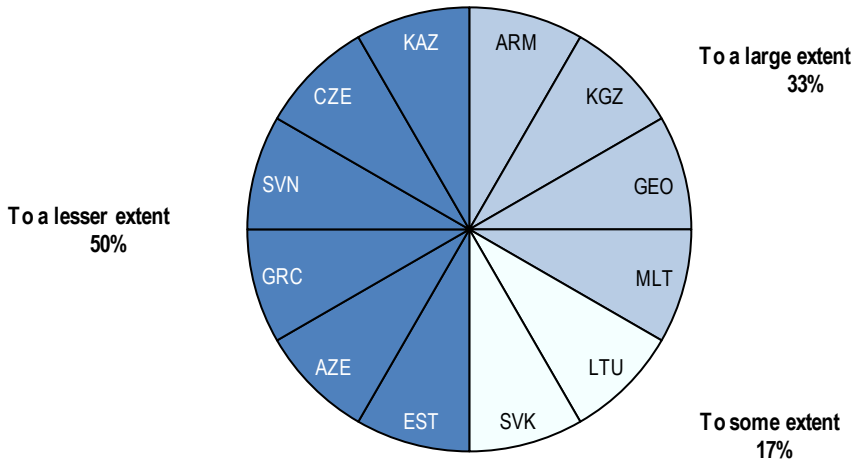
3.3.5. New projects and longer-term planning

The majority of the CESEE countries surveyed have a mechanism in place to ensure that new legislative proposals concerning publicly-funded health expenditures account for the full cost of the initiative by including cost estimates in the short, medium, and long-term.

Around 58% of budget agencies noted that they receive economic evaluations from Health Ministries for all or some policy proposals. They also noted, however, that these

assessments count "to a lesser extent" in their assessment of policy proposals (Figure 14). Only in Armenia, Malta, Georgia, and Kyrgyzstan are these evaluations often used by the CBA, for prioritising and supporting policy proposals based on some quantification of expected health benefits to the population ahead of all other factors.

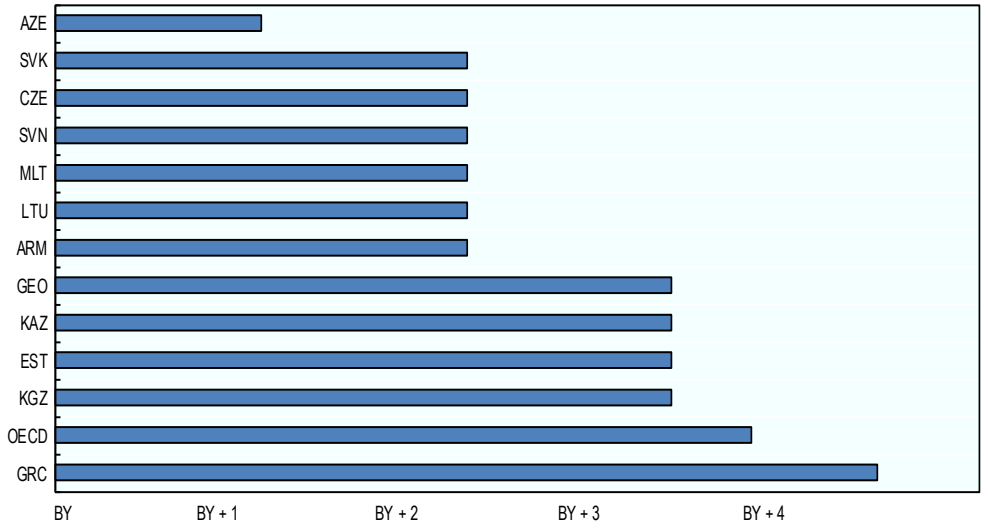
Figure 14. Assessment of health policy proposals by the CBA



Source: OECD (2017), Survey on Budgeting Practices for Health in CESEE countries (Question 36a)

Most budget agencies in the CESEE region have a multi-year vision of health spending, including estimates for public spending for more than one year in the budget document. While the majority of countries provide four-year estimates for medium-term projections, the length of the time intervals ranges from two to five years (Figure 15).

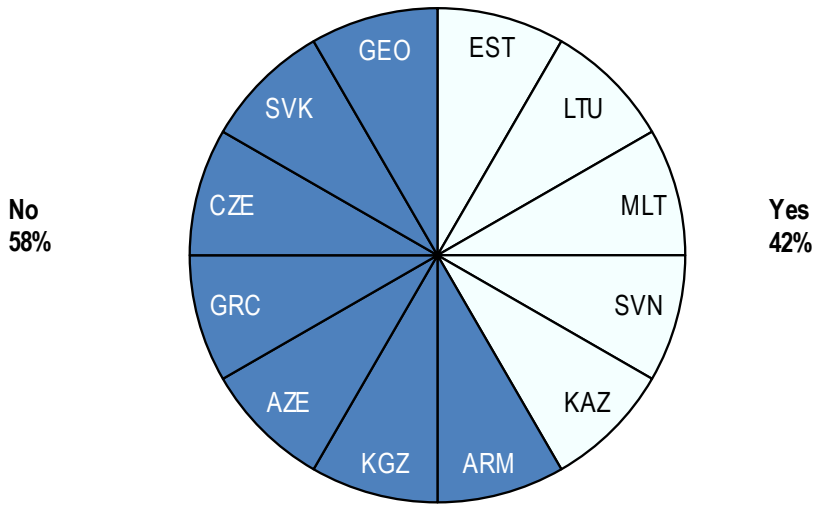
Figure 15. Medium-term estimates for health spending in the budget



Source: OECD (2017), Survey on Budgeting Practices for Health in CESEE countries (Question 38)

On the contrary, long-term projections (more than 5 years) are not common in the region (Figure 16). Less than half of the surveyed countries reported to have such types of projections, neither are they always produced for all areas of health expenditure. This panorama contrasts with practices in OECD countries, where 85% produce long-term projections of health spending and are generally publicly available. In a majority of cases (62%), projections cover 31 to 50 years (OECD, 2015[2]).

Figure 16. Countries with long-term projections of healthcare expenditure



Note: In Malta, these projections are only made for Public Private Partnership (PPP) projects
Source: OECD (2017), Survey on Budgeting Practices for Health in CESEE countries (Question 39)

3.4. Budget execution

3.4.1. Budget overruns and underspending

A crude measure of the success of the accuracy of the health budget estimates is the extent of budget overruns and underspending. Overruns often lead to unplanned savings demand at the end of the budgetary year, which might effectively cease access to some health goods or services. Similarly, underspending usually means that some health services were not provided to populations. In particular, underspending is symptomatic of inaccuracy in the mechanisms of budget allocation within the health sector. Some difference between the actual health spending and the budgeted expenditure is unavoidable but in a well-designed system, monitoring tools, such as early warning mechanisms, should minimise them.

There is great variation between the CESEE countries surveyed regarding expenditure levels. Three of the CESEE countries reported to have underspending in at least two of the last ten years (Malta, Georgia, and Azerbaijan), while two countries reported to have at least two years of overspending during the same period (Armenia and Malta). Six countries (the Czech Republic, Estonia, Kazakhstan, Georgia, Malta, and Greece) reported to have at least two of the last ten years without overruns or underruns (variations of less than 5%). Operational management issues in the health sector (e.g. excessive bureaucratic

procedures, narrow definitions of spending categories, and strings attached to transfers within the health sector) are one of the main reasons behind under execution.

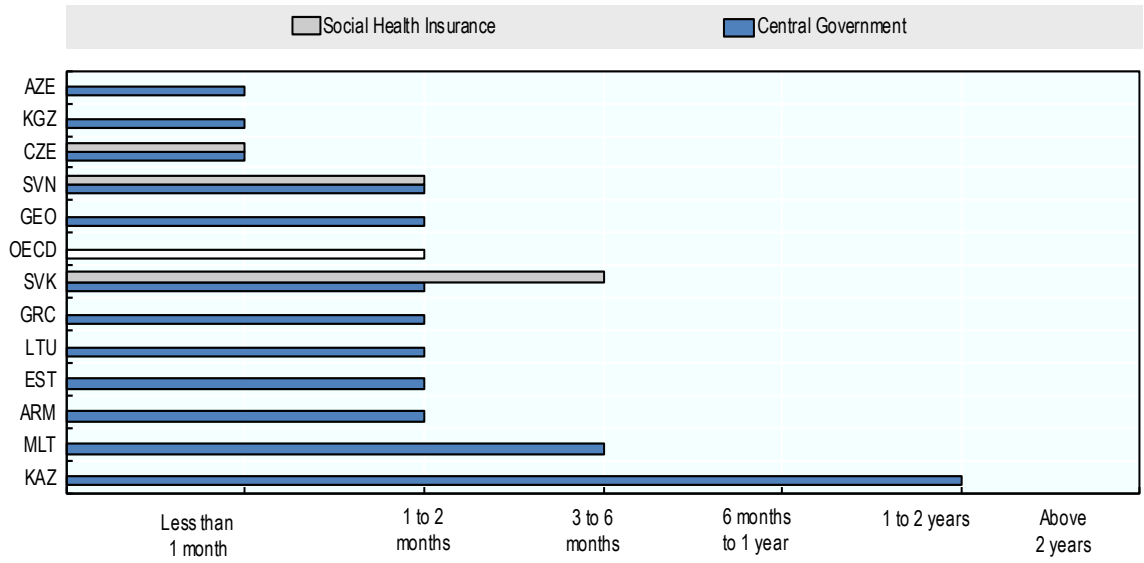
3.5. Budget monitoring and performance

3.5.1. Health expenditure reporting is mostly timely

There have been initiatives to introduce periodic reporting and monitoring systems in CESEE countries. Except for Estonia, all surveyed countries have a mechanism in place to monitor budget execution in the health sector (e.g. regular reporting on spending by relevant institutions to avoid over- or under-spending). In most cases, the Ministry of Health is the actor with the main responsibility in monitoring health expenditures and signalling when there is a risk of spending above/below the approved limit. The Ministry of Finance only has an active monitoring role in half of the surveyed countries and health insurance funds/agencies have an active role in more than half of the countries that reported to have that type of system.

Overall, the CESEE countries surveyed have timely information available for central government health expenditure. In most surveyed countries, the central budget authority receives information from one to two months after the spending occurs.

Figure 17. Central government health expenditure reporting delay



Notes: 1. OECD average refers to both social insurance and central government health expenditure
2. In Czech Republic, reporting on Social Health Insurance expenditures go through two stages, one that is received at the CBA in less than 1 month for a quick overview, and a detailed statements is received on quarterly basis
Source: OECD (2017), Survey on Budgeting Practices for Health in CESEE countries (Question 25)

3.5.2. Performance agreements and use of performance information

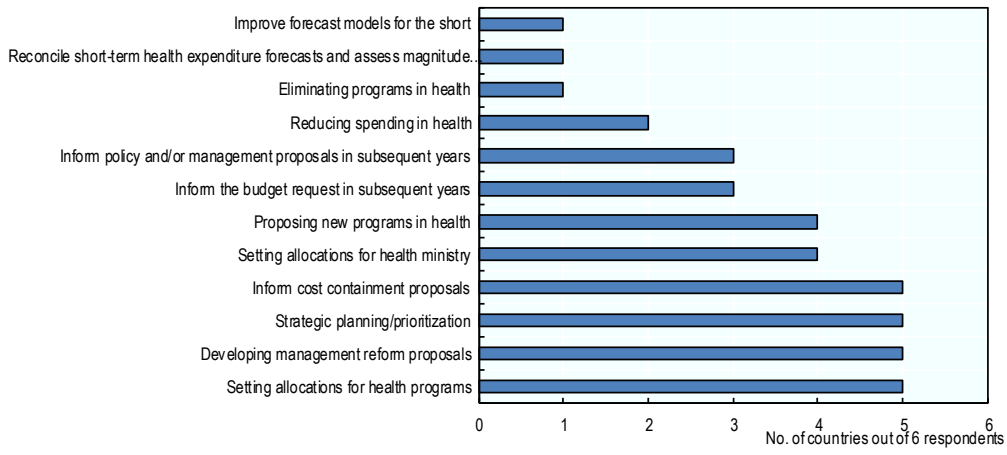
In addition to providing timely information on the general volume of spending, the monitoring mechanisms also need to shed light on health system performance. Designing well-functioning performance indicators is challenging but through incremental improvements, surveyed countries continuously develop their monitoring capacity in this

area. The development of effective accountability mechanisms appears to be more challenging, however.

Half of the CESEE countries surveyed reported to have performance agreements with implementing agencies/authorities. With the exception of the Republic of Slovenia and Georgia, all countries with performance agreements reported the central budget authority to have a leading role in deciding the performance indicators used to implement such agreements. Other institutions that also play a leading role in some countries are the legislative branch of government, the executive branch of government (president or a line ministry), and executive agencies.

Some of the most common uses of performance information in health expenditure are setting allocations for the health programme, developing management reform proposals, using it for strategic planning/prioritisation, informing cost containment proposals, setting allocations for the health ministry, and proposing new health programmes (Figure 18). The most common consequence when performance targets are not met is to increase monitoring efforts in the future. Only one or two countries adjust the budget or eliminate programmes.

Figure 18. The use of performance information in the health sector



Note: Information in this graph only includes countries that have performance agreements
Source: OECD (2017), Survey of Budget Officials on Budgeting Practices for Health in CESE countries (question 30)

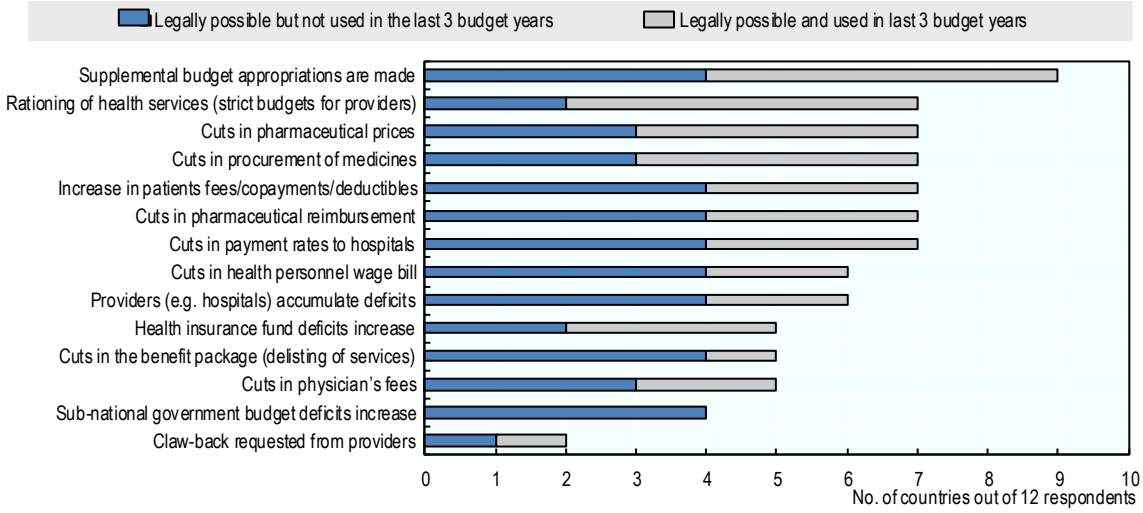
3.5.3. Most countries have a cost containment strategy in place

Over half of the CESEE countries surveyed reported to have an overall cost containment strategy ensuring that publicly-funded health expenditure stays within the initially allocated amounts, and that new legislative proposals concerning publicly-funded health expenditures account for the full cost of the initiative. In most countries, the Ministry of Health and the Ministry of Finance have the leading role for proposing measures of readjustment of health expenditures.

Some of the measures that are most likely undertaken in response to budgets exceeding initially targeted levels include making supplemental budget appropriations and rationing of health services (strict budgets for providers). These are not only legally possible in the majority of surveyed countries, but 40% of countries used them in the last three budget years. Other common practices are cuts in pharmaceutical prices, procurement of

medicines, payment rates to hospitals, pharmaceutical reimbursement, health personnel wage bill, and increase in patients fees/co-payments/deductibles (Figure 19).

Figure 19. Measures undertaken when budgets exceed targeted levels



Note: In Georgia, it is not legally possible to conduct supplemental budget appropriations. Nevertheless, this has been used in the last three budget years.
Source: OECD (2017), Survey on Budgeting Practices for Health in CESEE countries (Question 34)

4. Conclusions

Health represents an important share of public government expenditure, which has consistently outpaced other areas of spending. Efficiency in health expenditure requires good practices during the entire budget cycle: effective allocation mechanisms during the budget formulation phase, good operational management practices, co-ordination mechanisms, measuring and evaluating results, and reporting and monitoring tools.

Health financing arrangements vary across countries, but can be broadly characterised into either government schemes, social health insurance schemes, or a combination of both systems covering different segments of the population. Despite diverse financing models, the majority of countries reported that most public health expenditures are included in the central government budget. Therefore, the government's budgetary process remains an important tool in determining overall spending and achieving policy objectives. Where countries do have a separate budget for social insurance schemes, many are well integrated into the central budget process, particularly in the CESEE region. Furthermore, nearly all social insurance systems rely on transfers from general government revenues alongside traditional dedicated funding sources (e.g. payroll taxes), making the distinction between financing arrangements less relevant from a budgetary perspective. This result contrasts to countries in the Latin America and Caribbean (LAC) region, where the presence of numerous subsystems causes a disconnect between health expenditure and the rest of public government expenditure.

Along with well-integrated health financing systems, survey results across the regions point to the use of developed budgeting procedures and tools, including the use of medium-term projections, and expenditure monitoring and reporting frameworks. Moreover, among countries in the CESEE and Asia and Oceania regions, there is no prevailing trend in budget

overruns or underspending. This differs with OECD countries, where budget overruns in health remain common and often lead to deficit or unplanned savings requests to spending units at the end of the year, and in the LAC region, where countries tend to have lower expenditure levels than the ones initially programmed in the budget.

In addition, in line with trends across the OECD, countries in the Asia and Oceania region are moving towards 'top-down' budgeting. Top-down budgeting marks a shift in budgetary roles away from a more controlling budget agency and provides line ministries with relatively greater responsibility for resource allocation and for supervising spending. However, finance ministries within CESEE countries are continuing to base appropriations around specific healthcare functions, facilities, and diseases, limiting the flexibility of health ministries or social security institutions to adjust spending as health needs and objectives change.

There is also space for the further development of other budgeting tools, including long-term forecasts for expenditure projections to help shape long-term policies. Moreover, in spite of plans to increase publicly funded health coverage in most countries, the use of floors on the minimum growth of central government health expenditure to ensure advances in health system coverage is rare. The goal of achieving universal health coverage is also observed in the LAC region, but contrasts that of OECD countries, which are more concerned with controlling health expenditure.

Furthermore, evidence of disconnect between health ministries (and academic health policy circles) and budget agencies exists. This stems from the low weight placed on economic evaluations produced by health ministries in the assessment of policy proposal by budget agencies.

Across the OECD and LAC regions, countries are increasing their use of performance budgeting tools, including the allocation of resources based on results, to help align expenditure with the strategic goals and priorities of the government. This practice is seen less across CESEE and Asia and Oceania regions, particularly among non-OECD countries. However, some reported the use of performance agreements, using performance indicators in strategic planning and setting allocations for the health programmes

Further research for the CESEE and Asia and Oceania region Joint Network on the fiscal sustainability of health systems could be carried out in the following areas that link healthcare and budgeting practices in the region: budget rigidities and mechanisms to increase flexibility; reasons behind over and under-spending in healthcare and possible ways to overcome this situation; and effectiveness and challenges of using performance budgeting tools for health.

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Quality-based financing – the Norwegian experience

by

Axel Miguel Huus and Thomas Neby Baardseng

In this article we give a presentation of the Norwegian quality based financing (QBF) mechanism and our experiences with this financing mechanism. The article outlines the main features of the Norwegian health care system, and its financing mechanisms. We then focus in on the QBF with a description of the system and the main considerations on which the system is based. We give a short theoretical framework on how to design quality based financing systems, and show how the consequences can vary depending on the design of the system. The Norwegian system has been evaluated, and the main findings of this evaluation is discussed together with some tentative predictions about the future developments.

JEL codes: H51, I11, I18

Key words: Norway, budgeting, performance, hospitals

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1. Introduction

This short article describes the Norwegian quality-based financing mechanism. The first part outlines the general organisation of the health service and the financing system followed by a discussion on how the quality-based financing mechanism works; how different setups can yield a variety of outcomes; and the challenges posed by quality-based financing. This discussion is followed by an overview of the Norwegian experience. The final part of this article provides some ideas on future developments.

2. The Norwegian health care system

The Norwegian health care system is founded on the principles of universal access, decentralisation and free choice of provider.

It is financed by taxation, together with income-related employee and employer contributions and out-of-pocket payments (co-payments, deductibles). All residents are

covered by the National Insurance Scheme (*Folketrygden*, NIS), managed by the Norwegian Health Economics Administration (*Helseøkonomiforvaltningen*, HELFO). Private medical insurance is relatively limited.

While health care policy is formulated centrally, responsibility for the provision of health care is decentralised. Local authorities at municipal level organise and finance primary health care services according to local demand and requirements. All Norwegian citizens are invited to choose their general practitioner (GP) from a list. Almost all Norwegians (99%) have chosen to do so. Outpatient doctors act as gatekeepers for specialised care. The central Government has overall managerial and financial responsibility for the hospital sector.

Norway has four regional health authorities, which are fully owned by the state. The regional health authorities control the provision of specialised health services through 27 health trusts. Most hospitals in Norway are public hospitals, funded and owned by the state, through the regional health authorities. A small number of hospitals are privately owned. However, most private hospitals have contracts with the regional health authorities, providing services on behalf of the public system.

The government annually sets goals, specific tasks and requirements to the regional health authorities, through a letter of instructions and a general meeting ("*foretaksmøte*") between the Minister of Health and representatives of the regional health authorities. The letter of instructions is published after the parliament's decision on the national budget, and also contains information on the total budget of the regional health authorities. Although the letter of instructions and general meeting usually set a comprehensive set of demands, the regional health authorities are generally free to decide how they make sure that health trusts deliver on these different conditions and targets.

The regional health authorities are financed by blocks grants, activity-based grants, and to a lesser extent by earmarked grants. The block grants (approx. NOK 100 billion) are allocated according to a funding formula that takes into account demography, health variables and socio-economic factors. The goal of the block grants is to enable the regional health authorities to offer universally accessible services, according to the needs of the population. The activity-based financing (approx. NOK 40 billion) makes the distribution of funds contingent on the number of patients treated, and what treatment they are offered. It is based on the Norwegian Diagnosis-Related Groups (DRG)-system. The goals of the activity-based financing are to promote cost effectiveness and to incentivise a high level of activity in order to keep waiting times low.

The quality-based financing is an earmarked grant, allocated separately from the main components of block grants and activity-based financing. This article will try to shed light on how this mechanism works and share the authors' experiences with this financing scheme.

3. Outline of the Norwegian quality-based financing scheme

A pay for performance scheme termed Quality-Based Financing (QBF) was introduced in Norway in January 2014. QBF was initially designed as a pilot project for three years and covers all the public hospitals and public funded private hospitals. The main objective was to test the use of financial incentives to motivate the hospitals to increase overall quality and patient safety. After deeming the pilot successful, QBF was introduced as a permanent scheme from 2017. The scheme was intended to be a supplement to the main financing components of block grants and activity based financing.

QBF is based on how well hospitals perform on a set of quality indicators. In 2012 the Norwegian Directorate of Health was given a statutory responsibility to establish a National Quality Indicator System (NQIS), now comprising of nearly 200 indicators. Out of these, a sample of between 30 and 40 have been used in the QBF. Three different types of quality indicators are included; indicators for outcome, process and patient satisfaction. The outcome indicators include survival rates for various treatments. The process indicators include, for instance, waiting times for given procedures. The indicators measuring patient satisfaction are based on nationwide user surveys. All the indicators are measured at the hospital level. While QBF is allocated from the state to the regional health authorities, this enables the regional health authorities to use the model to distribute funds at the hospital level. In order to motivate the providers broadly, four different criteria are used to measure and reward performance on each indicator:

- reporting quality
- minimum performance level
- best performance
- best relative improvement.

The system is revised annually, which means that some indicators are changed each year. In most cases, this follows from changes in the NQIS. New and relevant indicators might have been included in the system, which means that they are applicable to QBF. In some cases indicators can be omitted, either due to omittance from the NQIS or due to information deeming the indicators less relevant than initially thought. The regional health authorities are always consulted regarding changes in the indicator set. The indicator set, along with other changes in the scheme and the results are published as an annual report. In the annual budget proposal, parliament is also invited to comment on the results of the four regional health authorities and how they change from year to year. Parliament is not invited to alter the distribution of resources based on the results, as this would undermine the whole model.

The results on the indicators in QBF are weighted. The indicators for outcome are considered the most important, and are weighted by 50 %. Indicators for patient satisfaction and process are weighted at 30% and 20 % respectively. The results are also weighted according to the size of the regional health authorities. This makes the distribution of the grants through QBF comparable to the distribution of the block grants.

In 2019, QBF represents NOK 550 million or around 0.4% of the health regions' total budgets. Compared to a block-grant distribution of these funds, the redistribution effect of QBF represents a 19% increase in income for one health region and a 20% decrease for another region.

In principle, the four regional health authorities can choose how they redistribute the grants allocated through QBF to the health trusts that they own. Generally the grants are redistributed according to the same formula, continuing the financial incentives on the executive level.

4. Main considerations in QBF

The purpose of QBF is to improve quality in the hospital sector. By connecting the funding of the regional health authorities to results on quality indicators, we expect that QBF

provides an incentive to improve quality. This expectation relies heavily on three assumptions:

1. That the quality indicators that are included in the model do in fact measure and represent quality
2. That the quality indicators in the model in fact are affected by actors in the hospital sector
3. That the actors who affect quality in the hospital sector are in fact affected by the financial incentives.

All of these assumptions are, to some extent, uncertain. Firstly, quality is a complex matter. It can only be observed and measured indirectly, and is not unambiguously defined. The indicators in the model will only reflect a small subset of the true quality in the hospital sector. Secondly, the measured quality will to some extent always be affected by relationships that are out of the control of the service provider. Thirdly, since the Norwegian health sector is public and the financing mechanisms are designed to provide institutions, not individual persons, with economic resources, no individual has any personal economic interest in improving quality. Financial incentives will mainly appeal to the motivation of doing better than others. In order to mitigate some of the uncertainty stemming from these assumption, the introduction of QBF is characterised by certain features:

- The model includes a broad set of indicators so that a broad set of practices are reflected
- The included indicators are deemed to be meaningful (can be measured unambiguously on a good-to-bad scale) and have legitimacy among stakeholders
- A fixed budget allocation encourages competition between hospitals. If someone does better, everyone else become a little worse off
- Emphasising that QBF is a supplement to other quality initiatives.

It is important that QBF is not used as a tool for giving priority to groups of patients admitted to specialised health care and to decide on what kind of health care is offered. This can be avoided by linking the financing to indicators that are as generic as possible, indicators that the whole service can agree upon as important aspects of the quality given. By making sure that the set of indicators are not biased towards specific diagnoses or set up in such a way that they favour certain groups of patients.

The designing of a system – effects and challenges of quality-based financing

The design of a system has important effects on the workings and the outcomes of the specific system. The next few paragraphs highlight certain effects of different approaches to designing a quality-based financing system.

Designing a system comprising a big share of the total budget allocation to specialised health care is a good place to start. This system could be based on either a few indicators or many. Few indicators in theory, would mean that the system will generate significant effects. The actors would adapt to the system as the large payoff creates strong financial incentives. How would we know for certain however, that we have chosen the right indicators? Poorly chosen indicators could lead to perverse effects in the system. Changing indicators could lead to difficulties as some actors who are benefiting greatly from the existing mechanism will defend it.

What would then happen if the set of indicators are expanded and a large share of the budget kept? In theory, this system would be highly effective because the use of many indicators will load many dimensions and activities within the service into the model. There will be large redistribution effects between different actors. This could then be a lever for a desired development in the service. However, it could lead to unintended consequences, including negative gaming effects.

Another approach is to allocate a small share of the budget and tie it to a few indicators. The chances are that this would result in negligible effects, as the incentives are small. However, there is a risk for flawed effects, as this system pinpoints certain areas and adjusting to a financing system could mean that other areas are neglected.

The QBF system in Norway uses many indicators on a small share of the budget and a distribution grants according to results but within a total economic frame. This model was introduced for all four regional health authorities at the same time. It could be said that there were no control groups or no mechanism of figuring out what was really happening, so the expected results were based on theoretical modelling. Of course, the effects will be small and could best be described as gentle nudging towards a desired target or outcome. This system however, plays down the possible gaming effects. This can be illustrated in the figure below.

Figure 1. Theoretical modelling of a QBF system

Few indicators	Many indicators	
• High risk of adverse incentives	• Medium risk of adverse incentives	**Large part of budget**
• Medium risk of adverse incentives	• Risk of negligible effect • Low risk of adverse incentives	**Small part of budget**

This way of approaching a quality-based financing mechanism might be described as a safety first approach, and where achievement of significant effects has lesser importance. This is probably a sensible approach, as experience has shown many times how easy it is to underestimate the strength of financial incentives.

If the mechanism shows only small and insignificant effects it can be modified to have a greater impact. The Norwegian government has taken the views that this is a more desirable way to work, rather than have to scale down a programme because of unintended or even harmful effects.

The purpose of quality-based financing is to give incentives for the health service to deliver better quality in their day-to-day practice. There are obvious challenges regarding how this incentive will work if there are no ceilings on the financial mechanism. There could be unintended consequences as the service try to maximise the gains from this financing mechanism. This is what happened in the early days of activity-based financing in Norway.[1]

With a fixed ceiling, it will be easier to avoid unintended consequences. On the other hand, how would this setup stimulate a lasting effect on the quality if the economic benefits are rather small, and the system works in a redistributive manner? If the competition is defined to what in reality is a closed shop, how can the authorities ensure that the service is

motivated to seek these benefits when they are small, and they can be lost easily as other actors improve their relative performances.

A third question arises regarding the motivation of the health professionals. Health professionals[2] are expected to follow strong moral codes of conduct, and are therefore believed to choose the best quality and affordable options without the need of further economic motivation. If this is right, why should central government then set up a financing mechanism based on how the service perform on different quality indicators?

The mere existence of a quality-based financing mechanism is an admittance that a financial incentive will put some extra impetus on the professional motivation of health care workers. This should not be regarded as a shortcoming, rather as a reward for having a high quality approach to the service delivered

5. Norwegian experiences from QBF

The Norwegian QBF was evaluated in 2015. Since the evaluation took place fairly soon after the introduction of the scheme, it was not possible to conduct a quantitative analysis of the effects. Through qualitative methods the evaluation found that QBF had led to more attention and dialogue regarding quality goals and quality improvement. The evaluators found no signs of negative effects. A weakness concerning the introduction of QBF is that it was introduced as a nation-wide financing scheme from the start. That makes it challenging to establish a relevant control group. If the scheme was only introduced in selected hospital areas, it would probably be easier to find causal effects following the initiative. This could be done by comparing results with the achievement from the hospitals which were not included.

The QBF model is based on the way we measure quality (The National Quality Indicator System). The model is only as good as the quality indicators that are included. Emphasis should therefore be on ensuring the reliability and validity of the indicators that are included. The authors have found it very important that changes in the indicator set are well grounded among relevant stakeholders and that the service providers themselves find the chosen indicators relevant. The authors believe that a QBF system with a low level of legitimacy would struggle to have the desired effects.

Furthermore, it is of paramount importance that this financing mechanism works with other actions to heighten the importance of quality standards and improve the quality in the service rendered. Therefore, integration with other actions into a comprehensive policy should be a priority. It has been emphasised that QBF is only a supplement to other initiatives to improve quality, such as The Norwegian Patient Safety Programme[3].

The number of indicators in the model is relatively high and it constitutes a small share of the total budget of the regional health authorities. Regarding Figure 1, the authors would place the Norwegian QBF in the bottom right quadrant. This reduces the risk of gaming effects and large redistribution between the regions each year. There is a trade-off between these considerations and the tangibility of the incentives for quality improvement. As a comparison, Denmark has recently introduced a somewhat similar model with only 5 indicators and for a larger share of the budget.[4]

A weakness with the Norwegian model is the delay between quality improvements and reward within the model. Data on quality is collected in year t, and the official results are published in year t+1, which is used to calculate the distribution of QBF grants in year t+2. This time gap could weaken the incentives following QBF for the health service in working

with quality improvements, as the rewards become less tangible when they lie far in the future. A solution for this time gap could be to pay out a distribution based on expected results and then adjust it afterwards, according to the actual results. This option could be feasible (this is the system we use for activity based financing). It implies however, that some regional health authorities will have to return an amount of money by the end of the year, while others will endure the whole year with a lower budget than they were entitled to. It is difficult to find a way to work round this without increasing the administrative costs drastically. Either way, this reduces the predictability of the model, and could adversely affect the service provider's financial leeway for investing in quality improvements.

The evaluation of QBF revealed that both the regional health authorities and the health trusts were largely positive towards the introduction of the scheme. Several of the representatives who were interviewed claimed that the introduction of financial incentives had induced a stronger motivation for improving on quality. Some critical opinions claimed that the focus on quality improvement was already high before QBF, and that the incentives were too weak to affect changes at the clinical level.

6. QBF in the future

What will the future hold for the Norwegian quality based financing? Firstly, it should be remembered that the whole financing system is part of the annual budget proposal from the government. Therefore, alternative systems can be designed and implemented if there is political will.

Speculations about the future, therefore, come from an assumption that there is a majority behind today's system also in the years to come. How then will quality based financing develop?

As of now, there are no official plans to make considerable changes in the financing scheme. So far, the safety first approach has been leading the development of quality-based financing in Norway. As the scheme matures, future changes would probably entail taking slightly more risk. The Ministry could do this either through increasing the share of the financing scheme, and/or sharpen the financial incentives through reducing the number of indicators that are included. Such a move would depend on whether or not the indicators and the data connected to them are regarded as reliable and valid within in the health service, as well as on other initiatives and measures to improve quality in the Norwegian health sector.

Notes

1 See for instance www.helsetilsynet.no/globalassets/opplastinger/publikasjoner/tilsynsmelding/2004/feil_diagnose_kode_journalfoering_ved_sykehus.pdf

2 https://legeforeningen.no/Om-Legeforeningen/Organisasjonen/Rad-og-utvalg/Organisasjonspolitiske-utvalg/etikk/Code-of-Ethics-for-Doctors-/

3 www.pasientsikkerhetsprogrammet.no/om-oss/english

4 The scheme is called "*Nærhedsfinansiering*", loosely translated to "proximity financing" – since the model rewards providing services closer to the patients, e.g. transition from hospital care towards more digital services.

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Measuring the productivity of the health care system; the experience of the United Kingdom

by

Anita Charlesworth

Measuring health care productivity is important as health is a large sector of the economy and with the majority of funding coming from public sources, the outlook for productivity growth is a critical factor in the debate about fiscal sustainability. The UK has over 20 years' experience of measuring health care productivity. The UK measure of productivity is relatively comprehensive; measuring hospital, mental health and primary care services. It compares changes in the volume of quality-adjusted output with changes in the volume of quality-adjusted inputs. The productivity measure plays a role in budget setting, fiscal risk assessment and within the health system, hospital reimbursement. The UK experience has considerable strengths but also highlights some of the challenges of health care productivity measurement. Robust productivity measurement requires high quality, comprehensive data collected on a consistent basis over time. Even in a national health service this is challenging. The emerging evidence on allocative efficiency also highlights the importance of shifting the focus from the outputs of healthcare to outcomes. But, however productivity is measured, for fiscal sustainability the critical issue is how to realise potential productivity gains within the healthcare system and the mix of policy and managerial support needed to help the system optimise the trend rate of efficiency growth.

JEL codes: H51, I11, I18

Key words: United Kingdom, productivity, measurement

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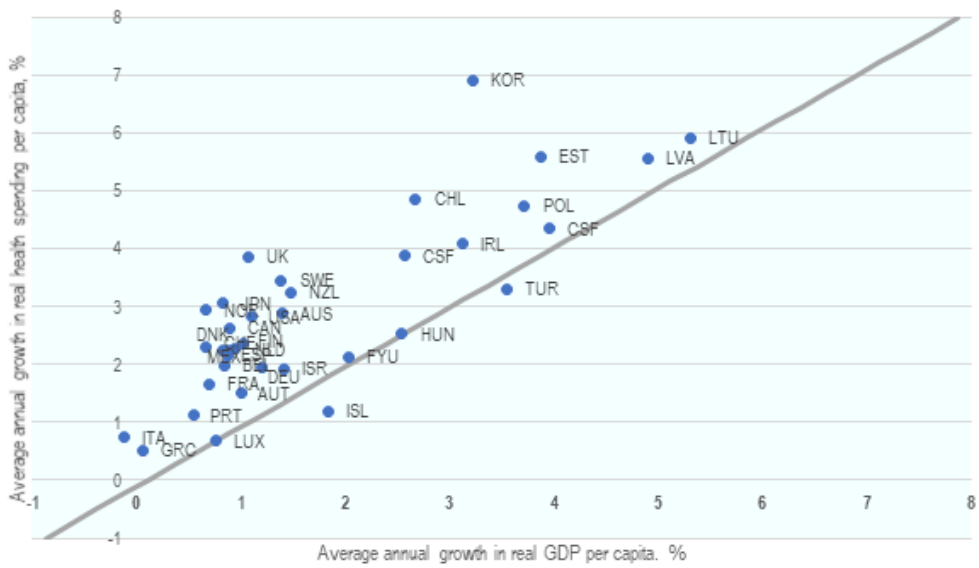
1. Introduction

Measuring the productivity of the health care system is important as across the OECD health accounts for almost 10% of GDP (OECD, 2018). The productivity potential of the economy as a whole is what determines the outlook for economic growth and citizens' prosperity. No country can properly understand the past or future potential performance of its economy without measuring as broad a range of sectors as possible. Health care is important as it is a large but also, expanding sector, projected to account for a growing share of GDP across the OECD (OECD, 2015).

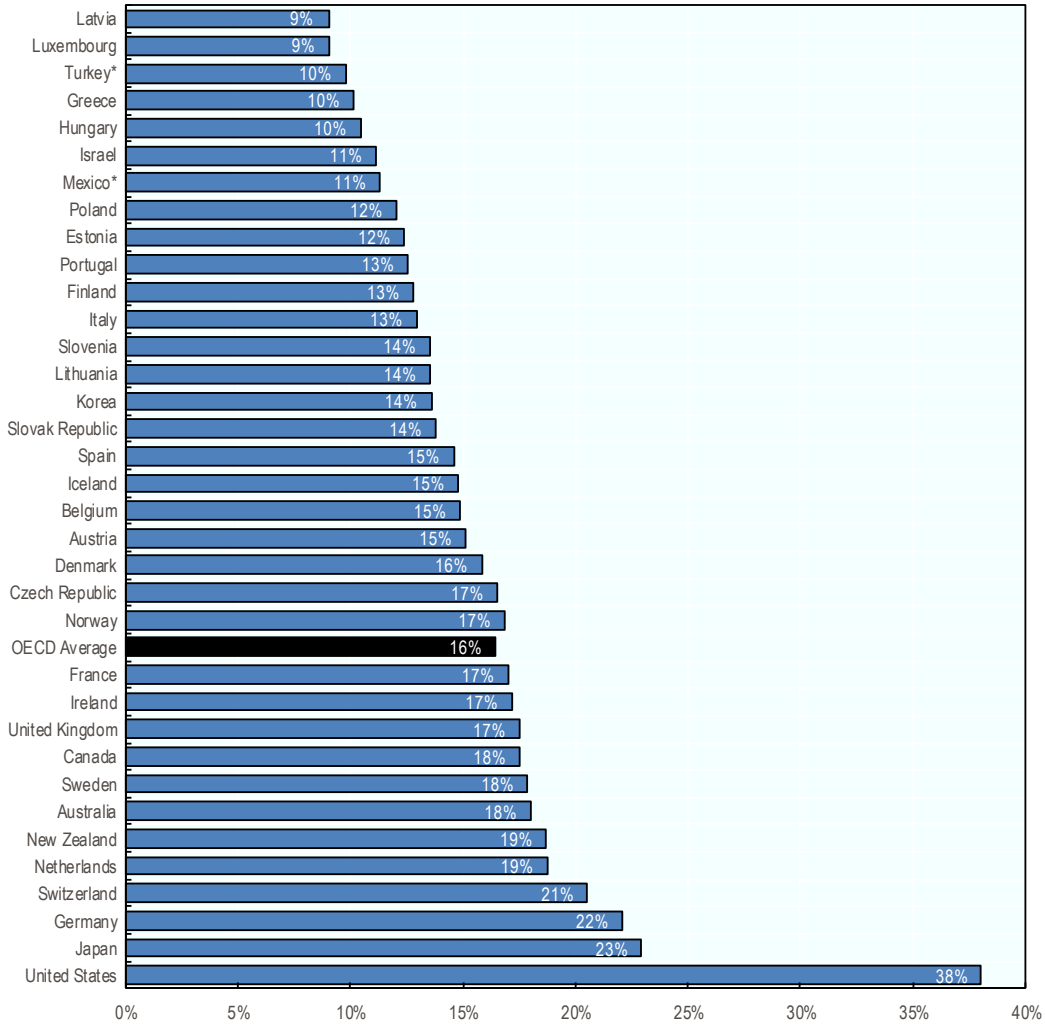
Figure 2. Average annual growth rate of real health spending and GDP per capita, 2000-2018



Source: www.oecd.org/health/health-systems/fiscal-sustainability-of-health-systems-9789264233386-en.htm

Across the OECD around three quarters of health care expenditure is financed from public funds. Healthcare spending accounts for an average of 16% of government spending and there are growing concerns about fiscal sustainability as spending consistently outpaces economic growth (OECD, 2015).

Figure 3. Health spending as a share of total government spending, 2017 or latest year



Sources: https://data.oecd.org/gga/general-government-spending.htm; https://stats.oecd.org/Index.aspx?DataSetCode=SHA

The extent of the fiscal sustainability risk from health care depends in part on the productivity performance of the sector. As Table 7 shows, healthcare spending pressures arise from both demand and supply side factors. Demand side factors include the size and demographic profile of the population, the income elasticity of demand and the burden of disease. On the supply size, a key factor is the relationship between productivity growth and real earnings for health care workers. This is the 'Baumol effect'. William Baumol hypothesised that, it is harder to generate labour-saving productivity growth in service sectors such as healthcare, than in capital-intensive manufacturing sectors (Baumol et al., 2012). This gap in productivity growth leads to services expanding as a share of GDP, as wage growth across different sectors adjusted for skills, needs to be broadly consistent for recruitment and retention purposes. Healthcare wages will therefore reflect whole economy productivity growth rather than the sector specific growth. If healthcare productivity is significantly below whole economy productivity, real labour costs will rise creating a cost pressure for health care.

Table 7. Key drivers of healthcare spending

Demand factors	Supply factors
Changing size and age structure of the population	
Burden of ill health	Productivity constraints
Public expectations and the income elasticity of demand	Technological advance
Technological advance	

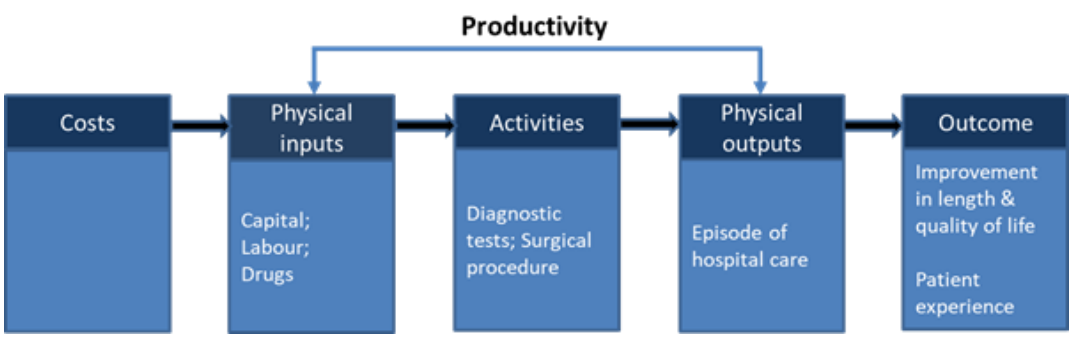
2. Measuring healthcare productivity

Productivity measures the volume of physical outputs relative to the volume of physical inputs for any given service or production process. There are two main measures of productivity:

1. labour productivity which compares the volume of labour with the volume of output produced; or
2. total factor productivity (TFP) which compares all the units of input (labour and capital) with the volume of output produced.

In many countries until the 2000s, the output of publicly funded health care has been conventionally measured as equal to the value of the inputs with the implied assumption of no productivity growth. The reason for this was the challenge of measuring the output of public services such as health care and even when they could be measured, placing a value on the output where there is no market transaction.

Figure 4. The production process in health care



Source: Health System Efficiency – How to make measurement matter for policy and management

In the UK in 2003 the National Statistician commissioned an independent review of the measurement of government outputs, productivity and price indices including healthcare productivity (Atkinson, 2004) (Atkinson, 2005). The Atkinson review established a series of principles which should underpin the measurement of healthcare productivity in the UK. The principles are:

- the measurement of government non-market output should, as far as possible, follow a procedure parallel to that adopted in the national accounts for market output.

- the output of the government sector should in principle be measured in a way that is adjusted for quality, taking account of the attributable incremental contribution of the service to the outcome.
- account should be taken of the complementarity between public and private output, allowing for the increased real value of public services in an economy with rising real GDP.
- formal criteria should be set in place for the extension of direct output measurement to new functions of government. Specifically, the conditions for introducing a new directly measured output indicator should be that (i) it covers adequately the full range of services for that functional area, (ii) it makes appropriate allowance for quality change,(iii) the effects of its introduction have been tested service by service, (iv) the context in which it will be published has been fully assessed, in particular the implied productivity estimate, and (v) there should be provision for regular statistical review.
- measures should cover the whole of the United Kingdom; where systems for public service delivery and/or data collection differ across the different countries of the United Kingdom, it is necessary to reflect this variation in the choice of indicators.
- the measurement of inputs should be as comprehensive as possible, and in particular should include capital services; labour inputs should be compiled using both direct and indirect methods, compared and reconciled.
- criteria should be established for the quality of pay and price deflators to be applied to the input spending series; they should be sufficiently disaggregated to take account of changes in the mix of inputs and should reflect full and actual costs.
- independent corroborative evidence should be sought on government productivity, as part of a process of 'triangulation', recognising the limitations in reducing productivity to a single number.
- explicit reference should be made to the margins of error surrounding national accounts estimates.

2.1. Inputs

Healthcare productivity is measured as total factor productivity (TFP) in the UK. Inputs in the public service healthcare productivity measure include:

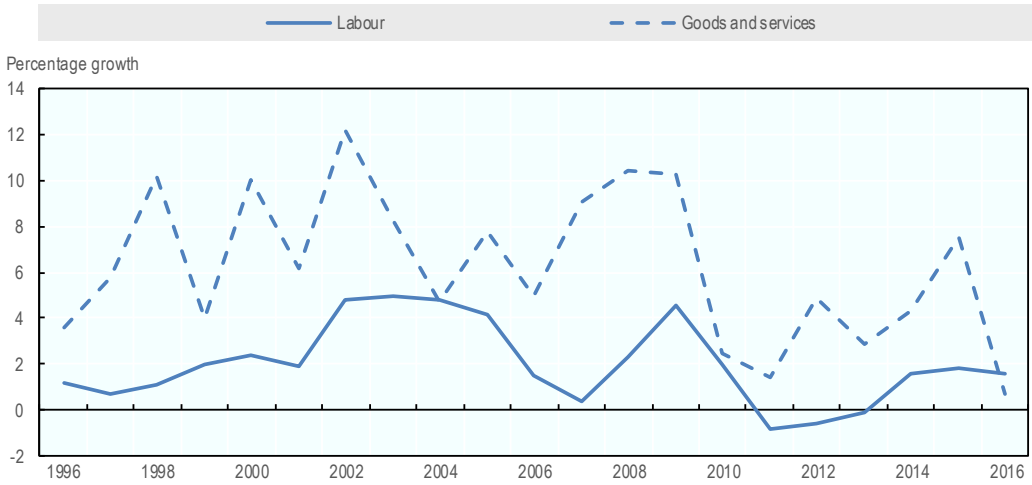
- labour – hospital doctors, nurses, technical staff, ambulance staff, support staff, general practitioners (GPs) and GP practice staff
- goods and services – the intermediate consumption of equipment used by healthcare providers, such as gloves and syringes, drugs and agency staff costs
- capital consumption – the consumption of fixed capital and the cost of depreciation of capital goods (items that are anticipated to be in use over several years, such as buildings and medical imaging) over time.

Labour inputs are measured directly based on the change in the number of full-time equivalent NHS employees, weighted by their average earnings to account for skill mix changes. Inputs for goods and services are estimated indirectly, by adjusting expenditure with appropriate deflators to remove the effects of price changes from current expenditure

and so produces a quantity input measure. Capital consumption is measured using the perpetual inventory method as used in the UK National Accounts.

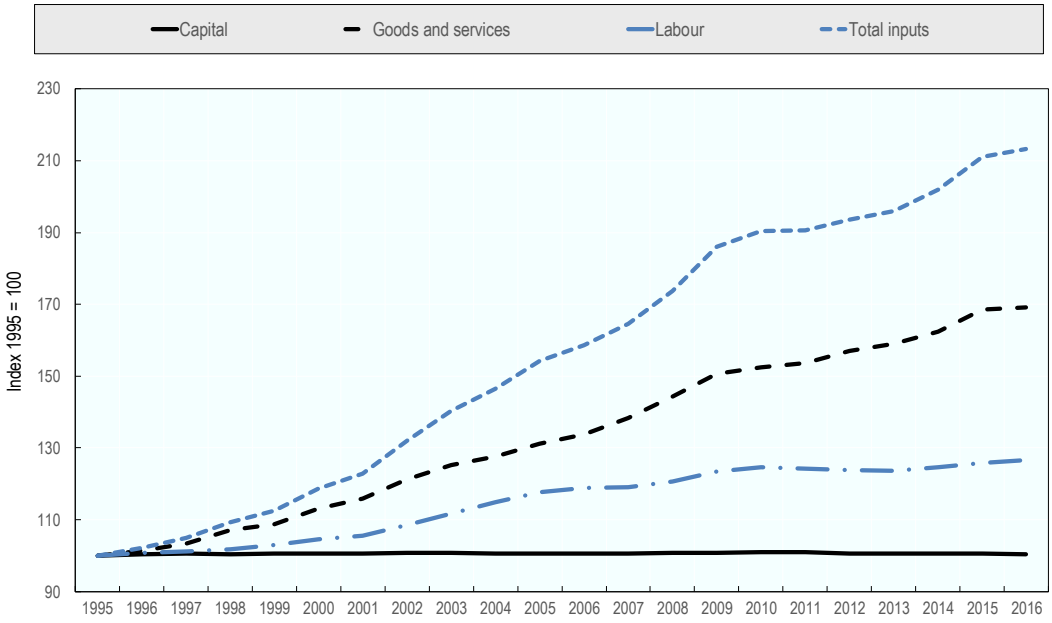
To produce the total inputs index, the growth rates of the three input components are combined, weighted by their share of total expenditure. Goods and services inputs and labour inputs account for the largest shares of input expenditure and therefore have a greater weight and a greater effect on the overall inputs index than capital consumption, which accounts for a small share of expenditure.

Figure 5. Public service healthcare inputs quantify growth UK, 1996 to 2106



Source: Office for National Statistics

Figure 6. Contributions to public service healthcare inputs growth by component UK, 1996 to 2016



2.2 Outputs

In line with the Atkinson Review recommendations, UK healthcare output is measured as the quantity of health care delivered adjusted for changes in the quality of care delivered (ONS, 2019). To reflect the complex mix of activities provided by the health care system the quantity of output is estimated using a cost-weighted activity index. To produce the cost-weighted activity index, the growth rates of individual healthcare activities are calculated and then weighted by their proportion of total expenditure. The growth in procedures that are high-volume and expensive, therefore has a greater effect on the output index than a similar rate of growth in procedures that are uncommon and low-cost.

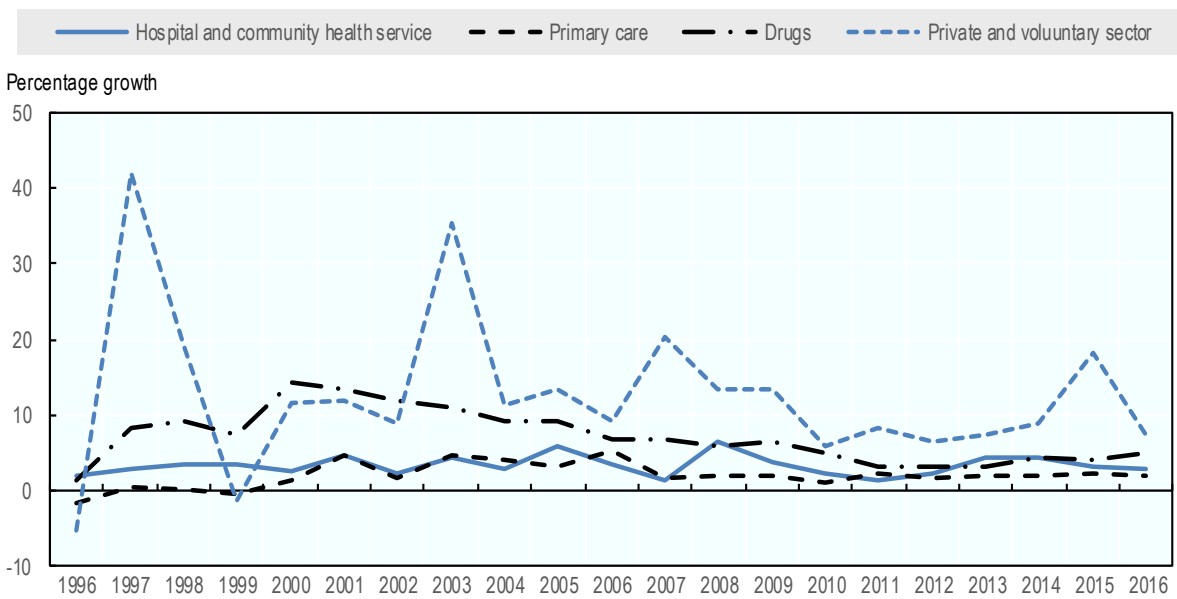
The measure aims to include the output of all publicly funded health care. The quantity of health care is estimated for:

- hospital and community health services – hospital inpatient spells, outpatient attendances and day case episodes
- primary care services – general practitioner (GP) and practice nurse consultations, publicly-funded dental treatment and sight tests
- drugs - prescribed by general practitioners
- non-NHS provision – health care funded by the government but provided by private or third sector organisations

The output of these sectors are weighted together to produce an overall quantity output series.

Figure 7 shows the quantity output growth by component before it is weighted by expenditure share.

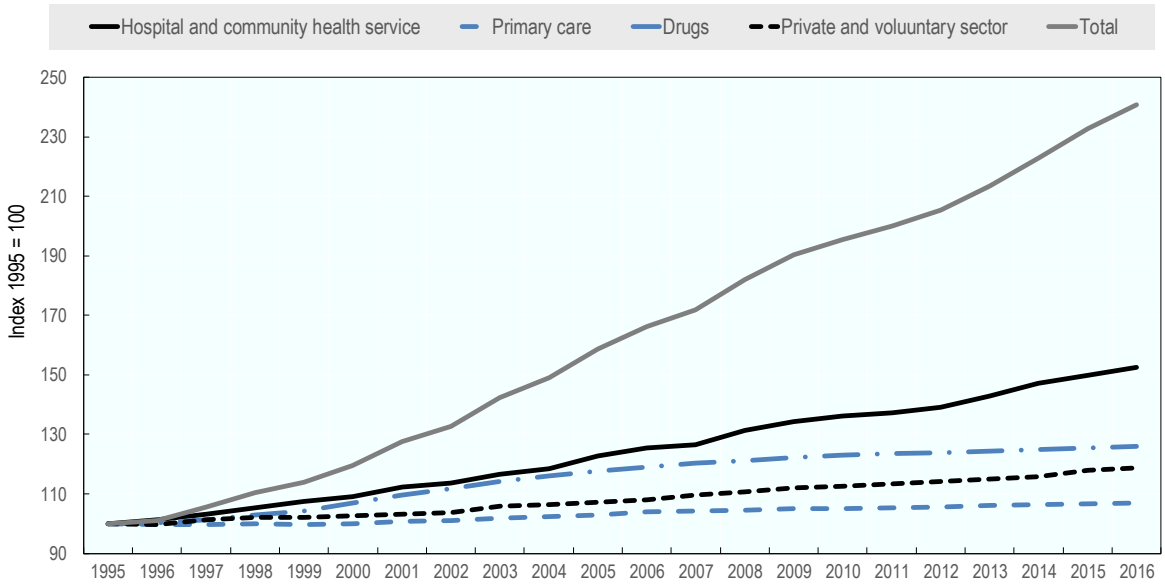
Figure 7. Public service healthcare quantity output growth by component UK, 1995 to 2016



Source: Office for National Statistics

Figure 8 shows how much growth in each component healthcare sector contributes to the growth in overall output quantity. Prescriptions drugs contribute a declining share of output growth over the period. Hospital and community health services consistently add a relatively large share of output growth. Private and voluntary sector output has become a more important area of output growth in recent years.

Figure 8. Contributions to public service healthcare quantity output growth by sector UK, 1995 to 2016

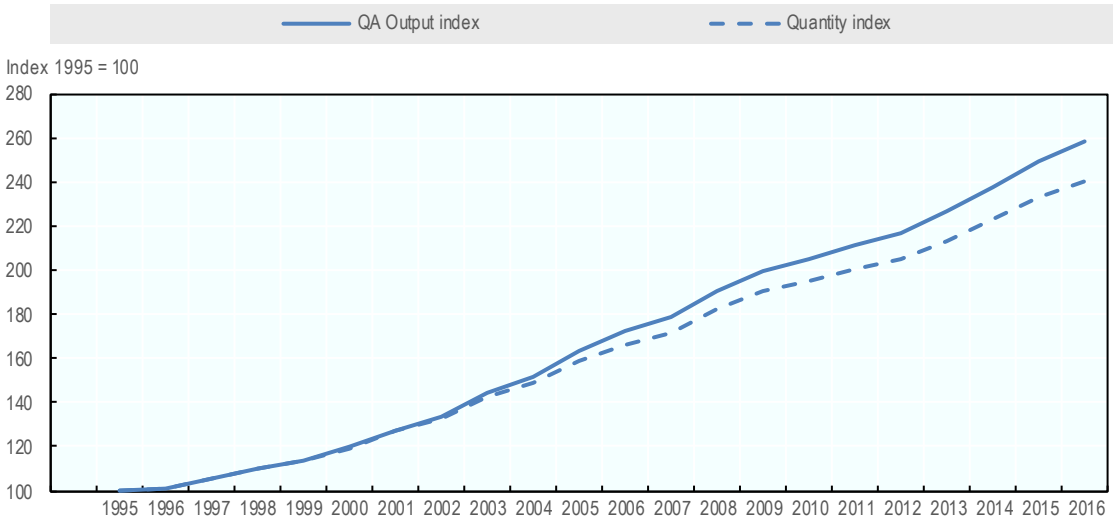


Source: Office for National Statistics

Following the Atkinson Review principles, healthcare output is also adjusted for quality. The quality adjustment is specific to the different sectors within the healthcare system. For hospital and community health services, quality is measured using hospital mortality rates, health gain following treatment in hospital and changes in waiting times. For primary care, quality is measured with a selection of measures from the general practitioner (GP) quality and outcomes framework (QoF), including measures for the percentage of certain groups of patients meeting target ranges for blood pressure. National Patient Survey results are used to measure patient experience of hospital inpatient services, mental health services, primary care, outpatient, and accident and emergency services. Together these measures attempt to capture the extent to which episodes of care deliver the intended outcomes and the extent to which services are responsive to patients.

Quality adjusted output has risen by more than the quantity measure of healthcare output over the last 15 years, highlighting the importance of including quality alongside the quantity of care delivered (Figure 9).

Figure 9. Public service healthcare quantity and quality adjusted output indices and growth rates



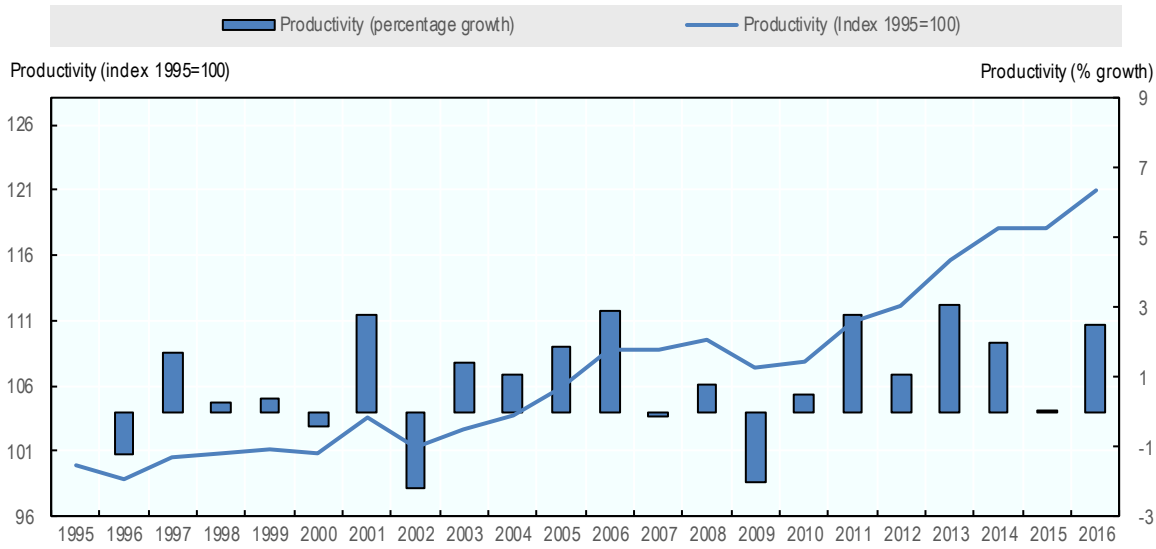
Source: Office for National Statistics

3. Productivity performance since 1995

Consistent data on UK publicly funded healthcare productivity is available for the period 1995 to 2016. The NHS increased its productivity by a fifth over this period (Figure 10), an annual average growth of 0.9%.

Quality adjusted productivity data is available from 2001. Over the subsequent 15 years quality adjusted health care productivity increased by an average of 1.1% a year and non-quality adjusted productivity grew at an annual average of 0.7%. Quality adjustment had a positive effect on productivity growth, accounting for 40% of the increase in healthcare productivity between 2001and 2016 (Figure 10).

Figure 10. Public service healthcare productivity index and growth rate

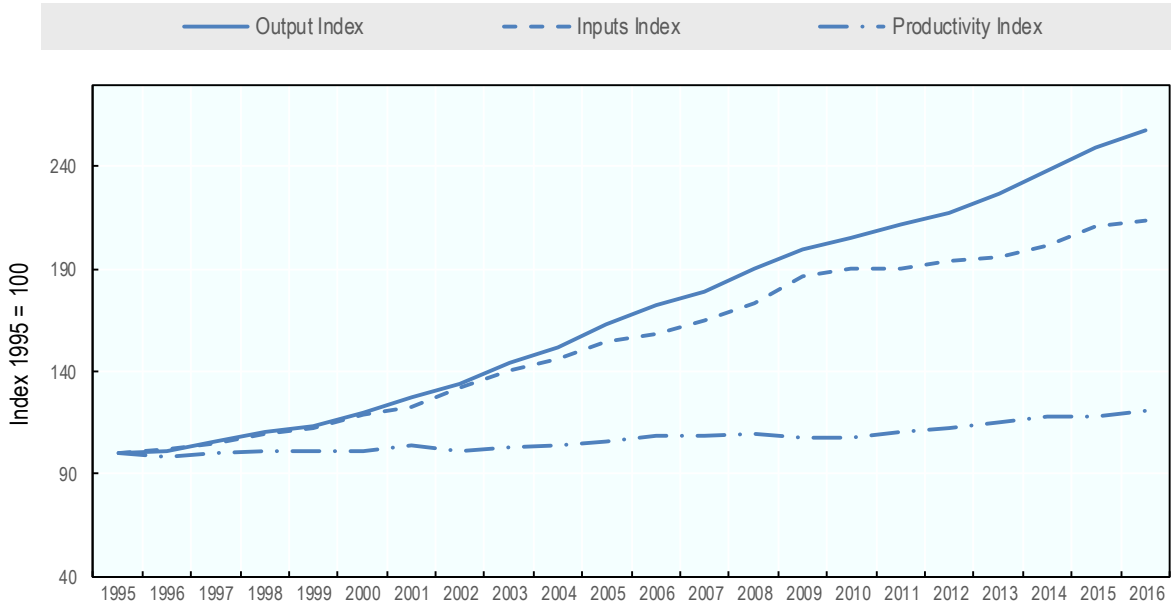


Source: Office for National Statistics

It is notable that there is quite a lot of variability in the annual measure of productivity performance. Looking more broadly we see 4 distinct periods of productivity performance: in the late 1990's productivity growth was relatively low, 2003-06 saw more rapid productivity growth followed by a slow down between 2007 to 2011. Since 2011 input growth has slowed and health productivity has been above trend. In 2016 output growth was 3.5% compared to input growth of 1%, leading productivity to grow by 2.5%.

Prior to 2011, health care productivity grew at a lower rate than whole economy productivity – in line with Baumol's hypothesis. Between 2001 and 2011 quality adjusted health care productivity grew by 0.5% per year, and whole economy productivity by 1.2% per year. Since 2011 the position has reversed and whole economy productivity has risen by just 0.5% per year while healthcare productivity has grown by 1.7% per year (Figure 11).

Figure 11. Public service healthcare output, inputs and productivity indices and growth rates



Source: Office for National Statistics

The UK productivity measures are produced by the Office for National Statistics. The University of York also produce estimates of the productivity of the English NHS consistent with the Atkinson Review principles. These estimates are able to incorporate richer data for the English NHS. The productivity estimates are very comprehensive, covering all forms of hospital care (inpatient, day case, outpatient, day care and A&E care), mental health and community based nursing care, primary care (GP services, ophthalmic and dental care) and prescribing (Castelli et al., 2019). Quantity of outputs is also adjusted for quality of care on the same dimensions (survival, health status, waiting times, although quality data is only available for hospital and GP care). The York estimates of productivity also measure TFP and use a mixed (direct where actual volume data for example on staff numbers is available and indirect for good and services purchased) and an indirect measure of inputs. The indirect method uses index of input growth based on input specific deflators where available.

The results from the York research show very similar broad patterns to the ONS measure; quality adjusted output and productivity growth is greater than a quantity based measure of output and productivity. Productivity growth in recent years has been above trend largely due to low input growth.

4. Uses of productivity measures in the UK budgeting system

The health system in the UK is predominantly funded from general taxation. The four countries of the UK (England, Wales, Scotland and Northern Ireland) are each responsible for delivery of health care. The UK government determines the overall budget for the NHS in England and through a process known as the Barnett Formula this determines the funding allocation to the other three countries within the UK. The UK therefore has a centralised national health system in which the bulk of health care expenditure is in the central government's budget and is determined along with the rest of government spending. Other

countries who follow a similar approach include; New Zealand, Hungary and Iceland (OECD, 2015).

Productivity measurement plays an important role in the budgeting system in the UK (Section 4.1). It is a key factor in the short-term budget setting process, which determines the budget ceiling for health care and the assessment of longer-term fiscal sustainability.

The assessment of the fiscal sustainability of health spending in the UK also uses productivity measures (Section 4.2). The OECD report on the fiscal sustainability of health care systems identified a series of policy levers available to governments to improve the sustainability of the health care system without putting at risk access and quality of care (OECD, 2015). These are grouped into four categories;

1. Supply side levers including provider payment reform, provider competition and generic substitution for drugs
2. Demand side reform levers including gatekeeping and preferred drugs lists
3. Public management and co-ordination including direct controls on pharmaceutical prices or profits and health technology assessment processes
4. Financing including additional revenues or change the source of revenues.

The UK uses a mixture of these policy levers. Provider payment reform has been a prominent feature of supply side policies since the introduction of a payment by results tariff system which is a form of DRG prospective case mix adjusted payment to hospital providers from 2003 onwards (Marshall et al., 2014). Productivity measures play a critical role in the hospital provider payment system, which is discussed further in Section 4.3.

4.1. Productivity and budget setting

Budget setting for public services in the UK is determined by a Her Majesty's Treasury (HMT) led process of government-wide spending reviews, typically on a three- to five-year cycle. The Treasury sets a cap on all public service spending based on macro-economic factors at the start of the spending review. It then works with government Ministries to apportion spending between the different public services based on an assessment of spending pressures and the incumbent government's political priorities. The Department of Health and Social Care receives a budget for the day-to-day running costs and capital investment needs of the NHS in England. Alongside this budget, the spending review normally sets out a series of service improvement ambitions.

Since 2010, the productivity potential of the NHS has been a key feature of the spending review process for health care in England. The government has sought to reduce the structural deficit in the public finances through reducing public spending as a share of GDP. Health care has been protected from budgetary cuts but the annual average growth rate has been below the historical average increase in funding and projections of demand and cost pressures (Charlesworth et al., 2019) (Roberts et al., 2012).

Table 8. Annual average real growth rates in UK public spending on health care, selected periods

Period	Financial years	Average Annual real growth rate (%)
Pre-1979	1949/50 to 1978/79	3.5
Thatcher and Major Conservative governments	1978/79 to 1996/97	3.3
Blair and Brown Labour governments	1996/97 to 2009/10	6.0
Conservative-Liberal Democratic coalition government	2009/10 to 2014/15	1.1
Cameron and May Consvervative governments	2014/15 to 2018/19	2.3
Whole period	**1945/50 to 2018/19**	**3.7**

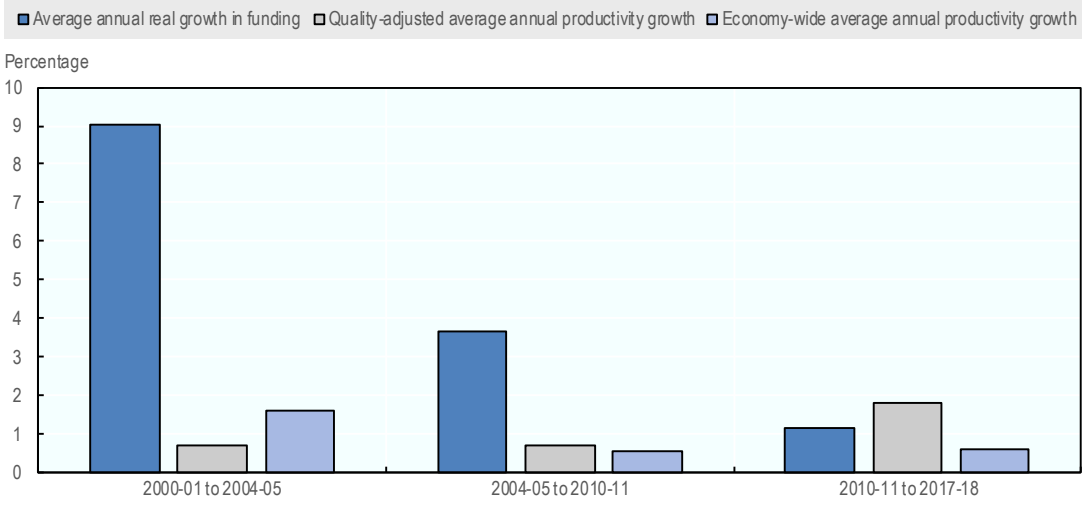
Source: Nominal health spending data from Office of Health Economics (1949/50 to 1990/91), HM Treasury Public Expenditure Statistical Analyses (1991/92 to 2016/17), and HM Treasury Supplementary Estimates (planned 2018/19). Real spending refers to 2019/20, using the GDP deflator from the HM Treasury, March 2019.

The government has sought to protect access and quality of care by setting the NHS targets to improve productivity through the spending review. Targets to realise significant increases in productivity and efficiency were set in the 2010 and 2015 spending review (GOV.uk, 2015) (HM Treasury, 2010).

Although a series of reviews had identified potential efficiencies and productivity gains in practice, it proved difficult to close the gap between spending pressures and funding through productivity and access to care has been negatively impacted (McKinsey, 2009) (NHS England, 2014) (Monitor, 2013) (John Appleby et al., 2015) (Anandaciva, 2017) (NHSI, 2019). Waiting time targets for accident and emergency department visits, diagnosing and treating cancer, or surgery have been exceeded for over three years. Hospitals have experienced increasing problems managing their budgets and 46% of publicly owned hospitals in England are in deficit in the financial year 2018/19.

Health care in England has a new budgetary settlement for the period 2019/20 to 2023/24 which sets a productivity goal which is in line with the trend rate of NHS productivity growth at 1.1% a year (NHS England, 2019). Figure 12 compares health care budget increases, NHS and whole economy productivity over recent years (OBR, 2019).

Figure 12. Real terms funding and productivity growth in the health



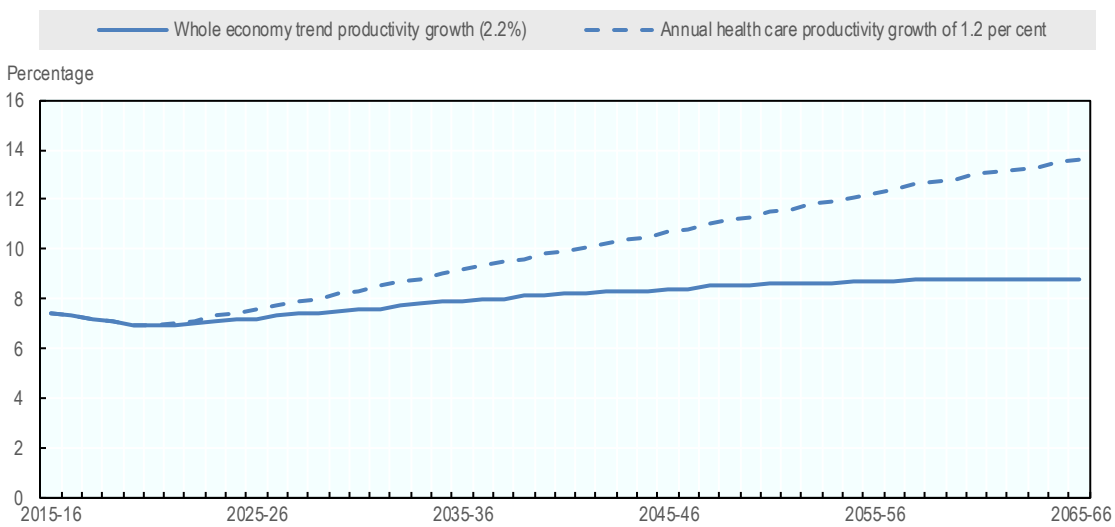
Source: OBR – Fiscal risk report

4.2. Productivity and fiscal sustainability

In 2010, the UK established an independent Office for Budget Responsibility, which reports to Parliament providing independent analysis of the UK's public finances. It produces assessments of the potential fiscal impact of future government activity, by making 50-year projections of all public spending, revenues and significant financial transactions, such as government loans to students. It also assesses the fiscal risks. The assessment of fiscal sustainability looks at two time-horizons; five years and 50 years. A number of dimensions of fiscal risk are considered including; macroeconomic, financial sector, revenue, spending, balance sheet, debt interest, policy and climate change risks (OBR, 2019).

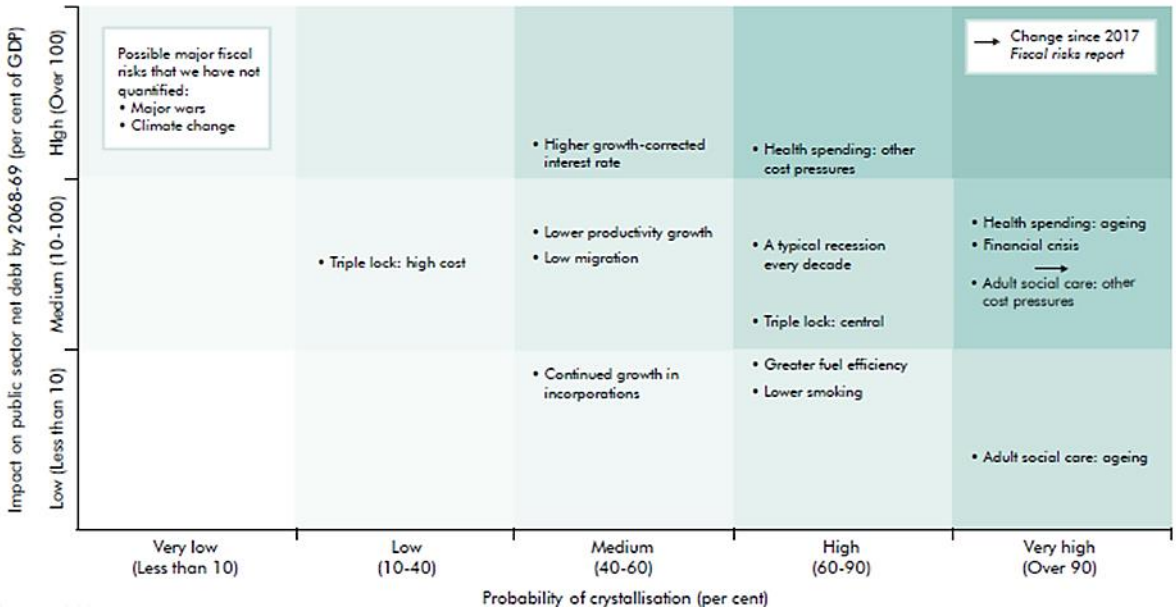
Health care spending is a key area of focus of the assessment of fiscal sustainability and risk. The OBR publishes long-term fiscal projections, which include projections for health care spending. Those projections show publicly funded health care spending reaching 13.8% of GDP compared to 7.6% of GDP in 2022/23 in 50 years' time if demographic and other cost pressures are to be accommodated (OBR, 2018). The OBR long-term projections show how critical productivity growth is to fiscal sustainability. They compare the growth in health spending under two scenarios; the trend rate of whole economy productivity in the UK prior to the 2008 recession (2.2% a year) and if healthcare productivity grew at a rate closer to the trend in sector specific productivity (OBR use an assumption of 1.2% a year). Projecting over 50 years health spending in 2065-66 would be almost 5% of GDP higher under the lower productivity assumption than if productivity growth matched pre-recession trend rate of whole economy productivity growth (Licchetta et al., 2016).

Figure 13. Sensitivity of health spending to alternative productivity assumptions in the health sector



Source: OBR

Figure 14. Sources of risk to fiscal sustainability

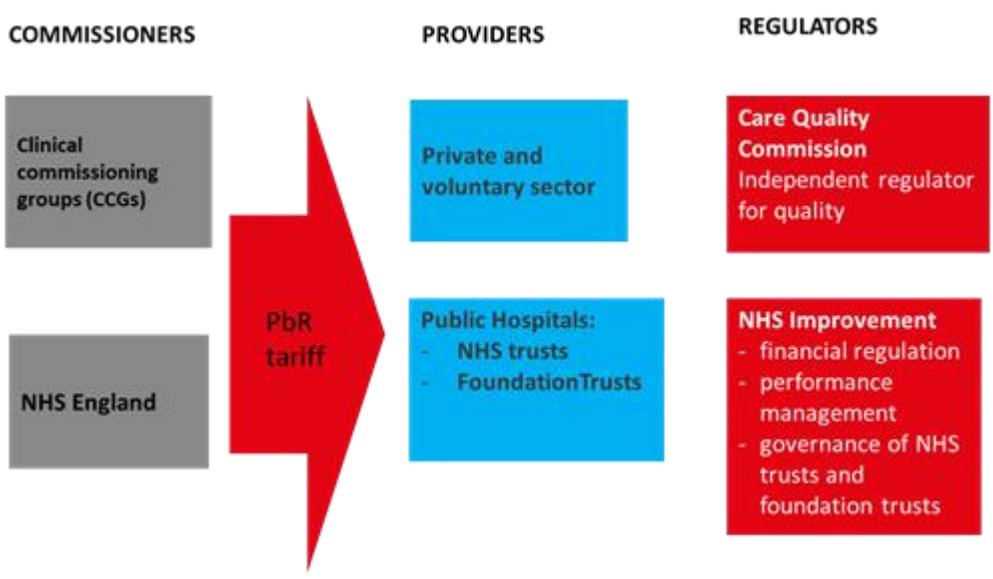


Source: OBR

4.3. Productivity and hospital reimbursement

Ensuring that the health care system maximises productivity growth is therefore a key issue for policy. The NHS in England has a purchaser / provider split. The national health budget is allocated to commissioning organisations who are responsible for population health and commission health care from a network of publicly owned hospitals and some private and voluntary sector organisations (Figure 15)

Figure 15. The NHS: How providers are commissioned



Providers of NHS treatment are reimbursed under a payment by results (PbR) tariff. The prices paid under the PbR tariff are set nationally by the regulator NHS Improvement. The regulator sets prices based on the current average cost of providing an episode of care within the NHS. This cost is then adjusted to take account of expected future cost pressures from pay growth and increases in the price of goods and services purchased by hospitals providing NHS care. Against this cost pressure the regulator sets a productivity target. The reimbursement hospitals receive for providing NHS care is net of an expected productivity gain. In this way NHS hospitals are required to deliver productivity gains and the national expectation for productivity growth is cascaded through the health care system.

NHS Improvement has sought to measure the potential for productivity and efficiency improvements by estimating the trend rate of efficiency improvements at individual hospital level (NHS England, 2016). The approach taken is to model hospitals' costs adjusting for a range of factors including efficiency (Figure 16).

Figure 16. Model specification

Note: The NHS is legally obliged to fund medicines and treatments recommended by the National Institute for Health and Care Excellence's (NICE) technology appraisals. When NICE recommends a treatment, the NHS must make sure it is available within three months (unless otherwise specified) of its date of publication. Currently, for its standard technology appraisals, NICE uses a threshold of GBP 20 000 to GBP 30 000 per quality adjusted life year (QALY). Treatments that within or below the threshold are usually approved. Those that are above it tend not to be judged cost-effective, and so are not recommended for adoption by the NHS

The model estimates the trend rate of efficiency improvement but also the variation between hospitals. It finds significant variations in cost which are not explained by the differences in healthcare output or unavoidable local factors.

In setting the efficiency and productivity goals for hospitals through the PbR tariff system the approach taken has been to argue that the system should seek to both continue to deliver the trend rate of efficiency improvement but go beyond this by improving the efficiency performance of those hospitals with weaker performance.

5. Strengths and weaknesses of health care productivity measurement in the UK

The measurement of productivity in the UK has considerable strengths; it is undertaken by an independent national statistic organisation, which is protected from vested or political interests. The methodology is rooted in a framework on clear principles established in the independent Atkinson Review. Notable strengths are the comprehensive nature of the measure; it seeks to include output and inputs across a wide range of health care services not just hospitals, it includes care which is delivered in NHS hospitals and that provided by private and voluntary sector organisations, it covers all the UK and output is quality adjusted.

Notwithstanding these strengths there are some clear limitations. Many of the limitations relate to data issues. Direct measures of inputs have obvious strengthens but often lack comprehensive coverage. Much of the input measurement is based on indirect estimation. The ability to obtain reliable estimates in the change in the volume of inputs from expenditure data depends on robust input specific deflators. The University of York measure of inputs using the mixed and indirect methods produce significantly different estimates of input growth in recent years (Castelli et al., 2019). In 2016/17 NHS input growth overall was 1.47% using the indirect method and 0.64% for the mixed method. Much of these data come from administrative data sets rather than national statistics and ensuring consistency over time is challenging.

The second key area is the process of adjusting for quality and measuring output. Key areas of health care such as mental health and community nursing lack measures of quality adjustment. More fundamentally, while quality adjustment is valuable, ideally output would be measured in terms of a comprehensive and consistent measure of health gain such as the quality adjusted life year (QALY).

The issue of measuring health gain consistently points to a broader and more fundamental issue with productivity measurement; it captures the relationship between the volume of physical inputs and outputs but not the value of that output. As such, it is a necessary but not sufficient condition for a high performing healthcare system. The mix of outputs, particularly their contribution to health outcomes, matters. While productivity has increased the NHS has scope to improve its allocative efficiency. The marginal cost per QALY from different areas of healthcare varies considerably (Claxton, 2018). There is evidence that while productivity has increased over recent years the marginal productivity of healthcare spending in terms of cost per QALY may have fallen consistent with diminishing margin returns to health care spending. The marginal cost per QALY in 2012/13 is estimated to be more than double that of 2003/04, although at around GBP 15 000 still below the UK threshold of GBP 20 000 – GBP 30 000 [1](Claxton, 2018). There is also evidence of significant allocative inefficiency between spending on treatment and spending on prevention. The marginal cost per QALY of spending on public health interventions in England was found to be GBP 3 800; less a than third of the marginal cost per QALY of health care services (Martin et al., 2019).

However well productivity is measured, how it is used within the health care system is also of critical importance. There is concern that over recent years as funding growth slowed, unrealistic and unachievable targets were set to improve productivity and this led to

damaging effects on the long-term sustainability of the service; increasing numbers of hospitals in deficit, a reliance of short-term cost cutting measures and rising waiting times and waiting lists (Street, 2015). In some cases, these short-term cost cutting measures may reduce the long-run productivity potential for the healthcare system. Over recent years the NHS has prioritised day-to-day spending and cut capital investment budgets in response to rising hospital deficits. As a result, NHS capital investment per healthcare worker has fallen by 17% (Kraidler, 2019).

Moreover, the approach to realising potential improvements in productivity is also critical (Dixon et al., 2018). In the English NHS the payment system has been the primary policy lever to incentivise productivity gains. There is evidence that payments system reform can improve productivity (Marshall, 2014). In recent years the health care regulator has sought to target healthcare providers with below average productivity for more rapid productivity growth. The pace and scale of productivity improvement being sought was very rapid. While incentives are important the scale of the management and improvement task to realise these gains in the timescales almost certainly required a more rounded approach. In particular, the evidence would suggest that improving care especially by spreading best practice is more complex and requires resource and support (Jones et al., 2019).

6. Conclusions

Paul Krugman's quote 'Productivity isn't everything, but, in the long run, it is almost everything' holds almost as much for the fiscal sustainability of heath care as it does for the economy as a whole. Measuring productivity and understanding its drivers and long-run potential is therefore critical for policy makers. Over almost two decades the UK has sought to develop comprehensive and consistent measures of productivity. This is a strength but it also points to some challenges. Robust productivity measurement requires high quality data across a wide range of outputs and inputs for all providers of care. This should be easier in the UK context which is a publicly funded and largely publicly provided national health service but even in this context it is challenging. The emerging evidence on allocative efficiency in the NHS points to the importance of conceptualising productivity more broadly in the future, shifting the focus from outputs to outcomes. However productivity is measured, for fiscal sustainability the critical issue is how to realise potential productivity gains and the mix of policy and managerial support which will help the healthcare system optimise the trend rate of efficiency growth.

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Can performance measurement make health care systems more sustainable? Or at least more efficient?

by

Joseph White

In light of the many discussions advocating the use of pay-for-performance and performance budgeting, this paper argues that discouraging experience with both approaches should temper expectations that performance measurement can be a reform that will make health care systems more "sustainable" or even more efficient. The link between sustainability and efficiency is tenuous, and attention to performance is not new. Measurement's accuracy tends to be overstated and its costs understated or ignored. Nor does it easily lead to changed behaviour. Yet some measurement is useful for managing any complex activity. In particular, there are situations in which measures are more accurate and the proper responses to shortfalls are generally agreed. Policy-makers should look for those conditions and encourage the more limited, targeted improvement that measures then can make possible.

JEL codes: H51, I11, I18

Key words: Performance, measurement, budgeting, sustainability

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Introduction

One goal of the Joint Network on the Fiscal Sustainability of Health Systems is for health policy experts and budget policy experts to learn from each other's experiences. This article addresses a wish common to both: that performance measurement will improve value for money, so make it easier to pay for what people need. In health policy the dominant hope is that sick persons or their insurer agents will "pay for performance" (P4P) rather than for mere activity or "being there" (Busse 2016: 1123). In the budget world, the parallel idea is "performance budgeting" (PB), in which programmes will receive more money if they produce more value, or the portfolio of programmes will be adjusted to maximise the return for total spending. P4P allegedly would improve on "fee-for-service" and other payment mechanisms. PB advocates claim it improves on "paying for inputs" rather than outputs.

These ideas are so attractive that they persist even though the extensive literatures on both PB and P4P show frequent failure and disappointment. On the budgeting side, Allen Schick (2013: 2) described PB initiatives as "often tried, but rarely successful." OECD's own work has shown that performance budgeting has tended to be "performance-informed budgeting" or "presentational performance budgeting" rather than allocation based on performance. Nevertheless, budgeting for "performance and results" is a core focus of the work of OECD's network of Senior Budget Officials.[1] Reviews of P4P show weak or mixed results, and weaker results with stronger studies (Busse 2016: Markowitz and Ryan 2016; Mathes et al. 2019; Mendelson et al. 2017; Ogundeji et al. 2016; Sullivan and Soumerai 2018). Performance measurement has rarely been linked to budget allocation for health care programs (Beazley et al. 2019).

Yet policy-makers and analysts still hope health budgets can become more "performance-oriented" (OECD Joint Network 2019). This interest in part reflects the fact that at some level, as R.G. Bevan and Christopher Hood wrote, "government by targets and measured performance indicators is a form of indirect control necessary for the governance of any complex system" (2006: 518). Measurement is not only a way to limit spending; it can also be used to build support for programmes and motivate employees. "If you have tested more people for lead poisoning this year than last, or if you have rid more premises of garbage or increased the number of prison doctors by fifty percent," Gordon Chase advised managers, "then say so" (Chase and Reveal 1983: 160).[2] Numbers are a fundamental aspect of policy-making discourse, whether accurate or not (Stone 2012: Chapter 8).

The goal of this article, therefore, is to explain why experience in both budgeting and paying for healthcare should lead to much lower expectations from performance measurement, and identify the conditions for modest benefits.

Sustainability, efficiency, and focusing on performance

We first should distinguish "sustainability" from "efficiency." Efficiency is an analyst's term. An activity could be popular and growing, but analysts could consider it a waste of money. Sustainability refers to whether a given level of activity can attract the inputs needed to produce it, without some terrible side effect in budgeting, that operates at two levels. System-wide is whether total spending can attract the taxes needed to pay for it without dangerous levels of borrowing. For programmes, it is the political system's willingness to fund the programme without restrictions that are widely viewed as harmful – e.g. waiting lists for care, or allowing an epidemic.

The budgetary sustainability of health care systems is a political, not an economic, question. Economic growth should not be related to how much is devoted to medical services as opposed to food consumption or housing or recreation. Medical expenses are jobs and income too.[3] When the U.S. spends much more than other countries, that is inefficient because it gets little value for the extra money, but comparatively higher spending does not appear to create comparatively worse economic performance.

The political challenge of health care finance is how to collect the money. Any hopes that performance measurement will make it easier to collect the revenue seems naïve. As Allen Schick (2013: 25) argues, "a government that candidly reports on its performance is likely to face more opprobrium for shortfalls in results than applause for its favourable accomplishments. There is little basis for expecting improved performance to itself elevate trust or confidence levels." In health care specifically there is little reason to believe that voters assess overall performance in the ways that analysts do. For example, analysts tend to care about population health statistics, while the voters and consumers care far more about personal access to what they believe to be rescue.[4] Public expectations may rise more quickly than services improve, "so that the public thinks that they're getting less when in fact they're getting more" (Martin Roland in Galvin 2006, w417).

The argument that "value for money" is too low carries much more weight in the attitudes of policy-makers and other elites: it involves their beliefs. If anything, making this argument seems likely to reduce ability to raise revenues. In the United States, opponents of redistribution to pay for health care frequently argue that, since care is weakly related to health outcomes, expanding access for the uninsured is not so important.[5] Higher-income voters seem more likely to believe they have a moral obligation to help lower-income voters if they are not told they are getting low value for their morality.

In short, better performance is weakly related to sustainability because efficiency and sustainability are different, the sustainability issue is political rather than economic, and focusing on alleged low-value-for-money can directly reduce political sustainability. This is not to say that efficiency should not be pursued, but that sustainability is not the reason to do that.

Advocates for performance budgeting normally claim that traditional budgeting focuses on inputs rather than results. The OECD notes that performance budgeting "represents a profound change in the character of the budget process, from a traditionally closed domain of budget specialists, focused on the numbers, to a more accessible, transparent and multi-disciplinary exercise." (OECD 2019) Yet the core process of traditional agency budgeting has been agencies justifying requests for inputs *by claiming that will lead to better outputs.* Changes to entitlement programmes often are justified by policy analysis of their likely effects – as in the many savings in the U.S. Affordable Care Act that were based on reports by MedPAC and other analysts (White 2018). Allen Schick argues that the many achievements of governments "before the first formal PB systems were launched" show that governments did focus on results before. Moreover, "there are often less differences between input-based and performance-based budgets than appears on paper." For instance, "it is difficult, sometimes impossible, to determine whether the amounts budgeted by governments are optimal when it lacks market prices or data on the cost of inputs" (Schick 2013: 5, 6). In practice, governments cannot be managed without decisions about what inputs to fund; agency personnel, equipment, and activities are inputs. Budgeting that purports to de-emphasise inputs only shifts the locus of control of inputs, from central authorities to agency managers.

Similarly, claims that new measurement create a focus on performance deserve scepticism. At a minimum, *reputation* for performance is rewarded in any system in which patients have some choice of provider and pay per service. Those with better reputations get more business. The core argument for measurement then should not be that FFS does not reward performance, but that whoever chooses (patients, or physicians through their referrals) tends to misjudge performance. While this is quite possible, we should remember that criteria such as providers' credentials, their facilities, or what people you know report about their experiences are logically relevant. Thus accreditation agencies may make those factors part of how they determine approvals, while patient satisfaction surveys in essence are attempts to quantify word-of-mouth reputation.

Also similarly to budgeting, the distinction between funding "activity" and funding "performance" is hard to maintain. In practice, a great deal of P4P is actually paying for activity. The most frequently (and legitimately) cited example of P4P having arguably positive effects, the NHS Quality and Outcomes Framework, paid GPs for documenting provision of specific services.[6] OECD's own assessment of P4P (OECD 2010: 107-108) emphasised increasing activity:

> *"results from P4P schemes suggest what common sense would tell you: quality of care increases when you pay for it. Paying for preventative and public health services appears to be particularly effective and can increase coverage of cancer screening, vaccination rates, etc. Often, primary care physicians neglect preventative services such as screening for cancer, measuring blood pressure and treating it, counselling patients to stop smoking or to improve their diet. The most successful P4P programmes pay additionally for providing these services or reaching some target."*[7]

In theory, P4P would pay physicians and hospitals based on measured improvements in patients' conditions, however achieved. Most P4P schemes however, do not operate this way for many reasons, beginning with the measurement difficulties we consider next.

Measurement

Whether applied to budgeting or payment for health care, performance measurement is part of a "recurring trope of public service reform" as described by Christopher Hood and Ruth Dixon (2015: 44-45): "the argument that policies to improve public management and service delivery ought to be based on proper evidence of 'what works" and that 'proper evidence' is often taken to mean well-developed performance numbers." They highlight one difficulty that has broader implications: governments continually alter the measures they use, "changing administrative record-keeping in ways that make it impossible to make before-and-after comparisons" (45). Anyone familiar with measurement in either the NHS or American Medicare could surely cite numerous examples. For example, one of the U.S. Hospital Inpatient Quality Reporting Program process-of-care measures had eight specification changes between 2006 and 2015 (Parast et al. 2015). The very frequency of change suggests concerns that any given set of measures is inadequate. As Bevan and Hood (2006: 520) argue, the case for measurement begins with core assumptions that, "measurement problems are unimportant, that the part on which performance is measured can adequately represent performance on the whole… that distribution of performance does not matter... [and] that this method of governance is not vulnerable to gaming by agents." All these assumptions are difficult to meet.

Measures are often statistically invalid or based on unreliable data. Measures that focus on adverse events often involve fairly rare events, so that results are not stable. This is made worse if, as in private sector P4P in the United States, the data includes only a portion of a medical provider's practice (McDonald et al. 2009). If providers collect the data, it may be gamed. Indeed, the policy might even encourage manipulation in the providers' self-interest. On the other hand, data collected by outsiders may (often for good reasons) be distrusted by the providers. For example, administrative data used for billing may be mined to evaluate performance, but is often incomplete or flawed. These problems are illustrated in U.S. Medicare's Merit-based Incentive Payment System (MIPS). MedPAC (2018a: 446) recommended abandoning MIPS because, with "quality of care and payment adjustments for quality" that are "based on measures that clinicians themselves choose to report," the system "will be inequitable because clinicians will be evaluated and compared on dissimilar measures" – while, "in addition, many clinicians will not be evaluated at all because, as individuals, they will not have a sufficient number of cases for statistically reliable scores." Letting physicians select scores for their own evaluation may seem like asking for trouble. Yet it can also seem a necessary response to the representativeness problem.

If measures are too narrow, there is a danger of "hitting the target and missing the point" (Bevan and Hood: 521). They provide a particularly scary example: that, "the waiting time for new ophthalmology outpatient appointments at a major acute hospital had been achieved by cancellation and delay of follow-up appointments… as a consequence, 25 patients lost their vision over two years." The most scandalous failures in the NHS would not have affected hospitals' star ratings, because the types of mortality involved were not measured (532-33).

In order to measure performance by an individual, organisation or programme, metrics should address not the final condition of the patient or population but the change that can be associated with the measured activity. That, however, requires measuring the original state of the system, not just the outcome. In health care this is the "risk adjustment" problem: one hospital's cardiac patients may have worse outcomes than another's because the first hospital has a deserved reputation for quality and so attracts sicker patients. Similar problems exist for many government programmes, such as crime control and education.

Adjusting for underlying conditions, however, expands the measurement challenge. In health care, the risk is defined by diagnosis and testing, that are usually performed by the same providers who are to be held responsible for the degree of cure. Ensuring accurate diagnosis is a measurement frontier that has received little attention (Berenson and Singh, 2018). The potential for gaming is obvious: for example, if a provider is paid based on a patient's risk profile, there is a strong incentive to diagnose as much illness as possible.

OECD's "User's Guide" to PB identifies a further difficulty: identifying whether poor performance means a programme is operated or designed poorly so should be cut, or faces a tough task that requires more resources. Therefore, (2008: 5), "in most cases the finance ministry does not use performance results to financially reward or punish agencies… poor performance may not be the agency's fault; poor performance caused by underfunding would hardly be improved by a further cut in funds."[8]

Bevan and Hood identify the risk of "gaming by agents," and there are many dramatic examples of documentation misleading because it is dishonest. In defence policy, these range from cover-ups of friendly fire incidents to false results of tests on equipment.[9] But the broader problem is that documenting is not the same as performing, involves extra work, and is independently shaped by payment incentives. In the NHS QOF, measured performance (and so payments for it) far exceeded expectations, partially because estimates

of baseline levels were too low but also because administrative staff was increased so as to improve reporting (Roland and Campbell 2014). When payment was reduced recorded performance also declined, but whether practice changed as much is less clear (Minchin et al. 2018).

Measurement becomes more difficult as the object of measurement becomes more complex, and so is especially challenging for health care or across a government.

The variety of tasks and of conditions that could affect performance for a single hospital, never mind a wider health care system, far exceeds what is faced in even technologically sophisticated production organisations like an aircraft carrier or nuclear power plant. Doctors and units in hospitals do many, many different things. Because practices and their patients differ so much, it is very hard to define measurements that are appropriate for a wide range of clinicians. It is very hard to compare performance of a police force and a primary school, but it is hardly easier to apply the same measures to a paediatrician and a cardiac surgeon. The result is that measures which are useful for managing performance within a unit (both in budgeting and health care) can rarely be used to compare performance across units. In the words of an OECD review (Shaw 2015: 5), "the line ministries themselves" are best able to identify measures that fit their programmes. "However, from the budgeting perspective, information generated in this highly decentralised way does not provide central, comparable data on performance, thus prohibiting strategic comparisons necessary in budget allocation processes."

This paper does not suggest that measures for a particular activity, such as ambulance response times, are not useful for assessing that activity – though even such statistics can be gamed (Bevan and Hamblin 2009). However, the immense variety of activities in even a moderate-sized government, or health care system, elicits a blizzard of measures that can overwhelm both those who seek to manage a system (e.g. Central Budget Authorities or managers of sickness funds) and the operators who do the work. In large and complex systems, accuracy and representativeness are inconsistent with manageability.

Although measurement is challenging enough, there are other reasons why improving performance through measurement is difficult.

PB and P4P in practice

As a budgeting tool, performance measurement could help save money in a more "sustainable" way (that is, without political blowback) by either guiding cuts in times of fiscal stress, discouraging incremental increases, shaping the limited incremental increases so they are most likely to increase value-for-money, or helping agencies manage more efficiently and therefore request less to do their jobs.

Yet cuts in response to crisis normally are "intended to be implementable in short order" and therefore, "not focused on efficiencies" (Shaw 2015: 24). Schick (2013: 9) summarised experience across countries, saying that the downturn from the Great Recession had not "swayed governments to emphasize performance issues in budget negotiations…negotiators have other things on their minds when they are pressured by time and fiscal constraints to hammer out a budget agreement." Similarly, a report on U.S. states which referred to performance budgeting as a "noble idea" noted that when "in crisis mode" states "resorted to mainly across-the-board cuts, furloughs, layoffs, and in some cases tax increases to attempt to achieve balance… both effective and ineffective programs are treated equally." (IBM 2011).

This is not to say that evaluation never affects decisions, but the process of changing minds about programmes does not fit well with the budget cycle. Major changes – "shift points" or "punctuations" in a previous budgetary "equilibrium" – are generally driven from outside the budget process (White 1994). In Schick's (2013: 11) words, "the budget is not the main driver of change but the means of accounting for changes made by other means."

Studies of budgeting for health care in particular show that experts' conclusions have at best moderate effects on allocations.[10] Experts, as in Canada, may hope that population health spending will reduce reliance on the acute care system, but that, "is more commonly portrayed as an ideal objective than as a realistic one." (Abelson et al. 2017: 9). Indeed, after the financial crisis, "public health was an easy target for budget cuts and curative services were more successful in holding on to (and increasing) financial resources" (Rechel 2019: 26). Leading researchers report that analytic priority-setting frameworks rarely lead to "successful disinvestment," and "almost none" make "claims for improved efficiency and equity" (Angell et al. 2016).

Although requirements to present performance information appear to have spread to more countries over time (Keller 2018), the scope and complexity challenges of PB have been particularly evident in countries that have tried harder to do it. "Countries with the most experience with performance budgeting" therefore "have steadily reduced the number of programmes and indicators over time" (OECD 2019: 39). "Performance budgeting momentum has in many cases, slowed under the weight of its own expectations," another OECD overview concluded, so that, "the number of performance indicators is being consolidated to provide more meaningful data metrics and reduce onerous reporting burdens" (Shaw 2015: 8). "Information overload," Allen Schick notes, “is a chronic problem in the time-compressed, deadline-driven world of budgeting,” and "exacerbated when PB adds new data, classifications and analyses to the old." PB "almost always increases the costs of generating and processing budget information," while within the agencies, "PB becomes discredited when spending units which produce much of the information perceive that their efforts have been in vain" (Schick 2013: 11, 12, 11).

Similarly, PB in American states has had weak effects at best for reasons mentioned above, such as: "difficulty in gaining clear agreement among stakeholders on the primary purpose of programs and activities," the limits of what is measurable, the weak links between agency performance and program outcomes, "budget decisions being made on the basis of priorities of elected leaders," and "incentives for agencies to choose easily achievable targets, or cheat in the use of measures" (Kamensky 2014). In all countries, it is most likely to shape budget allocations at the margins under favourable economic conditions, because "expansive budgets have sufficient space to accommodate both allocations based on evidence and allocations based on politically-expedient responses to voter preferences and group demands" (Schick 2013: 13).

As noted above, the numerous reviews of P4P have given little reason for optimism that it will fix health care. There are many potential avenues by which performance measurement could encourage providers to improve. Their managers might be subject to direct threats, as in the "targets and terror" approach in the NHS (Bevan and Hood 2006). Customers might switch providers in response to published (e.g. "star") ratings of performance – though coming up with accurate ratings that are aggregated enough to be usable by consumers is very difficult and they might not even respond to safety scandals (Bevan and Hamblin 2009; Hibbard 2008; Lavery et al. 2012). Medical professionals might learn from

measurement that they are not as good as they thought, and so realise they could do better – out of professional values or concern for reputation.

These benefits, however, require that the measures be accurate and believed and that is not easy, especially because there is often dispute about defining good practice.[11] The United States, again, may offer a worst-case scenario because measures and rankings come from multiple sources, which tend to disagree. In the U.S., four respected national hospital rating systems generated quite different results: "eighty-three hospitals were rated by all four rating systems, with no hospital rated as a high performer by all four. Only three hospitals were rated as high performers by three of the four systems" (Austin et al. 2015: 427.). Different reputable data sources for hospital surgery care yield very different lists of outliers (Lawson et al. 2015). The quality classifications in one of the most highly-publicised examples, joint replacements in California, involve quite different lists from different insurers.[12] These differences suggest that measurement is hard, and so one should not assume the single source in some other system is accurate.

In a few cases measurement may have encouraged major improvements. Perhaps the case that was most influential in promoting further measurement efforts involved cardiac artery bypass graft (CABG) surgery in New York state: hospitals appear to have responded to low ratings by improving their own processes (Chassin 2002). Yet even this success story must be tempered. Later reports suggest that physicians who are ranked on their performance have begun to avoid more difficult patients, leading even to greater mortality for patients who need percutaneous revascularisation in states with reporting processes than in nearby non-reporting states (Waldo et al. 2015; also see Rosenbaum 2015).

In fact, P4P may involve more serious risks than occur with performance budgeting. Performance budgeting routines can seem wasteful and pointless to the people who operate programmes, but generally do not interfere with most of the agency operators' work. In the case of health care, however, collecting information to measure performance can be much more intrusive, because the information is normally recorded by those caregivers.

Measurement burdens interact with the failings of electronic medical records (EMRs). In the U.S., one report by leading researchers (McGlynn et al. 2014: 2150) concluded that,

> *"Physicians, hospitals, and health plans view measurement as burdensome, expensive, and indifferent to the complexity of care delivery. Patients and their care-givers believe that performance reporting misses what matters most to them and fails to deliver the information they need to make good decisions. In an attempt to overcome these troubles, measure developers are creating ever more measures, and payers are requiring their use in more settings and tying larger financial rewards or penalties to performance. We believe that doing more of the same is misguided…"*

"Measurement fatigue" (Cassel et al. 2145) should be especially severe in the U.S., where providers are subjected to measures by many different payers. The result of excessive measurement is now being described as an epidemic of "physician burnout" (Noseworthy et al. 2017; Jha et al. 2018), as physicians are even reported, in some studies, to spend more time on documentation than patient care.[13] Documentation burdens may be less severe in other countries, but still, as with the NHS QOF, can require substantial resources.[14]

P4P can also create negative, rather than positive, incentives for quality. Donald Berwick (1995) once described "pay for performance" as "toxic to true organizational performance." He explained that the core idea, merit pay, has long been known to lead to making "the supervisor the customer," suppression of possibly harmful information, can inhibit

co-operation, costs a great deal to administer, because full accuracy is impossible will seem unfair, and can reduce intrinsic motivation for quality by putting price tags on everything.[15] Woolhandler, Ariely and Himmelstein (2012) criticise the underlying theory of incentives. "The quality improvement literature," they note, "has pinpointed many causes of quality breaches in medical care… But 'not trying' is rarely cited". Yet P4P implicitly blames lack of motivation for poor quality care." Monetary rewards not only may miss the point but may also backfire. "Tangible rewards – particularly monetary ones – undermine motivation for tasks that are intrinsically interesting or rewarding." P4P creates the equivalent of detailed contracts, making expectations for care far more specific than in the past. Transaction cost economics however, shows that making more complete contracts raises administrative and legal costs, while lists of rules "implicitly permit everything else." Therefore, while "injecting different monetary incentives into health care can certainly change it," that is "not necessarily in the ways that policy makers would plan, much less hope for."

To summarise, experience with both performance budgeting and P4P give little reason to expect performance measurement to make health care systems more than marginally more efficient, never mind more sustainable. Yet we should return to the earlier point that measurement is used in many situations, and can have some positive effect. In what health policy situations, and how?

Conditions for modest success

As a general rule, it is much easier (though not easy given gaming) to assess activity than outcomes. P4P therefore will be more successful if the goal is to increase activity and if activity can be increased at acceptable cost.

Measures to encourage specific activities must involve manageable and accurate measurement, and not ask providers of care to attend to more than a few items at a time. So they must be limited in number. They also need to ask people to do things they know how to do. If people are punished for failure they cannot avoid, they will subvert and deceive – and probably should. Worse, this will change their underlying attitudes and worsen performance on other tasks (Bevan and Hood 2006).

We can see these principles in some examples of positive change, and in some more mixed examples. The U.S. Hospital Inpatient Quality Reporting Program targeted process-of-care measures, mostly for treatment of cardiac patients. Between 2003 and 2015, most improved so dramatically that they "topped out." They were relatively clear, simple, cheap, and could be put on a check-list (Kahn et al. 2015).[16]

Perhaps the most broadly-adopted reform which could be interpreted as P4P is the international move to "activity-based payment" – often payment by DRGs – for hospitals, rather than fixed budgets. A full discussion of DRGs is beyond the scope of this paper (one is Busse et al. 2010); we should as a start remember that DRGs can be used as a management tool in budget-making instead of as a direct payment mechanism. Activity measures are useful for traditional budgeting by giving a way to compare inputs to outputs. Budget control in a DRG payment system requires some limit on payment for activities, such as overall fee reductions if volume exceeds targets (a volume-related fee schedule) or a system in which services beyond some total receive lower fees. It is clear however, that policy-makers have sought, with some success, to increase hospital productivity by paying for this version of "performance." Broader effects on population health are best described as uncertain.

An especially complex example of hospital payment for activity, a form of case-mix funding, was implemented in Victoria, Australia beginning in 1993, and associated with some savings (Duckett 1995). A baseline activity level was calculated and hospitals paid more, but only about half of the average payment, for increasing services. This was meant to be attractive because the marginal payment exceeded marginal cost. The system was designed to separate out budgets for non-care functions such as capital, research, and education. Savings were not due solely to this approach: Duckett reports that labour law changes also made it easier for hospitals to reduce staff, while the government funded buy-outs. Later observations suggested also that the buffering of non-care functions had not worked as intended: in essence, hospitals found it easier to make budget savings by raiding research and other funds, rather than increasing efficiency.[17] Nevertheless paying for incremental activity probably increased activity, and in a context in which hospitals had to increase activity to compete for scarce funds, should have improved efficiency. No effort was made to relate the funding to health outcomes.

Another major "value for money" initiative implemented in many countries has been to create bundled payments for most of the care for a given condition, with payments adjusted according to quality measures (OECD 2010, Chapter 5; Srivastava et al. 2016, Chapter 3). The goal has been to reduce incentives for excess treatments while encouraging relatively low-cost interventions that are believed to increase value. This approach has been implemented most widely for patients with Type 2 diabetes (Type 1 patients are more difficult to manage so normally excluded). Diabetes is one disease for which there are fairly widely-accepted process of care measures, intermediate outcome measures, and definitions of who qualifies as a patient. Some of the measures therefore may be included in rating the performance of primary care physicians (see, e.g., Mousques and Daniel 2015).

Dutch policymakers encouraged formation of Chronic Care Groups, consortiums of providers that would be paid bundles for treating diabetes, cardiac risk, and/or COPD. The diabetes initiative attracted far more participation because physicians agreed there were measures that were good practice but not everyone was doing. Implementation for cardiac care was limited because of diagnosis disagreement: the doctors wanted to describe the at-risk group far more broadly than the insurers could accept. Doctors were less willing to participate for COPD because it involved many fewer patients, so greater administrative costs per patient, and there was less agreement about treatment methods. Care groups for Type 2 diabetes appear to have adhered more fully to recommended processes of care. Outcomes are less clear because, while death rates were lower in the "treatment" group, there are strong indications that sicker patients were disproportionately excluded. There appears to be no sense that there were meaningful savings.[18]

Treatment of dialysis patients in the United States should be another opportunity to improve performance through measurement. Dialysis is a routine and frequent treatment with clear standards of quality. Compared to other countries, U.S. outcomes for dialysis patients have been poor, and this can be explained in part by practice patterns. For example, the U.S. has tended to use dialysis catheters more, and fistulas less, than other countries; treatment time on average is shorter in the U.S. than in Japan and Europe, and U.S. patients miss more treatments. U.S. patients are less likely to receive food or nutritional supplements during their treatment, and staff in U.S. facilities tend to have less training (Foley and Hakim 2009). Under these circumstances, improving quality with measurement (if accurate) should be not only "low-hanging fruit" but a moral imperative.

Medicare therefore in 2012 implemented the End Stage Renal Disease Quality Incentive Plan (ESRD QIP) which reduced payments by up to 2% for providers "that do not achieve

or make progress toward specified quality measures" (MedPAC 2018b: 3). The ESRD QIP has been associated with improvements on measures such as use of fistulas rather than catheters, and proper targeting of anaemia, especially a reduction in overtreatment (Weiner and Watnick 2017; Saunders et al. 2017). Because it uses penalties rather than rewards, and improved dialysis is unlikely to increase costs for other services, it should have increased efficiency.

Yet even this strong case for pay-for-performance reveals difficulties. There is disagreement between CMS and its expert advisor, the National Quality Forum, about which measures to use. The set of measures has been "fluid, with frequent addition of new" ones (Weiner and Watnick 2017). Some of the improvements may have been based on promotion of strong research evidence (e.g. regarding fistulas) rather than incentives. Some of the data is questionable, especially the patient satisfaction scores (Brady et al. 1365). As in many other cases (e.g. Kahn et al. 2015), the sanctions are more likely to apply to providers with more disadvantaged patients, whose outcomes can be shaped by their social disadvantages or personal behaviour. Reducing providers' resources in response is not likely to improve performance (Saunders et al. 2017). The ESRD QIP seems like a necessary response to blatant quality failures, but we should hope that such examples are rare.

Conclusion

Both budget-makers and people who attempt to manage health care systems should realise that evaluating and assessing of performance is part of their job. Yet hopes that performance measurement initiatives will make health care systems more sustainable are not likely to be met.

Both budgeting and health care payment may now involve too much *measurement* and too little *observation*. The ethos of measurement is so strong that U.S. health system CEOs worried about burnout from excessive record-gathering recommended that physicians answer surveys about their degree of burnout (Noseworthy et al. 2017). Not everything can be measured; measurement limits attention to what can be identified in advance for counting, but the costs of measurement may arise in activities not identified beforehand. Observation means open-ended attention to what is happening on the shop floor, on the ward, or in the prison yard. Organisations need the equivalent of the prison warden who stands at the entrance to the lunchroom greeting the inmates and watching how they interact, and the informal communication that shares information in unstructured directions. Yet observation and communication can be threatened by documentation burdens (Michel 2017).

These lessons are clear in the literatures on both performance budgeting and paying-for-performance. The similarities should alert both policy communities that the general approach itself is not as promising as many would hope.

Much of what has been argued in this paper is implied in many statements about "best practices" for PB or P4P. The danger is that ideal circumstances will be confused with best practices. Analysts should remember that the reason "best practices" tend to be rare is that they can be very difficult to create.

Notes

1 For information on that activity see www.oecd.org/gov/budgeting/seniorbudgetofficialsnetworkonperformanceandresults.htm

2 As is shown by the forwards in the book, Chase's work is in many ways the core statement of what the founders of Harvard's John F. Kennedy School of Government wanted its students to learn.

3 For more discussion see White (2014), 75-81.

4 For one good example, focusing on consumers' interest in quality information, see Hibbard 2008.

5 See, for example, Sullivan 1992, and the discussion in White 2010. This rhetorical promotion of public health is not accompanied by proposals to spend more on it.

6 There are many descriptions of the QOF; one good source is Doran et al. 2006, including the supplemental appendix available online at www.nejm.org/doi/suppl/10.1056/NEJMsa055505/suppl_file/nejm_doran_375sa1.pdf

7 Note that success here is defined as improving quality, not efficiency.

8 This is a fundamental reason why budget analysis must focus on inputs as well as outputs.

9 The U.S. experience may be most thoroughly documented, as in Wheeler ed. 2011; the most horrifying story involves the M-16 used in the Vietnam War, but there are many others.

10 I do not mean to suggest that the "experts" are necessarily right but that is another topic.

11 Debates about guidelines are too extensive to cover here – but, as one example, readers might look at the conflicts in many countries over when women should receive mammograms, e.g. Biller-Adorno and Juni 2014.

12 As Robinson and MacPherson (2012) report, differences between Anthem's and Blue Shield's lists of quality hospitals resulted in part from insurers' and hospitals' bargaining strategies. I found even less overlap in 2014, and somewhat more than in 2014 in 2016. In an interview, one Anthem official explained that they did not "have real detailed data about the procedures" so made rough assumptions such as that high volume indicated higher quality, looked at infection rates "and some internal performance goals," generated a list and then asked physicians if it looked OK. This method likely did no harm, and certainly the higher-priced hospitals had little or no evidence to support their prices – but it does not fit the idea that patients were steered to "centers of excellence" based on measurement.

13 We should remember that performance measurement is not the only goal for EMRs, which are also promoted as improving co-ordination – though there is reason for concern about that also. Reports of the time involved may be a bit misleading because they do not adjust for time that would have been spent on paper records, but findings that half or more of time is spent feeding the record are common. See Arndt et al. 2017, Sinsky et al. 2016, Young et al. 2018.

14 In my own interviews I have heard numerous complaints about documentation burdens in other countries.

15 See also Berwick and Bisognano 2019 for more recent worries about excess measurement.

16 See Kahn et al. 2015. The examples were giving a cardiac patient aspirin on arrival at the hospital; prescribing aspirin at discharge; giving an ACE inhibitor soon after arrival; prescribing a beta blocker at discharge; assessment of heart function and, for pneumonia

patients, assessment of oxygen levels. Some may wonder why incentives were necessary, but nevertheless these were positive effects.

[17] Personal communication with Dr. Duckett, 8 July 2019.

[18] My account here is based on a series of interviews in the Netherlands in 2018. The same three conditions were made subject to chronic disease management programs in Denmark. My respondents in Denmark saw less variation in implementation across diseases, but more variation across locations and more doubt about how seriously the initiatives were implemented. They noted substantial up-front costs, so while there may have been modest quality improvements, it is not clear value for money increased. None asserted it had.

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