

# Price setting and price regulation in health care

## Lessons for advancing Universal Health Coverage

**Price setting and price regulation in health care:  
lessons for advancing Universal Health Coverage**  
**Sarah L Barber, Luca Lorenzoni, Paul Ong**

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# Case studies

Australia

England

France

Germany

Japan

Malaysia

Republic of Korea

Thailand

United States of America

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## Case study

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# Australia

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## Abbreviations

Abbreviation	Term
ABF	Activity Based Funding
ACFA	Aged Care Financing Authority
ACFI	Aged Care Financing Instrument
AIHW	Australian Institute of Health and Welfare
AMA	Australian Medical Association
CPI	Consumer Price Index
DRG	Diagnosis Related Groups
GP	General Practitioners
HCH	Health Care Homes
HTA	Health Technology Assessment
IHPA	Independent Hospital Pricing Authority
MBS	Medicare Benefits Schedule
MSAC	Medical Services Advisory Committee
NWAU	National Weighted Activity Unit
PBS	Pharmaceutical Benefits Scheme
WASE	Weighted Ambulatory Service Event

## Abstract

The Australian health system consists of a mix of public and private service providers. Health is a shared responsibility between the various levels of government across the eight state and territory governments and the federal government. The actual responsibilities that fall on each level of government are largely historical, and, in some cases, are enshrined in the Constitution of the federal government and serve to limit government functions. The actual responsibilities that fall on each level of government were determined by the Australian Federation in 1901, with health care left to the states (and private interests) apart from a national quarantine service. The federal government gradually acquired greater responsibilities over time, particularly with the power to raise income taxes (during World War II) and to provide pharmaceutical, sickness and hospital benefits and medical and dental services (Constitution Alteration, 1946). This allowed the establishment of federally funded pharmaceutical benefits and medical benefits and federal grants to states to support public hospitals due, in large part, to this history and ongoing constitutional limitations. Thus, a myriad of ways has developed in which health care is funded. Each part of the health system therefore has its own set of funding rules, including the determination of pricing.

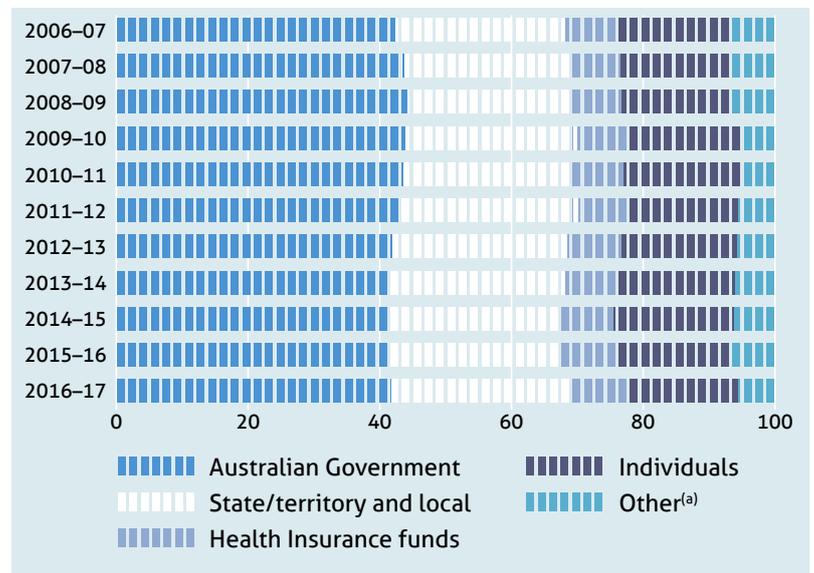
In this case study, we examine a range of Australian experiences in the determination of health care prices, from a system that is heavily influenced by market factors to one that is highly regulated and based on a cost-input approach. We discuss arrangements in four different sectors comprising hospitals, primary care, outpatient care and aged care, recognising that arrangements vary across (and even within) these sectors. In each instance, we describe the price setting arrangements as they currently stand, with a focus on recent developments.

## Background

Australia's universal health insurance arrangements have been designed and implemented within the context of Australia's constitution. Funding is provided by all levels of government, health insurers, and non-government organisations and by individuals. Medicare (or Medibank as it was originally known) was introduced in 1974, dismantled between 1976 and 1983, and re-introduced in 1984.

About 70%<sup>1</sup> of total healthcare expenditure is funded by government. Of this, the federal government (also referred to as Commonwealth) funds two thirds, and the state, territory and local governments contribute the other one third. These proportions have been fairly steady over the last decade (Figure 1).

**Figure 1**  
Source of funding as share of total health expenditures



<sup>(a)</sup> Includes funding by injury compensation insurers and other private funding. All non-government sector capital expenditure is also included here, as the funding sources of non-government capital expenditure are not known. If funding sources were known, this capital expenditure would be spread across all funding columns.

Source: AIHW, 2018.

The federal government's contributions are mainly through national health subsidies comprising:

- Medicare Benefit Scheme (also known as Medicare): subsidizes the cost of a wide range of health services provided out of hospital and for private inpatients.
- Pharmaceutical Benefits Scheme (PBS): subsidizes payments for a large proportion of prescription medicines bought from community pharmacies.

<sup>1</sup> In 2016-2017, this number was 68.7% (AIHW, 2018). The other 31.3% of total health care expenditure in those years was funded by individuals, private health insurers, and non-government organizations.

- Through the 2011 National Health Reform Agreements between the federal government and governments for each State and Territory: the federal government contributes to the cost of public hospitals based on activity and efficient prices.

In addition to the above schemes, the Australian government also provides funding for health care through social welfare arrangements, regional and remote health care programs, funding programs for chronic and complex conditions, indigenous health, and health care arrangements for Australian Defence, veterans and support of clinical education and training. Figures 2 and 3 show the percentages of total health expenditure by area across different funding sources in the year 2016-17.

**Figure 2**  
Total health expenditure percentages by funding source across areas of expenditure (%), 2016-2017

Areas of expenditure	Federal	State/local	Total government	Private health funds	Individual	Other	Total non-government expenditures	Total health expenditures
Hospitals	0.343	0.67	0.461	0.57	0.109	0.534	0.298	0.411
Public hospital services	0.292	0.646	0.42	0.076	0.049	0.328	0.088	0.319
Private hospitals	0.051	0.023	0.041	0.494	0.06	0.206	0.21	0.093
Primary health care	0.369	0.223	0.316	0.176	0.678	0.364	0.488	0.369
Unreferred services	0.137		0.087		0.026	0.22	0.039	0.073
Dental services	0.02	0.02	0.02	0.12	0.196	0.008	0.152	0.06
Other practitioners	0.029	0	0.018	0.053	0.078	0.063	0.069	0.034
Community health and other	0.014	0.172	0.071		0.008	0.037	0.009	0.052
Public health	0.017	0.031	0.022		0.001	0.026	0.003	0.016
Benefit-paid pharmaceuticals	0.143		0.092		0.047		0.027	0.072
All medications	0.009		0.006	0.003	0.322	0.011	0.189	0.062
Referred services	0.185		0.118	0.104	0.102		0.091	0.11
Other services	0.046	0.087	0.061	0.15	0.111	0.039	0.115	0.077
Patient transport services	0.004	0.066	0.027	0.014	0.014	0.017	0.015	0.023
Aids and appliances	0.011		0.007	0.044	0.096	0.022	0.072	0.027
Administration	0.03	0.021	0.027	0.093	0.001	0	0.029	0.027
Research	0.058	0.02	0.044	..	0	0.063	0.007	0.033
Total recurrent expenditure	1	1	1	1	1	1	1	1

Source: AIHW, 2018. Note: Each column shows the share of each health expenditure item as a total of each funding source expenditure.

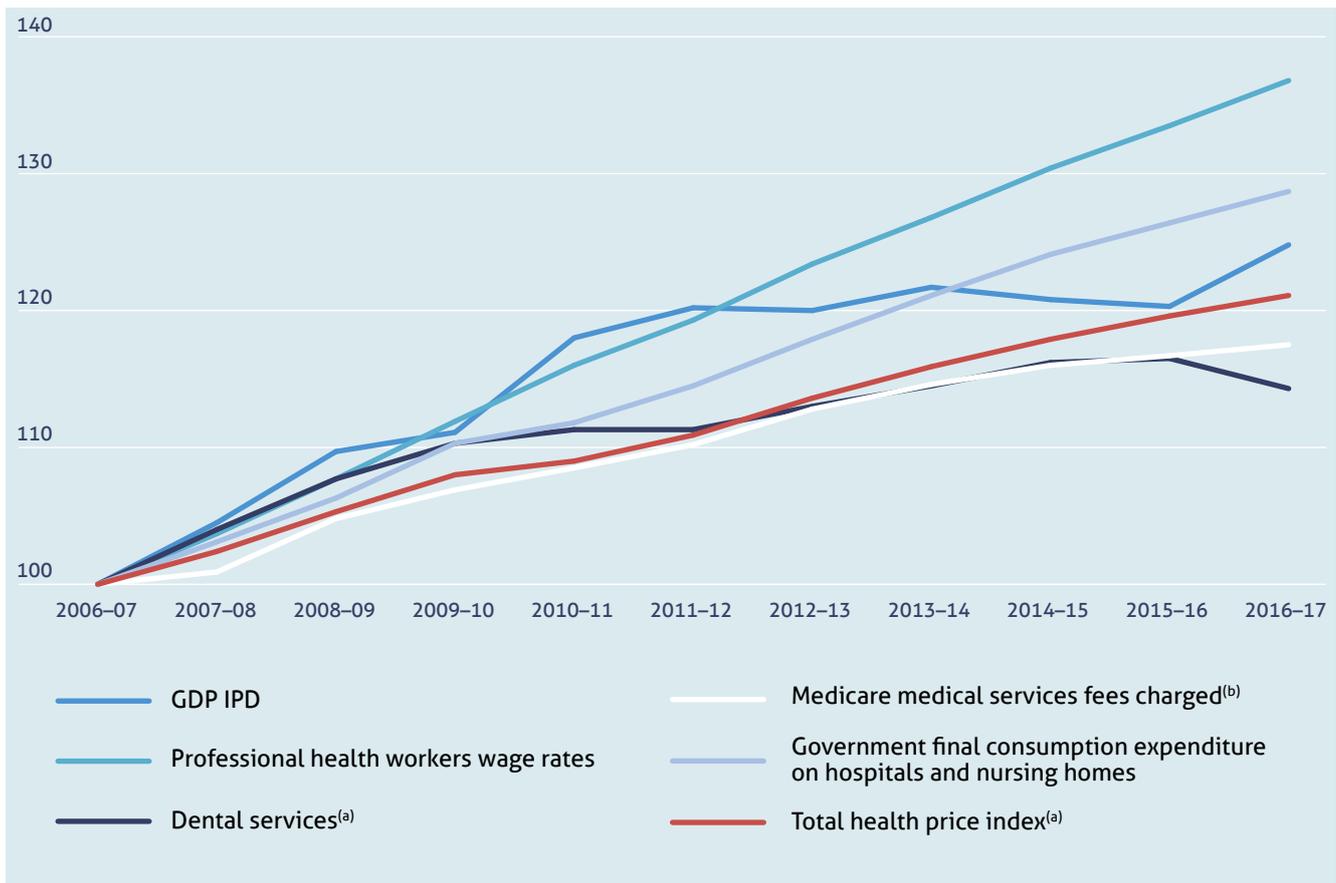
**Figure 3**  
**Total health expenditure percentages by areas of expenditure across funding sources (%), 2016-2017**

Areas of expenditure	Federal	State/local	Total government	Private health funds	Individual	Other	Total non-government expenditures	Total health expenditures
Hospitals	0.369	0.409	0.778	0.131	0.047	0.044	0.222	1
Public hospital services	0.406	0.51	0.916	0.023	0.027	0.035	0.084	1
Private hospitals	0.244	0.063	0.307	0.503	0.115	0.075	0.693	1
Primary health care	0.444	0.152	0.595	0.045	0.326	0.033	0.405	1
Unreferred services	0.835		0.835		0.063	0.102	0.165	1
Dental services	0.149	0.082	0.232	0.187	0.577	0.004	0.768	1
Other practitioners	0.378	0.001	0.378	0.148	0.41	0.063	0.622	1
Community health and other	0.116	0.832	0.949	0	0.027	0.024	0.051	1
Public health	0.468	0.47	0.938		0.007	0.054	0.062	1
Benefit-paid pharmaceuticals	0.884		0.884		0.116		0.116	1
All medications	0.064		0.064	0.004	0.926	0.006	0.936	1
Referred services	0.746		0.746	0.089	0.165		0.254	1
Other services	0.26	0.284	0.544	0.183	0.255	0.017	0.456	1
Patient transport services	0.079	0.726	0.805	0.058	0.111	0.025	0.195	1
Aids and appliances	0.187		0.187	0.153	0.633	0.027	0.813	1
Administration	0.484	0.193	0.677	0.318	0.005	0	0.323	1
Research	0.781	0.154	0.935		0.001	0.065	0.065	1
Total recurrent expenditure	0.443	0.251	0.694	0.094	0.177	0.034	0.306	1

Source: AIHW, 2018. Note: Each column shows the share of health expenditure item as a total of each funding source expenditure.

Figure 4 shows the increase in the health price index as a unit from 2006 to 2017. The total health price index was developed by the Australian Institute of Health and Welfare (AIHW) and is derived as annual ratios of the estimated total national health expenditure at current prices to the estimated total national health expenditure at constant prices. It shows that among expenditures, the wage rates for health professionals had the highest increase during this period.

**Figure 4**  
Health price index



<sup>(a)</sup> implicit price deflator (IPD): An index obtained using the ratio of current price expenditure to constant price expenditure, constructed by the AIHW.

<sup>(b)</sup> Chain price index, constructed by the AIHW.

Source: Authors using data from AIHW, 2018. Note: The implicit price deflator (IPD) is an index obtained using the ratio of the current price expenditure to the constant price expenditure. (a) IPD constructed by the AIHW. (b) Chain price index constructed by the AIHW.

Governments have been concerned about growing health care expenditure and the impacts on their budgets. The main pressures are considered to be expensive technologies, population expectations, and an ageing population with a growing burden of chronic disease. Although health sector inflation has outstripped general price rises, there has been no explicit objective around price control. However, policy aimed at hospital pricing and medical fees (as explained below) is evidence of some objectives to restrain price increases.

# 1 Hospital care

The funding of Australian hospitals reflects both the intricacies of Federal-State financial relationships and the interplay of public and private interests. State governments own and operate public hospitals but are reliant on financial transfers from the federal government, which has greater tax raising powers. Until 2011, specific bilateral agreements for public hospital funding (most recently termed Australian Health Care Agreements) were negotiated on a five-year basis since the 1940s. The introduction of Medicare in 1984 gave every Australian the right to treatment in a public hospital free of charge. This required a higher level of financial compensation from the Federal government, which has been around 50% of total public hospital expenditure (Deeble, 2008). However, this share was not fixed and was influenced by the timing of elections and the cycle of the Australian Health Care Agreements, reaching a low of 38% in 2007. This funding was provided to State treasuries, which then determined how to channel it to hospitals and other services. Increasing budgetary pressures for all governments, increasing hospital costs and growing demands, and public concern about their access to public hospital care provided the perfect environment for each level of government to blame the other for not providing sufficient funds and ineffective management.

The National Health Reform Agreement of 2011 introduced a basis for shared hospital funding (NHRA, 2011). The new arrangements provided increased federal government funding determined by the growth in public hospital activity and hospital costs. Activity was measured by DRG (Diagnosis Related Groups) weights. Hospital costs were set by determining a national efficient price. Federal government funding was paid directly to local hospital networks comprised of regionally based groups of hospitals. States and territories were designated the system managers with responsibility for managing volume growth, and their treasuries provided the balance of funds, a relationship that was expected to ensure a constraint on volume growth.

The NHRA initiated the establishment of a national Activity Based Funding (ABF) for the public hospital sector. Australia has had a long collected national case-mix data on activity and costs. These data included Australia's own version of DRG (Australian Refined-DRGs). The state of Victoria was the first jurisdiction in the world to introduce case-mix funding (Duckett, 1995). Over time, most but not all states and territories had moved to this form of funding in whole or in part. Although the introduction of a national ABF represented a significant change, there was already considerable infrastructure in place around case-mix classification, activity measurement, and costing.

## Public hospital pricing

The 2011 Agreement established a new body, the Independent Hospital Pricing Authority (IHPA), to determine the national efficient price for public hospital services (IHPA, 2018a). IHPA has a responsibility for the ongoing development of the component parts required by ABF: a classification system (AR-DRGs; and for sub-acute and non-acute services, the Australian National Subacute and Non-Acute Patient classification), data collection on activity (the National Hospital Data Collection) and calculating costs (with a standard framework for costing activities; the Australian Hospital Patient Costing Standards). Expenditure is split across five types of services: admitted acute, emergency, non-admitted, sub-acute and non-acute, and 'other'.<sup>2</sup> For the financial year 2017-2018, IHPA total expenses were \$A 17.9 million, and IHPA employed 42 staff at year's end (IHPA, 2018e).

The National Efficient Price is based on the average cost of an admission (IHPA 2017; IHPA 2018d). IHPA faced the challenge of determining what would represent the efficient price in the absence of any discussion of how this should be defined in the NHRA. Initial analyses showed wide variation in the cost per case across hospitals. ABF was intended to drive efficiency through pricing, but at the same time provide stability and certainty in the federal funding contributions. IHPA determined to adopt average pricing initially, as this would not remove funding from the hospital system while still providing a robust incentive to reduce costs. Case mix is adjusted by the National Weighted Activity Unit (NWAU), with more complex cases having a NWAU of greater than one. NWAUs are a common metric across admitted, sub-acute, emergency and outpatient services. Prices are also adjusted "to reflect legitimate and unavoidable variations in the cost of delivering health services" (NHRA, 2011), including indigeneity, the remoteness of patients' residential area, and the remoteness of the treating hospital. Prices are updated annually.

There are some other adjustments to ensure the Commonwealth does not pay twice for the same services. Where the federal government makes direct payments under special programs (i.e., highly specialized drugs, supply of blood, etc.), these payments are deducted from the calculation of the National Efficient Price. Public hospitals can also treat privately insured patients who can use their private insurance or pay for their own stay. In this case, private insurers and the federal government (through the reimbursement of fees for private medical practitioners) make payments to hospitals, and the National Efficient Price is adjusted to allow for this (IHPA, 2017). Adjustments are made for outliers, with long-stays receiving a per diem rate. This latter adjustment is intended to reduce the revenue (and hence the incentive) for long stay patients, while recognising that some long stay outliers are inevitable.

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<sup>2</sup> SNAP is applied to admissions for rehabilitation care, palliative care, geriatric evaluation and management, or maintenance care.

Australian geography is such that there are a number (approximately 400) of small hospitals serving small and often rural or remote population groups where ABF is not viable. IHPA determines a National Efficient Cost based on size, location, and type of services. A National Efficient Cost is also determined for services which are not yet able to be described in terms of activity. For these services, block funding amounts are directed to states and territories to allocate to the hospitals.

Consultation and stakeholder feedback is an integral part of the price setting process. IHPA works with a Jurisdictional Advisory Committee and a Clinical Advisory Committee in developing its systems and analysing the data. Its pricing framework establishes various principles, including transparency, and the framework itself is reviewed annually in consultation with the federal government, states and territories, along with a period of public consultation. Its work is published on the IHPA website. This includes full details of pricing frameworks and the list of prices.

One important provision of the National Health Reform Agreement is that, where changes are made to the classification systems or costing methods, these should not result in unwarranted payments (either due to apparently more or less activity). IHPA has developed a back-casting policy for the purpose of calculating federal government funding, remembering that this contribution is based on a share of growth in both prices and activity (IHPA, 2018b). The National Hospital Cost Data Collection is independently reviewed to assess quality (IHPA, 2018c). Because states and territories and the federal government scrutinize IHPA's determinations, there is considerable scope for review.

There have been several developments over time, reflecting improved data collection, changes in practice, and new technologies. From June 2017, pricing was required not just to recognize efficiency, but also to address safety and quality. IHPA worked with another independent body, the Australian Commission on Health Care Safety and Quality, to develop its approach. Hospital admissions that include a sentinel event (never events) attract no payment. Hospital-acquired complications attract a lower payment, which is risk adjusted for patient characteristics. Avoidable hospital admissions have been investigated, but as yet are not included in pricing or funding (IHPA, 2017).

Finally, IHPA has a responsibility in price determination. The actual payment of monies is the province of the National Funding Administrator, who recommends payments to the Treasurer after reconciliation of the activity data.

## Pricing for private hospitals

Private hospital charges cover accommodation and facility fees (such as operating theatres, intensive care, etc.), and other costs such as prostheses. The federal government sets minimum prices, for which private insurers must pay. Many of these prices were significantly reduced in early 2018 following a review but are still significantly higher than prices paid in the public sector or compared to international best practice. Medical fees, including imaging and pathology, are generally billed directly by the professional providers under private practice arrangements. This means that a private patient can receive a series of accounts related to one hospital stay, for which private insurance does not reimburse the full amount. This was the cause of widespread consumer dissatisfaction. Simplified billing arrangements mean that the hospital provides one account for an admission, though this does not necessarily include medical fees. It is not clear how widespread simplified billing arrangements are. There is no evidence that simplified billing arrangements have been accompanied by better co-ordination of care, and it is unlikely this would be the case, given that these arrangements were financial administrative arrangements only.

Private hospitals principally treat private patients covered by private health insurance; a small group of patients choose to pay themselves, with others covered as veterans or as claimants under workers compensation or motor vehicle accident insurance. Private health insurers negotiate directly with hospitals on accommodation and facility fees, with each fund separately reaching agreements with each insurer. The federal government sets the default benefit payable for accommodation in the absence of an agreement.

There is also National Cost Data Collection for private hospitals undertaken by IHPA. Participation is voluntary (91 from a total of 630 private hospitals in Australia in 2015-16, representing 60% of overnight admissions) for the purpose of reporting a range of hospital costs and activity data. No comparisons have been made with public hospital performance. Private hospitals are also required to submit data to the federal government Department of Health (DOH) for each admission on the DRG case type, benefits paid and charges, length of stay and demographic data. The AIHW publishes data on private hospital activity and expenditure (AIHW, 2014).

## 2 Primary care

Primary care services in Australia have historically been provided by general practitioners (GPs). GP practices are, by and large, privately owned but are publicly funded through the Medicare Benefits Schedule (MBS) and, to a lesser extent, copayments paid by patients directly.

Although health care is a shared responsibility between the various levels of government, the MBS is funded solely by the federal level of government. Ever since the 1946 constitutional referendum, the federal parliament has powers to make laws with respect to a range of social benefits, including medical services but not so as to authorize any form of civil conscription.

In the context of price setting, the 'civil conscription' prohibition has important implications on the government's ability to exert price controls. For example, former High Court Justice Michael Kirby stated that "any form of civil conscription" acts as a guarantee against any federal intrusion into what was in effect the small business option for the provision of medical services in Australia. The test for attracting the prohibition is whether regulation intrudes into the private consensual arrangements between the providers of medical services and the individual recipients of such services. The most obvious intrusion would occur if an attempt was made to nationalize the healthcare professions or to force their members into full-time or part-time work for the federal government or its agencies (Faunce, 2009).

The MBS funds primary care for all Australian citizens and permanent residents. Under this scheme, patients are entitled to a rebate for treatment from eligible providers who have been issued a Medicare provider number. In the case of primary care, providers are usually medical practitioners as well as nurse practitioners working directly under the supervision of a general practitioner.

GPs are paid on a fee-for-service basis, with patients receiving a rebate that is equivalent to 100% of the MBS fee.<sup>3</sup> The MBS fee is determined by the Federal government. When the MBS list was first introduced, the fees were based on the Australian Medical Association's (AMA) indicative list of "most common fees" charged. At that time, the AMA's fees reflected a market-based price based on a practice costs and patient's willingness to pay.

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<sup>3</sup> Since 2004, Australians have also been eligible to receive benefits under the Extended Medicare Safety Net (EMSN). This program exists for those families who have incurred very high out-of-pocket costs during a year for out-of-hospital services. Once a family qualifies, they are eligible to receive an amount that is higher than 100% the MBS fee. Approximately 5% of the Australian population qualifies for the EMSN each year. Whilst primary care consultations are covered by the EMSN, the majority of benefits (90%) are actually directed towards specialists' services. Further details of the EMSN and its effect on prices will be provided in the outpatient's specialist section of the Australian case study.

Since the introduction of Medicare, MBS fees for primary care consultations have routinely been indexed based on a discounted version of the wage-price index and the consumer price index. As part of various austerity measures, the federal government froze MBS indexation arrangements in 1996-97 and also between 2013 and 2018 (Parliament of Australia, 2019). This method of indexation has led the AMA to argue that the growth in MBS fees is far behind the rising cost of medical practice. The AMA reports that between 1985 and 2015, MBS fees increased by 80%, whereas practice costs (defined by CPI and wage indexes) increased by 220% over the corresponding period.

It should be noted that doctors, including GPs, are not bound by the MBS fee. Doctors have the freedom to charge any fee to any patient at any time. However, any GP fee that is higher than the MBS fee creates a gap that the patient must pay. No supplementary private health insurance is available for out-of-hospital services that are covered by Medicare.

The MBS rebate acts as a floor price for doctor fees. If the doctor charges a fee that is equal to the MBS rebate, the patient faces a copayment amount of zero. From the doctor's perspective, there is no financial reason to charge less than the rebate. If they were to do so, the patient copayment would still be zero, and hence would not affect demand for their service. However, it would reduce their revenue. Although doctors have complete discretion over their fees, it turns out that in most cases, the fees charged by GPs are, in fact, equal to the MBS fee. This practice is commonly known as 'bulk-billing'. In 2017-2018, 86% of all primary care consultations were bulk-billed, indicating that in all these instances, the MBS fee acts as an effective floor price and the patient incurs no out-of-pocket-cost for the consultation.

For the remaining 14% of primary care services, the average gap between the doctor's fee and the MBS rebate is just over \$A 37 (DOH, 2018). This indicates that, on average, for those consultations that are not bulk-billed, the GP fee is \$A 37 higher than the MBS fee. For reference, the most commonly claimed GP MBS item has an MBS fee of \$A 37.60.<sup>4</sup> This implies that for the 14% of non-bulk-billed services, the average GP price is \$A 74.60 for a standard consultation.

Due to the extensive use of bulk-billing in primary care, the government has strong regulatory power over prices through its control over the MBS fee. It can control a highly effective floor price. That said, its control is tempered by the GP's ability to switch from bulk-billing their services to charging fees above the MBS fee at any time.

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4 Item 23 is described as a professional attendance by a GP at consulting rooms (other than a service to which another item in the table applies) lasting less than 20 minutes and including any of the following that are clinically relevant: (a) taking a patient history, (b) performing a clinical examination, (c) arranging any necessary investigation, (d) implementing a management plan, and (e) providing appropriate preventive health care for one or more health-related issue with appropriate documentation for each attendance.

The aforementioned mechanisms provide an accurate description of the historical manner by which the federal government has exercised influence over GP prices. These mechanisms remain current for the vast bulk of GP consultations. In addition, the federal government has introduced a raft of reforms that have some bearing on the prices paid to GPs. In particular, the government has introduced:

- new Medicare items to define primary care services.
- price-based incentives to meet government objectives.
- staged roll-outs of bundled payments.

The remainder of this section will focus on the mechanisms used to set prices in primary care under the auspices of the MBS as well as recent reforms that have the potential to influence price settings.

### **New Medicare items to target high-need populations and incentivize quality of care**

Over recent decades, there has been a considerable expansion of the types of services listed in the MBS that relate to primary care. Back in 1997, for example, the MBS listed 48 different items that primarily related to the types of services provided by GPs. Back then, the most distinguishing features between items were the length of the consultation and the place of the consultation (e.g. at the patient's home, at the doctor's office, or nursing home). The June 2018 edition of the MBS counts 148 items relating to primary care. In most instances, these additional items provide a more in-depth description of the type of consultation that is required before a claim can be made against such items. Examples of these new items are:

- Multidisciplinary case conferencing and care planning for people with chronic and complex needs
- Health assessments for people with chronic illnesses or at risk of developing chronic illnesses such as diabetes
- Home medication management review in collaboration with a community pharmacy
- Out-of-hours consultations
- Completion of an annual cycle of care for patients with chronic diseases such as diabetes and asthma

The main difference between these items and those that were previously listed on the MBS is that new items are more prescriptive. The new items tend to define the type of medical services and/or are targeted at particular types of patients before patients are eligible to make a Medicare claim. For example, some items can only be claimed by patients of a certain age or with certain conditions. Items have also been added that expand the types of professions able to claim Medicare benefits including nurse practitioners and psychologists working alongside GPs.

The federal government has, in general, made the MBS fee for these new items more financially rewarding for GPs than previous ones. For example, the MBS fee for the health assessment of a person with a chronic disease is \$A 137.90 – well above the \$A 37.60 for a standard consultation.<sup>5</sup> Through the establishment of these new items, the federal government has created a new set of price signals to direct care towards specific target populations and also for providing more comprehensive care. There is no unequivocal evidence that this has changed the process or improved the quality of care or patient outcomes. It is clear, however, that larger and better organized practices are more likely to bill these new items.

### **Price-based incentives for access to care**

Similar to the establishment of new item descriptions, the federal government has also used price-based incentives to improve access to care. In 2003, the federal government introduced financial incentives for GPs to provide greater access to services through lower copayments for particular patient groups. These incentives were introduced after a sustained period of increasing copayments (Wong et al., 2017). In the six years leading up to this reform, the percentage of bulk-billed GP services (where patients pay zero copayment) fell from 84% to 68%.

The new incentives gave metropolitan-residing GPs an extra \$A 5 if they bulk-billed (i.e. charge zero copayments) patients who hold a concession card (i.e., lower income families and pensioners) or are 16 years or less. The corresponding incentive for GPs practicing in rural, remote, and some outer metropolitan areas was \$A 7.50. The reforms were strongly associated with a rise in bulk-billing, but evidence also showed that price-discrimination became a stronger feature of the primary care system. Wong et al. (2017) showed that while concession-card holders were more likely to face a zero copayment, other types of patients were more likely to witness an increase in their copayment. This reflects a change of pricing behaviour on the part of GPs, where concession card status became a greater marker of a doctor's decision to charge lower fees compared to fees charged to the general population.

### **Health care homes bundled payment**

In 2017, the Australian government commenced the first roll out of its Health Care Homes (HCH) program. This program moves away from the traditional fee-for-service model by providing a capitated payment to general practitioners to care for the chronic condition needs of complex patients. It is intended to give practices greater flexibility in the delivery of services by allowing them to broaden the use of technology and the roles of the workforce.

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<sup>5</sup> Medicare item 703 versus item 23.

GP practices and Aboriginal Community Controlled Health Services are eligible to become HCH. Once they become an approved HCH, they can enrol patients into the program. Three tiers of payments are available depending on the patient's level of complexity and need. The value of each tier is:

- Tier 3 — the highest level of patient complexity: \$A 1795 per annum
- Tier 2 — increasing level of patient complexity: \$A 1267 per annum
- Tier 1 — the lowest level of patient complexity: \$A 591 per annum

The payment values represent an 'average' payment based on a bundle of services that complex patients are expected to use for the management of the chronic disease and were previously funded through the MBS. It should be noted that enrolled patients can still access care outside of their HCH and are also able to access MBS funded fee-for-service episodes of care not related to a patient's chronic conditions. However, the government expects that for the vast majority of HCH patients, the number of fee-for-service episodes will be small (DOH, 2017).



### 3 Outpatient care

Outpatient care in Australia is funded through a myriad of public and private financial sources. As such, the price setting arrangements depend very much on the funding source. In this section, we will cover price setting arrangements for:

- Outpatient services covered by the MBS
- Privately provided allied health services
- Hospital based outpatient departments

#### **Outpatient services covered by the Medicare Benefits Schedule**

Aside from general practice consultations, the MBS covers a vast range of outpatient services including specialists' consultations (including psychiatry), pathology services and diagnostic imaging, some allied health services as well as a large range of procedures and operations. The funding and pricing rules are identical to those described in the primary care sector. However, because the market structures are very different across these different types of services, the pricing mechanisms vary accordingly.

The Medicare rebate for most outpatient services is set to 85% of the MBS fee. There are two exceptions to this rule. The first exception is primary care items (e.g. GP consultations) which, since 2005, are reimbursed at 100% of the MBS fee. The second exception is the Greatest Permissible Gap (GPG) rule. This rule requires that the difference between the MBS fee for an item and the 85% Medicare benefit must not be greater than a specified amount. From 1 November 2018, the GPG has been set at \$A 83.40. For example, if the MBS fee for an item is \$A 1000, then the 85% benefit would be \$A 850, which means that the gap is \$A 150. In this case, the GPG would apply and the patient would receive a Medicare rebate of \$A 916.60, not \$A 850. This amount is indexed by the consumer price index each year. In 2018, the GPG is relevant for any out-of-hospital Medicare item which has an MBS fee of \$A 556.30 or more.

Above, we discussed the role of the Medicare rebate acting as a floor price for services. In primary care, this is a highly effective pricing mechanism because 85% of GP consultations adhere to the Medicare rebate. High rates of floor price adherence can also be found for pathology services, optometry, practice nurse consultations and diagnostic imaging. Figure 5 reveals the percentage of services where the doctor fee is equivalent to the Medicare rebate. Overall, the fees for 86.4% of all Medicare claims in the out-of-hospital sector are equivalent to the Medicare rebate and therefore incur zero copayment. For these services, the floor price is the effective price. However, this percentage varies considerably between different types of health care providers. In the primary care market, this percentage is influenced by high levels of competition (particularly in metropolitan areas) and the patient's ability to consult any doctor (there is no registration). For specialists' attendance, on the other hand, the Medicare rebate acts as an effective floor price for only 41.3% of all services. This implies that for the remaining 58.7% of services, the doctor's fee is higher than the floor price. In fact, as shown in figure 5, the specialist attendance fee, on average, is \$A 79.94 higher than the floor price. The reason for the higher price often relates to supply-side market power and the patient's ability to pay. The number of specialists are controlled by training places accredited by specialist colleges. Further, patients require a GP referral for a specialist attendance so it is not so straightforward for a patient to find another specialist. There is also a strong positive association between higher fees and the wealth of the area in which the specialist practices.

When doctors charge fees that are higher than the Medicare rebate, the government's control over pricing is limited.

**Figure 5**  
**Medicare claims, fees, benefits and copayments out-of-hospital (2017-18)**

Services	per capita	Services with zero copayment %	Average benefit per service \$A	Average fee charged per service \$A	Average copayment \$A	Average copayment excluding services with zero copayment \$A
Total	15.3	86.4	53.33	61.87	8.54	63.47
GP	5.5	84.9	45.54	51.04	5.5	36.5
Practice nurse	0.1	99.6	13.38	13.39	0.02	4.43
Specialist attendants	1	41.3	84.86	131.79	46.94	79.94
Obstetrics	0.1	61	64.82	162.52	97.69	250.27
Pathology	5.2	99.3	20.37	20.43	0.06	24.54
Diagnostic imaging	1	84.3	135.31	150.9	15.59	99.52
Operations	0.3	68.5	107.35	135.93	28.58	90.76
Optometry	0.4	94.3	46.6	48.07	1.48	26.08
Radiotherapy and nuclear medicine	0.1	76.1	210.21	223.48	13.26	55.5
Allied health	0.5	62.7	74.73	91.95	17.22	46.11
Other	0.4	74.3	160.04	189.1	29.06	112.89

Source: Department of Health, 2018.

As noted in the primary care section, the setting of the rebate for each MBS item has, by and large, been historical. However, there are clear processes in place to advise the Minister for Health about new items proposed to be listed on the MBS. A formal Health Technology Assessment (HTA) is required on any proposed new (or amended) service to evaluate the safety, effectiveness, cost-effectiveness and budget impact. The Medical Services Advisory Committee (MSAC) considers the evidence and makes recommendations to list or not to list the proposed new service to the Minister.

A 2011 Government Discussion Paper articulates the MBS principles upon which proposals for new items should be made (DOH, 2011). The paper proposed an improved evidence-based MBS fee setting process by making explicit the components of fees for new and revised MBS items. The new process aims to increase transparency in the resource inputs, measurements and calculations going into a recommendation for an MBS fee. In doing so, MBS fees are based according to their time and cost components, consistent with the broad range of MBS fees for services offered within a specialty. It is expected that MBS fees will become more incentive-neutral than is currently the case so that there are fewer perverse incentives to provide particular services as well as less cross-subsidisation from one item to another (DOH, 2011).

It is not entirely clear from public documents how the discussion paper recommendations have been implemented. The costing information for many MSAC proposals has been redacted and is not available to the public (see <http://www.msac.gov.au> for details). That said, under the MSAC guidelines for the proposal of new items, applicants are asked to indicate the likely cost of providing the proposed medical service, including any equipment and consumable costs as well as to specify how long the proposed medical service typically takes to perform. On the basis of these inputs, applicants are asked to provide an indicative MBS fee for the proposed service, which is then included in the cost-effectiveness analysis. This implies that the MBS fee is based on an input cost basis but assessed on the basis of value for money through a formal HTA.

While MSAC may give advice on MBS fees, it does not set them. Once MSAC makes a positive recommendation to list a service on the MBS, the DOH will consult with stakeholders to finalize the MBS fee. If the final fee greatly differs from the proposed fee considered by MSAC, then DOH reserves the right to redirect the proposed fee back to MSAC for further consideration.

### **Privately provided allied health services**

Although the MBS covers some allied health services, these can only be accessed under strict conditions and constrained to a limited number of allied health professions. For example, the MBS will cover up to 10 consultations per year with a clinical psychologist if the patient is referred by a medical practitioner and has a GP Mental Health Treatment Plan. Coverage of allied health services by the MBS is a relatively recent addition, and coverage is by no means complete. Dental and physiotherapy services, for example, are mostly excluded from the MBS.

Consumers can purchase private health insurance for outpatient allied health services that are not covered by the MBS. In general, allied health practitioners set their own fees, and private health insurance companies will contribute a fixed amount towards the cost of a service. Services are described in a similar fashion to the MBS, however, instead of the government paying a set benefit, the private health insurance company does. Insurance companies can and do enter into agreements with some allied health providers that restrict the prices charged by providers and, as a result, the copayments faced by patients.

### **Hospital-based outpatient departments**

Public hospitals have traditionally been owned, operated and funded by the state and territory governments. Prior to the introduction of Medicare (universal health coverage in 1984), outpatient services were provided free of charge to patients meeting a means test. Under Medicare, all Australians are entitled to the same level of reimbursement for medical services provided out of hospital, which resulted in a

substantial move of this form of care from hospital campuses to private consulting rooms funded through the MBS. The extent to which hospital outpatient clinics declined varied from state to state.

As noted above, until 2013, the federal government contributed to the funding of public hospital services through 5-year block grants. Since the National Health Reform Agreements were signed in 2011, the federal government has paid state governments on an activity-funded basis.

Funding for public hospitals applies across several service streams in addition to inpatient activity including emergency, non-admitted, sub-acute and non-acute, and 'other'. Sub-acute and non-acute services are applied to admissions for rehabilitation care, palliative care, geriatric evaluation and management, or maintenance care. Under the 2011 Reform Agreement, the federal government share of funding includes all hospital emergency services and some non-admitted services. The current funding agreements cover specialist clinics which were reported prior to 2011 and non-admitted services which meet the following criteria: directly related to an inpatient admission or Emergency Department (ED) attendance, substitute for an admission or ED attendance, or are expected to improve the health of people who have a history of frequent attendance or admission. However, certain services are excluded, including primary care, family planning, and aged care assessment (IHPA, 2018a).

Activity and cost data for outpatient services are collected as part of the national hospital cost collection. At this stage, there is no non-admitted services classification that is patient centred and suitable for the Australian setting. Therefore, these services are categorized by the nature of service and type of clinician involved.

State governments are still in the process of fully implementing these reforms, although some states such as Victoria have provided details of their new funding and pricing model.

In 2017–18, Victoria introduced the Weighted Ambulatory Service Event (WASE) funding model for acute non-admitted specialist clinic activity, covering, for example, home renal, radiotherapy, and home enteral nutrition. The WASE model is intended to encourage health services to improve their data reporting, drive technical efficiency, and deliver greater transparency and accountability for the funding received (DHS, 2018).

Under the WASE model, activity will be counted as service events and classified according to the national Tier 2 classification with cost weights calculated based on Victorian cost data. Tier 2 classifications are published by the IHPA and categorize a hospital's non-admitted services based on the nature of the service provided and the type of clinician providing the service. The major categories are: procedures, medical consultation services, diagnostic services, and allied

health and/or clinical nurse specialist intervention services. Hospitals have been allocated an activity target that matches their historical non-admitted specialist clinics funding. The framework has been established to adjust funding when health services under-achieve their targets. Currently, the WASE model will not have a direct impact on health service funding in 2018-2019 (DHS, 2018).

## 4 Residential/long-term care

### Context and objectives

The federal government subsidizes the cost of services which provide non-medical care and support for the elderly (Australian Government, 2017). The subsidies are given to consumers (for home care) or providers (for long-term residential care). Not-for-profit and private for-profit providers deliver care and are paid the same rates of subsidy. In home care, there is open competition between authorized providers (those who meet safety, quality and prudential requirements). In residential care, there is restricted competition as the government limits the number of licensed beds in each region and allocates the licences to authorized providers through recurring competitive Approval Rounds (Australian Government, 2017).

The aged care programs are undergoing a medium-term agenda of reform (Australian Government, 2017). The agenda is based on a report by the Australian Productivity Commission in 2011 titled *Caring for Older Australians* (Productivity Commission, 2011), together with consultation by the government and subsequent studies. The first tranche of legislation to enact the reforms came into effect in July 2014. Despite changes of national governments, there is bipartisan support, and the reforms continue within the initial framework.

The objectives for providing public subsidies to support the delivery of aged care services, including long-term residential care, are set out in legislation of the federal parliament known as the Aged Care Act 1997 (as amended). The objectives (in summary) are to:

- Provide care recipients (and carers) with access to diverse, flexible, responsive and affordable high-quality care and accommodations that achieve appropriate outcomes.
- Promote ageing in place and encourage independence and choice.
- Provide funding based on the quality of care and the type and level of support delivered.
- Hold providers accountable for the funding they receive and outcomes achieved.

- Consider equity and merit given the limited resources available.
- Target services to places and people with the greatest need and integrate aged care with related health and community services.

The reforms have adopted a market approach to the delivery of aged care and therefore prices play an integral part.

- Care recipients should contribute to the costs of their care and accommodations according to their income and assets. They should have choice and control, be the subsidy fund-holders and 'purchase' care from authorized providers according to quality, quantity, price, and timeliness.
- Public subsidies must be sustainable over the long term, particularly given the fiscal impact of the ageing of Australia's population (reduced per capita revenue from taxation as well as increased public expenditure on aged care and health care, including salary pressure from the increasing demand for a proportionately declining workforce).
- The forces of market competition between providers should be harnessed to deliver more efficient, effective and higher quality services that are attuned to the consumers' needs. The sector needs to be viable overall, but individual providers must make their own market judgements and can fail. The regulation of safety and quality must be rigorous, and consumer information must be accessible.
- Funding for an adequate level of approved care is treated separately from residents paying the market price for accommodation (with safety nets) and paying for additional care.

The Aged Care Act 1997 provides the legislative authority for funding and price setting. The next two sections describe the relevant funding and fee setting arrangements, and the final section explains the legal instruments and institutions.

### Funding arrangements

There are four main forms of funding for residential aged care:<sup>6</sup>

- Paying for basic daily services. This covers day-to-day living costs such as meals, cleaning, laundry and air-conditioning. With minor exceptions, all residents are required to pay a basic daily fee.
- Care funding. This is the amount received by a provider for delivering care to the residents according to their needs. Apart from residents with low income and assets, nearly all residents make a financial contribution for their care according to their capacity to pay. The government makes a balancing subsidy payment.

<sup>6</sup> Please refer to <https://www.myagedcare.gov.au/aged-care-homes/working-out-the-costs> for more information.

- Accommodation funding. Providers charge separately for the cost of the accommodation they offer. Some residents have their accommodation costs fully funded by the government, and some others receive a partial subsidy. The remainder pay the full cost of their accommodation.
- Paying for additional and extra services. Residents can agree to pay extra for a higher standard of accommodation or for additional services.

## Care funding

### Care funding to the provider

The level of funding to the provider is determined by the provider assessing the care needs of the residents in accordance with the Aged Care Financing Instrument (ACFI). This provider assessment can be subject to independent audit. The funding comprises a care fee which is paid by residents whose income and assets are over a certain threshold, together with a balancing government subsidy.

The ACFI is a regulatory funding instrument, but it is not a comprehensive clinical assessment of care needs. It consists of 12 sets of questions about assessed care needs, each having four ratings (A, B, C or D) as well as two diagnostic sections. The government claims that the ACFI provides sufficient precision to determine the overall relative care needs profile and the subsequent funding for each of the residents. Providers pool the funding received for resident care within each of their facilities and deliver care to the residents according to residents' needs. By way of contrast, recipients of home care services are allocated individual funding and exercise control over its expenditure.

### Care fee

Residents pay a means-tested care fee as a contribution towards the cost of care. The amount paid depends on an assessment of their combined income and assets (set out in regulation), which is conducted by a government agency and the cost of their care, as determined by the assessed input costs of delivering the care needs (ACFI). However, there are limits in place. For persons of low income and assets, the government funds providers for the full cost of the resident's care. There is a sliding scale to an upper threshold, above which residents pay a capped maximum fee. Fees are subject to quarterly reviews. There are annual and lifetime caps in place to limit the amount of the means-tested care fee that a resident can be asked to pay.

## 5

# The market price of accommodation and additional and extra services

### The price of accommodation

Aged care homes can, within a wide limit, set the price of their accommodation in the market. They must publish their maximum accommodation prices on the government's My Aged Care website, their own website (if they have one), and in other relevant materials they provide to people who are considering becoming residents. There may be different maximum accommodation prices for different room types in an aged care home. The published accommodation prices are the maximum a provider can charge, but a lower price can be negotiated.

Providers wanting to charge accommodation prices of more than \$A 550 000 as a lump sum (or the rental equivalent) must have their prices approved by the Aged Care Pricing Commissioner (an independent statutory office holder appointed under the Aged Care Act 1997 who reports to the Minister for Aged Care).

The government fully funds the costs of accommodation for those on low income and assets and provides a tapering subsidy for partially supported residents. All other residents pay the full agreed price of their accommodation.

Residents who must pay a partial contribution or the full price can choose between making a lump sum, fully-refundable accommodation payment (at nominal, not real, value) or a rental-type daily accommodation payment. The daily payment is set by a regulatory formula to provide the provider a return that is the equivalent of the refundable lump sum.

The government provides incentives to providers to upgrade their standard of accommodation and provides financial disincentives to have less than a minimum proportion of residents who are fully subsidized.

### Fees for additional and extra services

Residents can agree to pay extra for a higher standard of accommodation or for additional services. The prices and the services must be published and explained to the residents. Extra service fees are to be approved by the Aged Care Pricing Commissioner. Residents cannot be charged additional fees for other care or services that they do not receive a direct benefit from or that cannot be used for care. Residents cannot be charged for additional or extra services that the aged care home is required to provide by law.

## 6 Instruments and institutions

### Fees and Payments Principles and Schedules of Fees and Charges

The Aged Care Act 1997 authorized the Minister to make principles relating to a wide range of issues including provider accountability, consumer information, quality of care, sanctions, subsidies, fees and payments. The Fees and Payments Principles 2014, No. 2, specify the Rules and Approval Processes. They cover such matters as:

- Resident fees
- Accommodation payments and accommodation contributions
- Calculation of the equivalence between refundable accommodation contributions (lump sums) and daily accommodation contributions (rental payments)
- Approval of higher maximum accommodation payment amounts
- Financial hardship
- Prudential standards of providers

The DOH publishes up-to-date schedules of fees and charges for residential aged care (and home care), which have been set in accordance with the Act and the Principles.<sup>7</sup> Each schedule also specifies the period for which the fees and charges are current.

### Aged Care Financing Instrument

In addition to these short-term measures, the government is investigating alternative approaches to determining residential care funding that delivers more stable funding arrangements. The government is engaging with the residential care sector on the development of longer-term reform. One of the actions has been to commission a Resource Utilization and Classification Study to determine the characteristics of residents that drive residential care costs.

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<sup>7</sup> For the most recent schedule, please refer to <https://agedcare.health.gov.au/funding/schedule-of-fees-and-charges-for-residential-and-home-care-from-20-september-2018>.

## **Aged Care Pricing Commissioner**

The Aged Care Act 1997 established the position of the Aged Care Pricing Commissioner. The Commissioner is an independent statutory office holder appointed under the Act who reports to the Minister.

The functions of the Commissioner are set out in the Act and are to consider and approve extra service fees and accommodation payments that are higher than the maximum amount of accommodation payment determined by the Minister.

The functions of the Commissioner increase the level of transparency in the pricing of the specified residential aged care services and aim to ensure that aged care recipients are charged appropriately through approval of these prices.

## **Aged Care Financing Authority**

The Aged Care Financing Authority (ACFA) is a committee of experts established by legislation and appointed by the Minister to provide independent advice to the government on funding and financing issues. The committee is informed by consultation with consumers and the aged care and finance sectors.<sup>8</sup> ACFA publishes research that it has commissioned as well as an annual report titled "Funding and Financing of the Aged Care Sector". The report examines developments, issues and challenges affecting the sector, and provides a range of statistics and analyses of the provision of aged care in Australia. ACFA has no price setting or other regulatory responsibilities.

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<sup>8</sup> More information is available at <https://agedcare.health.gov.au/aged-care-reform/aged-care-financing-authority>.

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## Case study

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# England

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## Price setting and price regulation in health care: England

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The current English National Health Service payment system has evolved greatly over the last decade and employs a mix of different payment methods across different services and sectors. The predominance of activity-based payment in the acute sector, introduced at a time of long waiting lists, encouraged activity in hospitals. At the same time, block budgets in community services and capitated budgets in primary care offer little incentive to increase activity or enhance efficiency in these settings.

New payment models are being developed and tested in local areas. As an example, a version of capitation-based payment known as 'whole-population budgets' has recently been suggested to support new models of care delivery. However, improved arrangements for ongoing evaluation of these new payment systems and spreading of best practice must be developed.

## Abstract

Two key messages are reflected throughout the report:

First, that there is no such thing as an "ideal" payment mechanism (or combination thereof) per se, but that each approach has defined (and often empirically sound) advantages and disadvantages that can help policy-makers reach defined objectives. These objectives should be the guiding light that defines how prices are set in a health system, with key emphasis on making clear which objectives should be prioritized. Trade-offs are commonplace in the mechanics of incentive structures. However, if there are too many objectives, and priorities are not set, the effectiveness of a specific combination of price-setting mechanisms is muddled.

Second, that price setting is just one of many policy tools available to help reach key policy objectives. There are far too many actors at different levels of the system for the price-setting mechanism to be able to significantly incentivize every single one of them. One of the key arguments is that price setting and regulation could provide incentives to hospitals but may not have as much of an effect on individual practitioners, who may be less likely to modify their practice in the intended ways.

# 1

## The National Health Service: payment mechanisms, budgets, and commissioning

**Payment mechanisms in the National Health Service are blended across and within types of services, with the aim to optimize incentives and minimize the disadvantages of each mechanism**

The National Health Service has a long history of change aimed at continuous improvement. Established in 1948 with the core idea that good quality health care should be available to all regardless of their income, it was one of the key drivers for shifting expectations (both nationally and internationally) on health care as a good – from a standard economic good to a much more complex public good that seeks to reduce inequalities. The complexity of health care as a non-standard good has been the subject of extensive research efforts and constitutes one of the main reasons why provider payment systems have evolved so rapidly, especially in the last decade. In the United Kingdom health is run separately in England, Wales, Scotland and Northern Ireland. This report only covers payment mechanisms for the National Health Service in England (henceforth referred to as the NHS), although the founding principle of free universal healthcare applies across the United Kingdom.

The NHS employs a range of payment mechanisms across its core services – primary care, acute care, community and mental health services. Each mechanism comes with advantages and disadvantages, with the optimal mix dependent on the priorities of the system. It is therefore common to not only adopt different mechanisms for different services (since objectives and incentives in each service might differ), but also to blend different payment practices within a specific service to mitigate some of the drawbacks of the main payment system in place.

The NHS incorporates block budgets, capitation, and activity- or case-based models (Wright et al., 2017). These mechanisms can be described primarily based on the extent to which they bundle payments for services:

- Block contracts bundle payments for all services provided in the sector, with a lump sum paid to providers at a specified interval (much like a salary), and may be independent of the level of activity;
- Capitated budgets bundle payments prospectively per patient enrolled in the system, often with a risk-adjustment weighting for more complex patients;
- Case-based payments made prospectively for an episode of care, which therefore involve less bundling than capitated payments since they do not involve periods where there may or may not be activity for any given patient (Marshall, Charlesworth and Hurst, 2014).

The NHS currently uses capitation as the main form of payment for primary care, block contracts for the community and mental health sectors, and case-based payments for the acute sector. The following sections detail how each of these three services has evolved in the past decade with regard to its objectives, funding and payment system, together with a general overview of the NHS as a whole and future integration plans encouraging the use of global budgets as set out in the “Five Year Forward View” (2015) and reinforced in the “Long Term Plan” (NHS England, 2019).

### **Funding flows in the NHS: budgets and commissioning shifts**

With a broadly static health budget in real terms over the five years leading to 2015-2016, the NHS was asked to make efficiency savings of 4% per year over this period, equating to a total of £15-20 billion. A key tool for incentivising higher efficiency has been the payment system through which NHS commissioning bodies purchase health care from hospitals, general practitioners (GPs) and other providers (King’s Fund, 2017a).

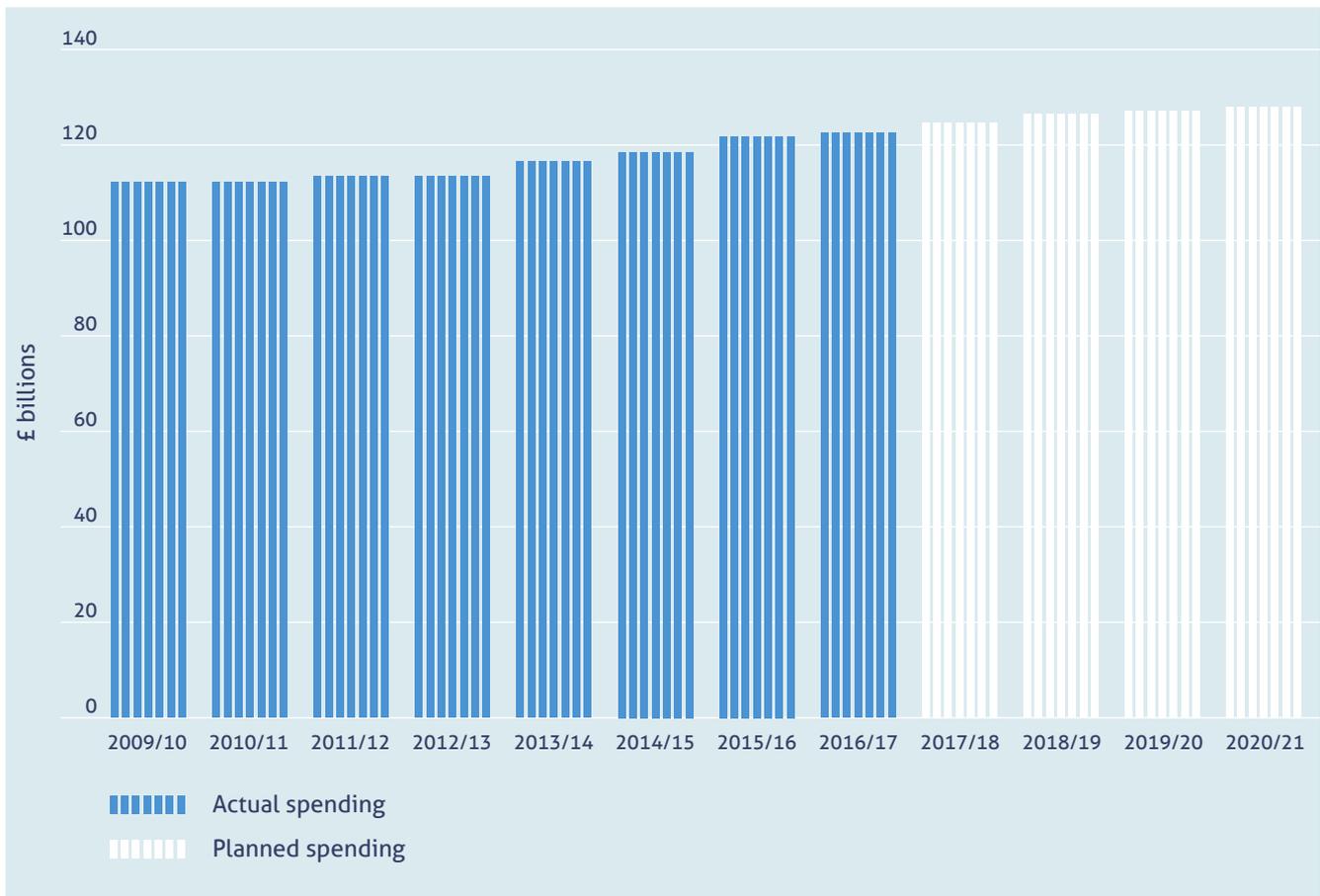
The NHS is primarily funded through general taxation and National Insurance contributions from employees, employers and the self-employed. General taxation accounts for around 80% of NHS funding (£125 billion in 2017-2018). A small percentage of funding is generated through patient charges, such as prescriptions, dental care and spectacles. For the year 2015-2016, user charges amounted to £1.3 billion, corresponding to 1.1% of the budget (King’s Fund, 2017a). The level of overall funding for the NHS is set through the UK Government’s Spending Review process. Estimates are made of the projected income generated by the three sources. When the spending generated by user charges and National Insurance is lower than estimated, funds from general taxation are adjusted to provide the planned level of funding.

Following a period of mostly static budgets (and cuts in real terms) between 2009-2010 and 2012-2013, the budget for the Department of Health<sup>1</sup> is expected to grow by 1.2% between 2010 and 2021 in real terms (King’s Fund, 2018). Figure 1 below details this planned budget growth, with funding pledged mainly for staff salaries and medicines, to support expansion of the number of NHS services provided seven days a week, invest in new clinical strategies for cancer and mental health, improve the integration of health and social care, and fund posts for 10 000 new nursing and other health professionals (Department of Health, 2015). In June 2018, a new long-term funding settlement was announced. The priorities for the NHS were set out in the long-term plan in January 2019 (NHS England, 2019).

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<sup>1</sup> Now renamed Department of Health and Social Care.

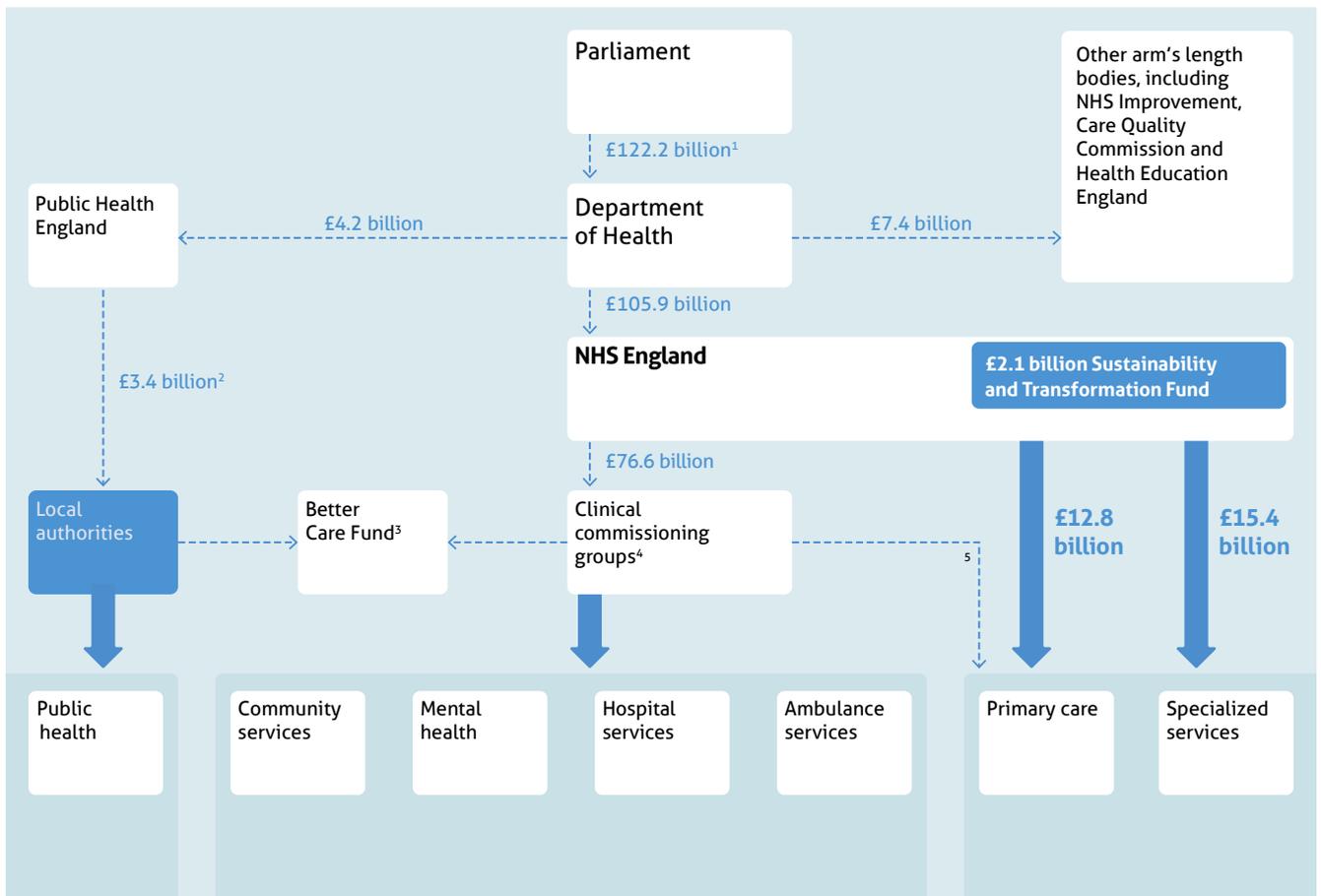
**Figure 1**  
**Department of Health total departmental expenditure limit (TDEL)**



Source: King’s Fund, 2018. Note: Figures are expressed in real terms at 2017-2018 prices using deflators published by the Office of Budget Responsibility in November 2017.

The commissioning structure of health services was reformed in 2013. Figure 2 below shows the reformed commissioning structure. PCTs were replaced by clinical commissioning groups (CCGs). These are clinically-led, and their governing bodies include GPs, other clinicians, patient representatives, general managers, and in some cases practice managers and local authority representatives (King’s Fund, 2017b). CCGs are now responsible for the commissioning of most NHS services: acute care, mental health and community services, urgent and emergency care (including out-of-hours), rehabilitative care and, increasingly, primary care and some specialized services (NHS England, 2018a). The initial number of CCGs was 211 and was 191 on 1 April 2019. This is due to mergers and joint and integrated commissioning at the local level across a larger geographical footprint, with many areas sharing staff or structures between CCGs.

**Figure 2**  
Funding the NHS in England



<sup>1</sup> All figures are for 2016/17.

<sup>2</sup> Public health grant.

<sup>3</sup> With the aim of integrating health and social care services, NHS commissioners and local authorities pool some of their annual budgets (around £5.8 billion in 2016/17) to create the Better Care Fund.

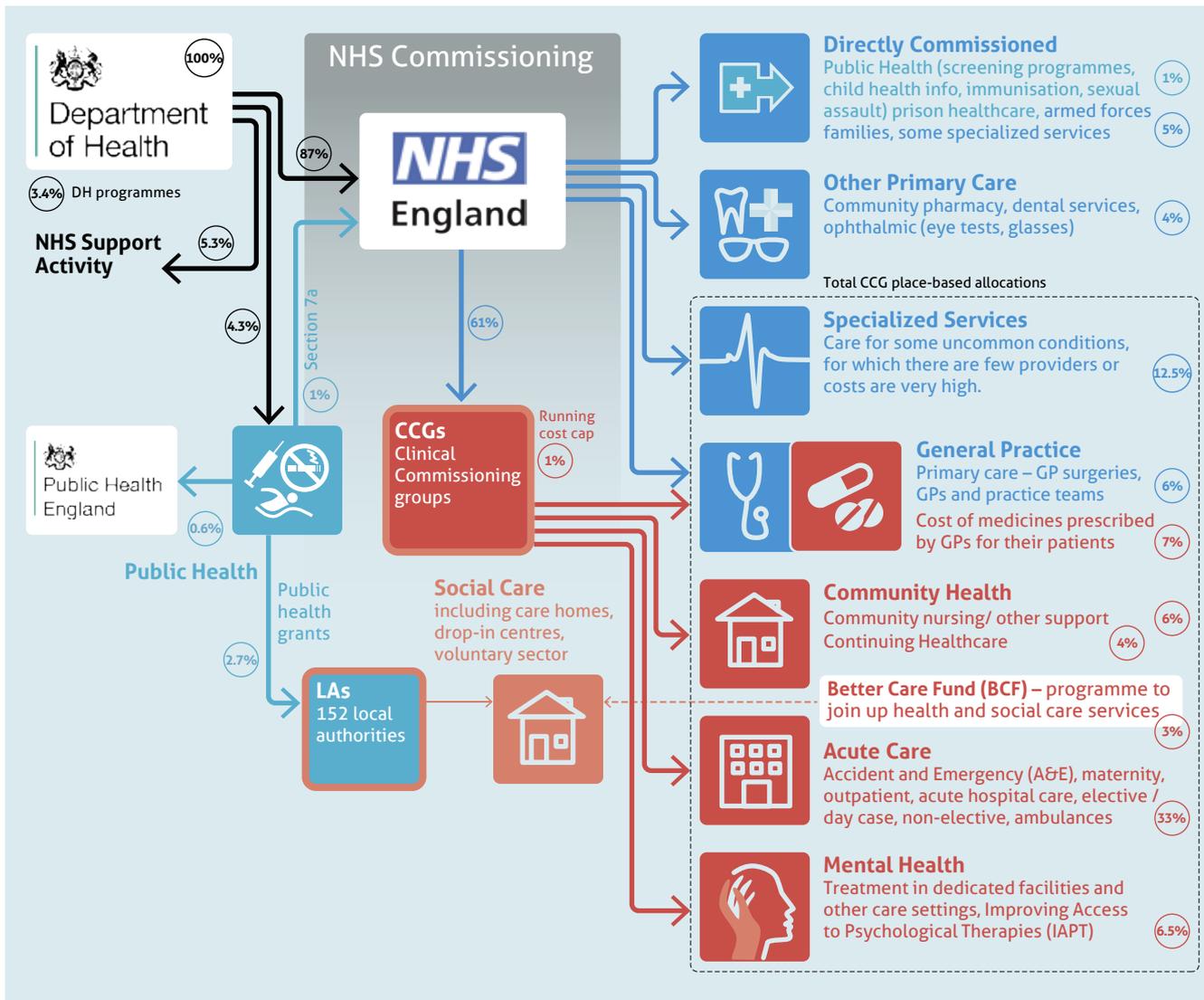
<sup>4</sup> From April 2017, all CCGs have assumed some responsibility for commissioning primary medical care services. Sixty-three have taken on full delegated responsibility; the rest have joint responsibility with NHS England.

<sup>5</sup> NHS England transfers money to those CCGs that have taken on full delegated commissioning of primary medical care services.

Source: Reproduced with permission, King's Fund, 2017c.

Figure 3 below shows the funding flows of the total NHS budget (in percentage estimated from expenditures in 2016-2017). Around 60% of the total NHS budget is managed by CCGs, and more than half of the budget managed by CCGs – which represents one third of the total NHS budget – is used to pay for acute care.

**Figure 3**  
Distribution flow of NHS budget



Source: Reproduced with permission, NHS England, 2018b.

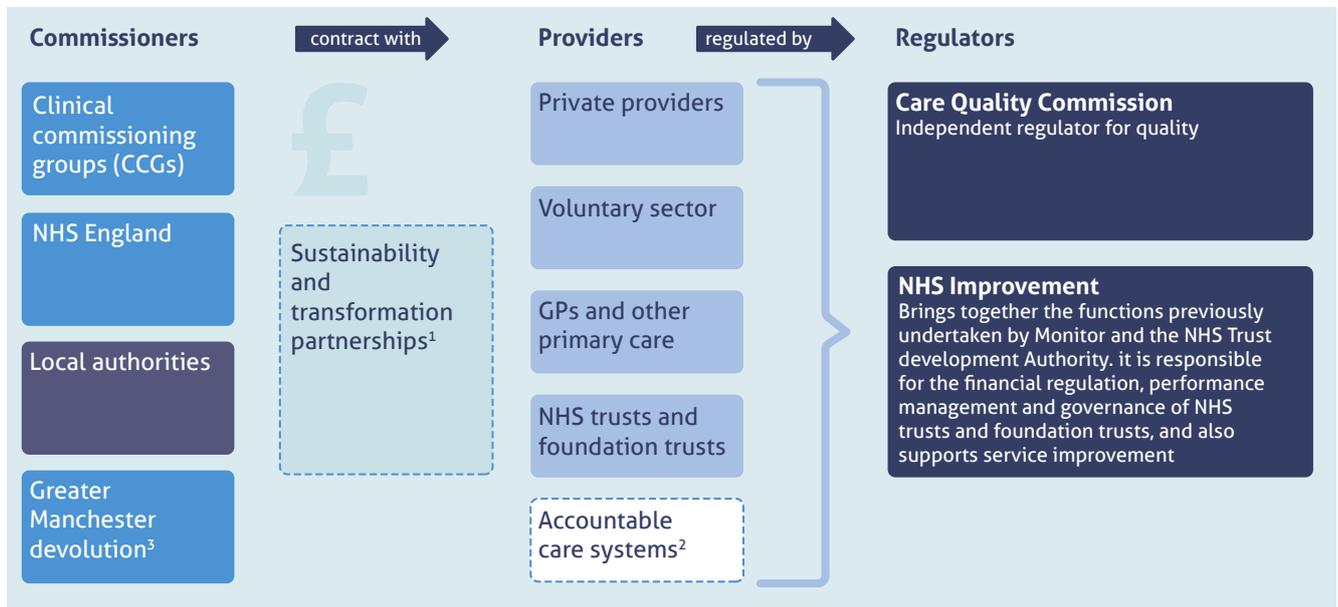
Initiatives like the Better Care Fund require CCGs to work together with local authorities by pooling budgets to deliver more integrated care. Similarly, the creation of Sustainability and Transformation Partnerships (STPs)<sup>2</sup> have brought together CCGs, local authorities and NHS England to plan services around long-term needs of local communities (King's Fund, 2017b). Overall, CCGs are responsible for about two thirds of the NHS commissioning budget.

Most of the remaining budget is managed by NHS England, which is responsible for strategic oversight for the NHS and directly commissioning most specialized services and, jointly with CCGs, primary care services, including GPs, pharmacists and dentists. NHS England is also responsible for some public health services, such as immunization and screening programmes.

<sup>2</sup> In 2016, the NHS and local councils came together in 44 areas covering all of England to develop proposals to improve health and care. They formed new partnerships – known as STPs – to run services in a more coordinated way, to agree on system-wide priorities and to plan collectively how to improve residents' day-to-day health.

Lastly, local authorities are responsible for commissioning social care services (such as providing home and residential care), and most public health services (such as sexual health, school nursing and addiction services), with a specific ring-fenced budget since 2013 (King’s Fund, 2017c) (Figure 4).

**Figure 4**  
Commissioner-provider structure in the NHS



<sup>1</sup> Since December 2015 NHS providers, CCGs, local authorities and other health care services have come together to form 44 STP 'footprints'. These are geographic areas that are co-ordinating health care planning and delivery, covering all areas of NHS spending on services from 2016/17 to 2020/21.

<sup>2</sup> From mid-2017, eight areas of England are evolving into accountable care systems. This involves commissioners and providers assuming responsibility for a budget to deliver integrated services for a defined population.

<sup>3</sup> From April 2016, leaders in Greater Manchester have taken greater control of the region’s health and social care budget. This includes taking on delegated responsibility for several commissioning budgets previously controlled by NHS England. Other areas – including London and parts of Surrey – are also pursuing devolved arrangements.

Source: Reproduced with permission, King’s Fund, 2017c.

Commissioners are increasingly working together across the larger STP footprints to deliver long-term plans for the NHS. In some cases, such as Greater Manchester, there are additional devolved responsibilities (Greater Manchester Health and Social Care Partnership, n.d.) for commissioning health and social care services from a range of providers – GPs and other primary care health professionals, NHS trusts and foundation trusts, private providers, and the voluntary sector. All STPs will have to evolve to form an Integrated Care System over the next two years. Alternative payment approaches are being developed, and in a few cases, commissioners have contracted to manage a single budget to deliver a range of services for the local population (King’s Fund, 2017b).

Providers are regulated by two main entities: the Care Quality Commission (CQC), which is primarily responsible for quality and safety assessments for all health and social care services; and NHS Improvement, which regulates resource use, financial levers and operational performance using a shared definition of quality and efficiency with the CQC.

## 2 Price setting across NHS services

In this section, the current price-setting mechanisms for primary care, acute services and community and mental health services are described, with an emphasis on how these systems have changed in the past decade to better align with the objectives set out at the national level.

In this context, it is important to underline that there is a wide range of choices available to NHS patients as long as this is clinically appropriate. These are set out in the Choice Framework (Department of Health and Social Care, 2016). They include statutory rights to choose for elective acute and mental health services, where diagnostic tests will be undertaken, and the right to have a personal health budget where certain prerequisites are met. Patients should also be offered choices for maternity and community services, although these are not set out in legislation. Patients should also be offered choices for maternity and community services, although these are not set out in legislation. Patients can review the choices that are available to them for particular procedures and treatments on the NHS website, as well as the waiting times at each provider.

### Primary care

GP services are primarily funded through capitation. The services are commissioned by NHS England, and increasingly by CCGs with delegated responsibility for four primary care contractor groups (medical, dental, eye health and pharmacy) (NHS England 2018). The negotiations for GP reimbursement are carried out between NHS England and the General Practitioners Committee (GPC) of the British Medical Association (BMA) on the General Medical Services (GMS) contract, under which most GPs (individuals and practices) are contracted.

GPs have traditionally worked as independent contractors under the GMS, usually in GP practices in which each GP is a partner with a stake in the financial success of the practice. Today, an increasing number of GPs are employed on a salaried basis, usually by other GPs who own the practice.

GP practices are now working together to form Primary Care Networks (PCNs) (National Health Service, 2017) covering a population of 30 000-50 000 patients, with the ambition to encourage more collaboration and delivering a more proactive and personalized approach for primary care services in each

area. Additional funding for PCNs is being made available throughout 2019, and new contractual arrangements for GPs to reflect the role of GPs in PCNs start in April 2019 (National Health Service, 2019).

The General Medical Services (GMS) contract is the main contractual form used to commission primary medical services, and it delivers core medical services at a nationally agreed price. The capitated funding received by each GP practice to deliver these services is based on each practice's registered list size with a fixed, nationally agreed price per patient, weighted by the demographic mix of patients and levels of deprivation. Personal Medical Services (PMS) contracts provide similar core services to GMS contracts but can also include extra health services 'over and above' the standard services, are issued to address specific local health needs. Funding for such contracts is agreed locally.

Lastly, Alternative Provider Medical Services (APMS) contracts enable primary care organisations (PCOs) to commission or provide other primary medical services within their area to the extent that they are necessary. They allow PCOs to contract with non-NHS bodies, such as voluntary or commercial sector providers, or other GMS/PMS practices, to provide enhanced and additional primary medical services. Around 62.5% of practices operate under GMS contracts, 34% under PMS, and 3.5% under APMS deals (Figure 5).

Where a practice opts out of delivering out-of-hours services their contract value is reduced to reflect this.

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**Figure 5**  
**GP practices by contract type**



Source: Bostock, 2016. Note: Snapshot from 2016 data. OpenStreetMap contributors, © CARTO. Map created by Nick Bostock.

In addition to these core contracts, a range of voluntary and additional contracts are used to cover specific needs or to incentivize prevention and quality in primary care. These include Enhanced Services (ES), which are locally contracted and cover a range of functions such as sexual health screening, smoking cessation programmes, blood pressure monitoring and weight management (Addicott and Ham, 2014); other community-based services and public health services such as screening and immunisation programmes; and, importantly, the Quality and Outcomes Framework (QOF).

Introduced in 2004, the QOF provides additional income to GP practices that deliver improved quality of care as measured by performance against a range of metrics (mainly related to patients with long-term conditions) (National Health Service, 2018a). Most practices on GMS contracts, and many on PMS contracts, take part in the QOF. For the 2013-2014 GP contract, QOF thresholds were raised to further improve performance, and new indicators were added. The National Institute for Health and Care Excellence (NICE) took a new role in the QOF context by producing a menu of evidence-based, clinically and cost-effective indicators selected on the basis of criteria such as accuracy of data, clarity of diagnosis and relevance of actions. The indicators are being updated further from April 2019.

### Acute services

The last decade has seen major reforms to the payment system for acute and emergency services. Before 2003, hospitals in England were paid through block contracts for most services. These contracts specified minimum and maximum levels of provision, with activity falling above or below these thresholds triggering actions such as renegotiation or data validation (Marshall, Charlesworth and Roberts, 2014). A series of reforms in 2002 introduced the current dominant activity-based payment scheme, initially known as Payment by Results (PbR), and now called the National Tariff. It initially financed a small proportion of inpatient elective hospital care, was expanded to cover all elective care by 2006, and by 2007 covered most acute activity, including non-elective, outpatient, and accidents and emergencies (A&E) (Department of Health, 2012). By 2014-2015, PbR covered 67% of acute income and 60% of the total income received by all NHS trusts (Wright et al., 2017).

The National Tariff sets out nationally determined currencies<sup>3</sup> and a schedule of prices. It is the main way that commissioners pay acute health care providers for each patient seen or treated, taking into account the complexity of the patient's health care needs.

Activity based funding has meant that money 'follows' the patient and, because prices are fixed, competition for patients has been on the basis of quality rather than price. For inpatient

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<sup>3</sup> Currencies are the unit for which a payment is made. They take a number of forms covering different time periods from an outpatient attendance to a year of care for a long-term condition. They include Health Resource Groups (HRGs) for inpatient spells. Tariffs are the set prices for each currency.

stays, providers are reimbursed for 'spells' of activity. Spells, which cover the period from admission to discharge, are coded as Healthcare Resource Groups (HRG) based on the types of patient and treatments with similar cost implications (Marshall, Charlesworth and Roberts, 2014). There are currently more than 2800 HRGs included in the national tariff.

Costs are reported by all NHS providers in the annual reference cost collection. Reference costs give the most comprehensive picture available of how the 232 NHS providers in England (80 NHS trusts and 152 NHS foundation trusts) spent £68 billion delivering health care to patients during the financial year 2017-2018 (the most recent year for which data has been published) (National Health Service, 2018b). This is 62% of total NHS expenditure and includes core admitted patient care (APC) costs of £27.7 billion, mental health costs of £7.2 billion, community care costs of £5.5 billion, ambulance costs of £1.9 billion, as well as outpatient care.

It is mandatory for NHS trusts and foundation trusts to submit their cost data. These data have been collected since 1997, and since 2003 have fed into the calculations that determine the published tariffs.

The reference cost data is publicly available at the provider and aggregate levels. It is a rich data source and has many uses, from informing price setting to public accountability to Parliament. NHS trusts have a responsibility to improve their internal costing processes and systems to help them better understand the cost of delivering services, leading in turn to the submission of improved cost data. NHS Improvement has a responsibility to ensure the costs collected are fit for purpose and support this responsibility by producing comprehensive and clear guidance.

National cost collection submissions are subject to audit as part of the costing assurance audit program, and all acute NHS trusts and foundation trusts are selected for audit at least once every three years. The purpose of the audit program is to provide assurance that reference costs have been prepared in accordance with the Approved Costing Guidance.

England's NHS trusts and foundation trusts are in the process of moving to a new national approach of cost data collection based on patient-level costing (known as PLICS). This will be the mandated approach for all acute providers from the financial year 2018-2019.

The tariff (price reimbursed) is typically based on the national average cost of providing care for each currency unit as estimated on the basis of the reference cost submissions. There is a formal consultation process with providers and commissioners about each National tariff package, including the draft prices, calculation methodology, and any policy changes. Stakeholder views are taken into account in the final published tariff package.

The price actually received for an intervention or procedure by each acute provider is then multiplied by a nationally determined market forces factor (MFF), which is unique to each provider and reflects relative costs of care across the country. London providers have the largest MFF. There may also be other adjustments to the tariff for long or short stays, specialized services, and support for specific policy goals such as providing care compliant with Best Practice (Department of Health, 2012) (Figure 6). Some tariffs were also traditionally adjusted to take account of NICE guidelines on cost-effective technology. Figure 7 shows the information flow from treatment to payment.

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## Figure 6 Best Practice Tariffs

A 2008 review of the NHS found a substantial amount of non-compliance with best practice for hospital services. As a result, a policy commitment was made to set some tariffs that financially incentivize providers to provide care compliant with best practice – referred to as Best Practice Tariffs (BPTs). The aim of this approach was to encourage the payment of services that followed clinical guidelines and to discourage variation in practice that did not follow best practices (Marshall et al., 2014). BPTs target hospital activities according to the following criteria: high potential impact (e.g. volume, significant unexplained variation in practice, or significant impact of best practice on outcomes), strong evidence on best practice, and clinical consensus on characteristics of best practice. In 2010, BPTs applied to all providers of NHS-funded care, including both NHS and independent providers, for hospital admissions related to hip fracture, stroke, cholecystectomy and cataract surgery. BPTs can be higher or lower than HRG tariffs based on national average costs. The price differential between best practice and “standard” care is set to ensure that the anticipated costs of undertaking best practice are reimbursed, while creating an incentive for providers to shift from standard care to best practice. Coverage of BPT has steadily increased from four in 2010 to more than 50 procedures. The tariffs are set centrally, which leaves very little room for local price negotiation between providers and commissioners, although there are some non-mandatory BPTs (OECD, 2016).

Private providers may choose to offer their services to NHS patients, in this case they are also reimbursed by commissioners using the prices published in the National tariff. For their private patients, these providers set their own prices. Around 30% of income to providers comes from NHS patients (LaingBuisson, 2018).

The development of an activity-based payment system was led by the Department of Health. Since 2014, responsibility has been shared between NHS Improvement<sup>4</sup> and NHS England for the tariff, currency design and price setting.

For the tariff which took effect from April 2019, England has introduced a ‘blended’ payment approach for emergency care taking place in acute hospitals. This comprises a fixed amount (linked to expected levels of activity) and a volume-related element that reflects actual levels of activity, as well as some

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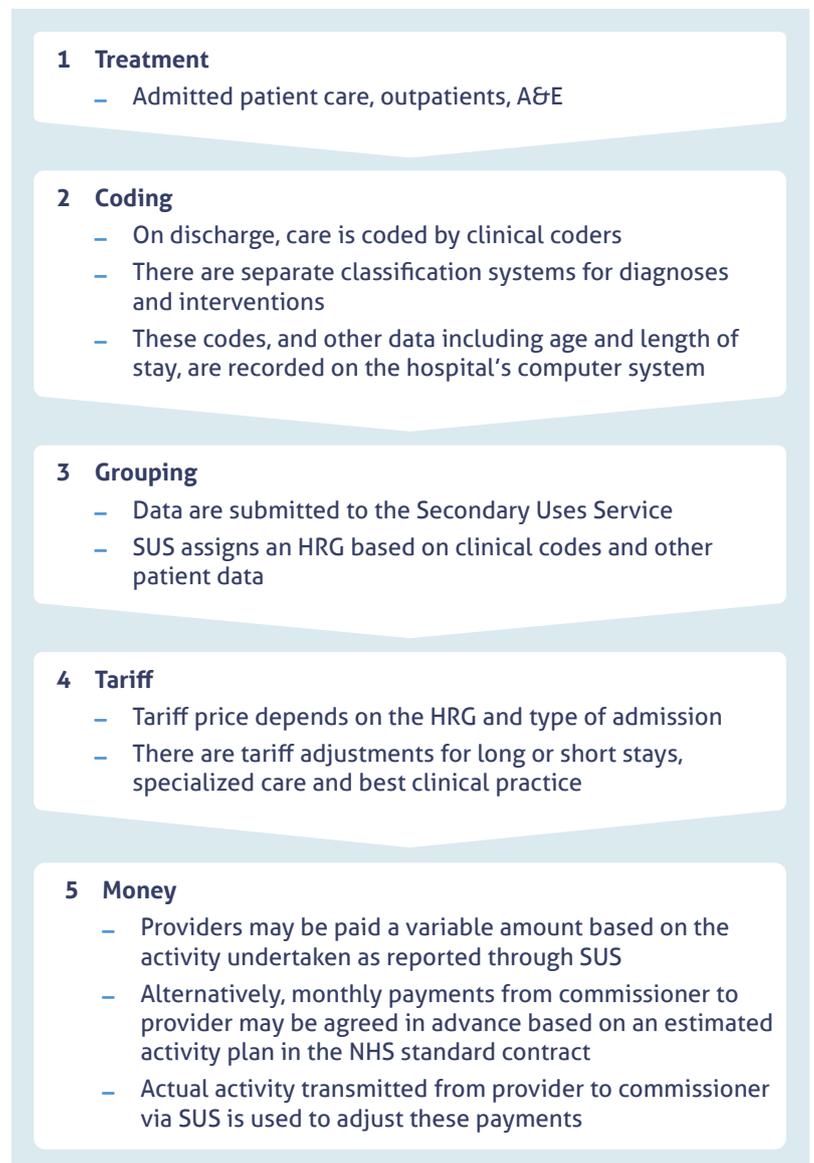
<sup>4</sup> NHS Improvement is the organisation responsible for overseeing foundation trusts and NHS trusts, as well as independent providers that provide NHS-funded care. NHS Improvement offers support to give patients consistently safe, high quality, compassionate care within local health systems that are financially sustainable.

sort of risk-share between provider and commissioner (National Health Service, n.d.).

The payment model covers A&E attendances, non-elective admissions (excluding maternity and transfers) and ambulatory emergency care. It is the new 'default' reimbursement model for emergency care but does not stand in the way of local systems that want to move faster towards other population-orientated payment models.

This approach is designed to provide greater stability and encourage providers and commissioners to focus on how to use resources most efficiently and effectively to improve quality of care and health outcomes. The approach shares responsibility for the resource consequences of increases in acute activity and the benefits of system-wide action to reduce growth in emergency care, and ensure that care takes place in the most appropriate setting.

**Figure 7**  
**Payment by Results (PbR) from treatment to payment**



Source: Department of Health, 2012. Note: SUS: Secondary Uses Services.

## Community and mental health

Putting mental health care on a level footing with physical illness has been a top priority for the NHS in England in recent years. The blueprint for improving mental health services was set out in 2016 in NHS England's Five year forward view for Mental Health, supported by an additional £1 billion investment and informed by the views and needs of thousands of patients, their families and medical professionals. The Long-Term Plan for the NHS reinforces this focus with a commitment for a further £2.3 billion increase in annual real terms investment by 2023-2024. Since 2015, spending has increased £10 979 million in 2015-2016 to £11 976 million at the end of financial year 2017-2018, around 13.7% of overall allocations to CCGs.

While almost two thirds of hospital activity are covered by activity-based payment through the national tariff, the predominant payment system for the remaining secondary care services has been through the agreement of a block contract used to reimburse around 90% of community services and two thirds of mental health care. Commissioners and providers can agree to prices and a payment approach locally for mental health and community services in line with the local pricing rules published by NHS Improvement. Pay-for-performance aspects have also been added to the payment system for mental health and community services through the Commissioning for Quality and Innovation (CQUIN) schemes.

The national currencies for mental health were introduced in 2012. These are needs-based currencies under the three broad diagnostic categories of psychotic, non-psychotic and organic presentations. However, only a small number of contracts have been agreed on the basis of such currencies. Currencies also exist for the Improved Access to Psychological Therapies (IAPT) service and are being developed by Child and Young People's Mental Health Services (CAMHS) (Marshall, Charlesworth, and Hurst, 2014).

The Mental Health Investment Standard was introduced in 2016 to try to ensure that CCGs increase spending on mental health in line with the overall increase in funding available to them. CCGs must report on their compliance with the standard.<sup>5</sup>

The National Tariff also proposed that blended payment would be the default payment approach for mental health services from April 2019. This combines a fixed payment with a variable element where activity exceeds planned levels, and an element linked to delivery of agreed outcomes.

The other key group of services not covered by a tariff payment system is community health services. Community health

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<sup>5</sup> The Mental Health Five Year Forward View (MH FYFV) sets out the plans for improving and expanding mental health care, which continues to be central to the NHS as part of the Long-Term Plan. The MH FYFV dashboard brings together key data from across mental health services to measure the performance of the NHS. The dashboard provides transparency in assessing how NHS mental health services are performing, alongside technical details explaining how mental health services are funded and delivered. <https://www.england.nhs.uk/mental-health/taskforce/imp/mh-dashboard/>

services are diverse in function and differ widely between localities across England. They include a wide range of services that are delivered at clinic or in patients' homes, including care for long-term chronic conditions, preventive services, and assessment and rehabilitation services, plus some inpatient community hospital services and hospice care. Together, these services accounted for 12% of NHS funding in 2014-2015 (Lafond, Charlesworth and Roberts, 2016).

A project is underway to test a community currency model with providers and commissioners. This work will draw upon data from the community dataset, which was introduced in October 2017, and is a nationally mandated dataset for all providers of community services. The currency model will be tested during 2019 and is focused on the changing needs of patients through their life-course.

### **Nursing and care home funding**

The funding of places in nursing and care homes in England is a complex area. The type of care provided in such homes is often a mix of health and social care. Whilst there is no legal definition of social care, previously published NHS guidance (Davies, n.d.) defines it as a social care need "that is focused on providing assistance with activities of daily living, maintaining independence, social interaction, enabling the individual to play a fuller part in society, protecting them in vulnerable situations, helping them to manage complex relationships, and (in some circumstances) accessing a care home or other supported accommodation".

State funding for social care needs is a local authority responsibility and is means tested. Therefore, if a person needs to go into a care home or nursing home for mainly social care needs and their income and savings fall above a certain threshold, they will have to meet the costs of their care through their savings or through the sale of their home.

Where the person has some nursing needs and lives in a nursing home, they will be entitled to some NHS funding. The money is paid directly to the nursing home, and from April 2018 the standard rate is £158.16 per week. For those people whose needs are deemed to be predominantly health related, they may be entitled to NHS Continuing Health Care funding, which will pay for the entirety of their care whether at home, a care home or nursing home (National Health Service, 2018c). A multidisciplinary assessment is made of the person to decide on the entitlement.

Various governments have committed to introducing an upper cap on the requirements for an individual to contribute to their social care and have also discussed new schemes to fund social care in the future. The current UK Government has committed to publishing a Green Paper on this topic in 2019.<sup>6</sup>

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<sup>6</sup> This is a forthcoming green paper for which no publication date has yet been decided <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-8002>

## 3 Discussion

### The current NHS is evolving to adapt its payment system to its stated objectives

The current NHS payment system has evolved greatly over the last decade and employs a mix of different payment methods across different services and sectors. Moves away from block budgets to activity-based payment approaches have improved provider productivity in the acute sector. However, block contracts are still the predominant payment mechanism for the community and mental health sectors. Moreover, the structure of incentives across services does little to support policy ambitions to shift care that does not need to be delivered in hospitals into a community setting, with the payment systems often giving conflicting signals. The predominance of activity-based payment in the acute sector, introduced at a time of long waiting lists, encouraged activity in hospitals; at the same time, block budgets in community services and capitated budgets in primary care offer little incentive to increase activity or enhance efficiency in these settings (Marshall, Charlesworth and Hurst, 2014).

Although a combination of methods is likely to be appropriate in most instances, the current combination of a case-based system for most acute care and block budgets in out-of-hospital services has provided a balance of incentives that are counter to the national ambition to provide more care out of hospitals and to treat mental and physical health services with parity. Equally, they do not provide incentives for prevention or early intervention.

New payment models are being developed and tested in local areas in line with the development of the various new models of delivering care. As an example, a version of capitation-based payment known as 'whole-population budgets' has recently been suggested to support these new models of care. However, arrangements for ongoing evaluation of these new payment systems and spreading of best practice are not currently clear, and must be developed and shared (Wright et al., 2017).

New models of care were proposed in the five year forward view are now in their third year and piloted by 50 vanguard areas in England. STPs published plans in 2017, and these plans will evolve into Integrated Care Systems over the next two years. The aim of these developments is to drive collaboration and more integrated care across providers to better meet the needs of local populations. These new ways of delivering care may require new ways of paying for care too. Under the current system, payments are made within organisational boundaries (Wright et al., 2017).

## Policy lessons across services

Although the ultimate purpose of the health care system is to improve patient outcomes, there is currently limited evidence for the impact on outcomes of financial incentives to providers. There has, however, been only limited experimentation and even scarcer robust evaluation. This is in part due to the fact that outcomes are far more difficult to measure and attribute than the processes of care. For something to be incentivized, it must be both measurable and directly attributed to the provider. Outcomes are often difficult to measure, distant in time from the care activity, and influenced by multiple determinants, including many outside the control of the health sector, making attribution to a specific provider difficult. There are also inherent risks to incentivising outcomes which need to be managed, including the impact on equity and equality of access to care.

Conceptually, the measurement of outputs should include the quality of care as well as the volume of care. However, measuring outputs in health care is complex, and there are concerns that quality differences are not effectively captured. Measures of efficiency of health services are therefore often a simple comparison of activity and cost, rather than quality-adjusted output (Marshall, Charlesworth and Hurst, 2014).

There is still limited evidence that the increasing attempts of pay-for-performance schemes to improve quality of care are actually able to do so, both in the NHS and at the international level (Marshall, Charlesworth and Hurst, 2014). Financial incentives are more useful in influencing processes of care rather than patient outcomes.

For the QOF scheme in primary care, there is a consensus that it improved processes as well as quality of care for chronic conditions. However, there is concern that this kind of financial incentive may have a detrimental effect on the intrinsic motivation of health professionals (Glasziou et al., 2012). Glasziou et al., (2012) found that motivation was reduced due mainly to the fact that professionals disputed the evidence base for one of the quality indicators used to assess them.

For activity-based funding in acute care, there is strong evidence that the tariff system has resulted in reductions in length of stay and increases in day cases across most groups of patients, providers and HRGs (Farrar et al., 2010). These changes came with a resource saving of around 1-3% over a five-year period and an increase in the number of spells of 3-9%. Overall, this evidence is broadly consistent with international evidence of similar DRG-based payment systems introduced in place of block budgets.

Moreover, since DRG-based systems require good information on costs, quality and outcomes, there is the risk that inaccuracies in cost data will result in reimbursement levels that do not reflect true underlying costs (Marshall, Charlesworth and Hurst, 2014).

Regarding BPTs, evaluations show mixed effects. There is clear clinical support for BPTs due to their promotion of evidence-based protocols. It is, however, unclear whether the financial incentives alone are sufficiently high to change care or significantly reduce variation (Gershlick, 2016).

### System objectives and other policy levers

The scale of change required in a payment system is hard to determine without clear objectives in mind. Figure 8 shows the difference in how many priorities were identified in the NHS for the tariff system compared with countries with similar DRG payment schemes.

**Figure 8**  
Policy objectives for DRG payment in European countries

	England	Finland	France	Germany	Ireland
Increase efficiency	√		√	√	√
Expand activity	√				
Enhance patient choice	√				
Increase patient satisfaction	√				
Reduce waiting lists	√				
Improve quality	√		√	√	
Control costs	√				
Ensure the fair allocation of resources (or funding ) across geographical areas and across and within health care sector	√	√	√	√	
Shift patterns of service provision away from historical patterns	√				
Encourage the development of new, cost-effective, treatment pathways	√				
Improve transparency of hospital funding, activity and management	√		√	√	√
Encourage providers to be responsible to patients and purchasers	√				
Cover costs of production		√			
Create a level playing field for payment to public and private hospitals			√		
Improve documentation of internal processes and increased managerial capacity, which would in turn improve efficiency and quality				√	
Establish link between activity and funding		√			√

Source: Reproduced with permission, O'Reilly et al., 2012.

Achieving so many objectives through the payment system will lead to an overly complex system that is ultimately unable to deliver on any of them (Wright et al., 2017).

The payment system can play an important – although limited – role in improving the quality of care and efficiency of services provision, but it cannot by itself overcome the many challenges that characterized complex care systems. Where payment mechanisms have improved quality and efficiency, the effect tends to be small. Their impact is also very dependent on the wider policy and delivery context.

A number of factors (e.g. organisational culture, relationships between organisations, and system-wide funding and demand pressures) can either undermine or enhance the impact of a payment system, and thus must be considered. Payment rules are just one lever among a range of tools that should be considered to maximize effectiveness (Wright et al., 2017).

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## Case study

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# France

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## Abstract

The French system encourages plurality in health care provision, which relies on a mix of public and private providers. This plurality, with a high share of private providers working under public insurance regulation, explains partly the relatively good results concerning waiting times and patient satisfaction. However, the high degree of autonomy and choice both for providers and patients together with primarily fee-for-service payments for health care providers requires careful regulation of prices and of the health care market to contain health expenditures and to tackle issues of care coordination, access and efficiency.

The level of remuneration of health professionals is partly the result of the power relations between the stakeholders. In a system where most health professionals are paid on a fee-for-service basis and where the social health insurance funds act as a single payer, the French experience shows that price regulation at the central level combined with macro-level expenditure controls is instrumental for steering health care providers. France has put in place successfully several mechanisms for controlling the fees for providers, services, medications, etc. at the national level. The regulation of prices for major health services and medications reduces financial burden of care for patients and allows improved access for the whole population. Private providers contracted with public payers under regulated fees contribute to easing the pressure on public resources and satisfying the increasing demand. However, the French experience also shows that concentrating only on provider fees, without questioning the quality or appropriateness of services, is not enough for cost containment in the longer term. Under fee-for-service, and activity-based payment in hospitals, providers tend to compensate for (potential) lost revenues by increasing the volume and intensity of their services.

Therefore, increasingly, the attention is turned on alternative modes of payment with development of value-based contracts and bundle payments to incentivize quality of care both in the ambulatory and hospital sector. In the hospital sector, there is also a growing tendency to use prices for encouraging treatments, which are considered as "better practice" or discouraging "low value care" rather than paying for any volume of activity.

# 1 Background on the French health system

## Health status

France is a high-income country with relatively good health outcomes. Compared with other industrialized countries, France ranks high in terms of life expectancy both at birth and at advanced age. In particular, older persons remain in better health with one of the highest life expectancies at the age of 65 over among OECD countries (24 years for women and 19 years for men) (OECD, 2018a; 2018b). Cancer survival rates, which are often used as a more direct indicator of the performance of the health care system, are also high compared with most other European countries (Eurocare, 2014). At the same time, France suffers from a high rate of premature male deaths from accidents and unhealthy habits (smoking and alcoholism), and social and geographic inequalities in health remain substantial (Lang and Ulrich, 2017).

## Health care financing

Health care is financed via a social insurance system where the coverage is effectively universal. Health-related costs are covered by a mixture of compulsory social health insurance (SHI) and private complementary health insurance (CHI) schemes. The benefit package is comprehensive, uniform, and of overall good quality. In addition, France has one of the lowest levels of out-of-pocket payments among OECD countries (OECD, 2017).

Enrollment in SHI depends on the employment status and is automatic for workers (covering their spouses and dependent children). Consumers cannot choose their scheme or insurer and cannot opt out. Since 2000, there is a state funded scheme, Universal Medical Coverage, for very-low income groups (*Couverture Maladie Universelle*, CMU). There are no competing health insurance markets for the core health coverage in France. There is however a very competitive private complementary insurance market with about 95% of the population owning private CHI. This is due to the fact that patients need to pay part of the cost for almost all services, including doctor consultations, hospital care and prescriptions. CHI is mostly used to cover the share of cost left to patients for services included in the public benefit basket.

Funding of the SHI comes mainly from income-based contributions of employers and employees, and increasingly by taxes on a broader range of income with additional revenues from earmarked taxes on tobacco, alcohol, pharmaceutical companies, etc.

## Health care provisions

Health care provisions rely heavily on private providers. Ambulatory care is mainly provided by self-employed private health professionals including physicians (general practitioners [GPs] and specialists), nurses, dentists and medical auxiliaries, working in their own solo practice or in health/medical centres and hospital outpatient departments. More than half of all surgeries and one fourth of obstetric care are provided by private-for-profit hospitals that are contracted with and paid by the SHI fund.

Historically, health care is organized around four principles delineated by law: confidentiality of medical information; freedom of practice for physicians; patient's free choice of provider; and office-based fee-for-service (FFS) practice in the ambulatory sector. Doctors are free to choose where and how they practice. Patients have free access to any physician or any facility with no limit on the frequency of visits. There is very little control of access to hospital and specialist care. While some of these principles have been challenged with recent reforms, there is still a high degree of independence and choice both for providers and patients.

## Regulation and management

The regulation and management of the health care system is mainly divided between the state (parliament and government with several ministries) and the statutory health insurance funds. The state/government sets out sector-level expenditure targets, determines the levels of health care provision and training, regulates care quality, and defines priority areas for national programs. On the other hand, the statutory health insurance funds play the main role in defining the benefit baskets; regulating the prices of procedures, drugs, and devices, which will be reimbursed to patients; and defining the levels of copayment. Statutory health insurance oversees setting tariffs for health professionals in private practice via collective negotiations with professionals' unions.

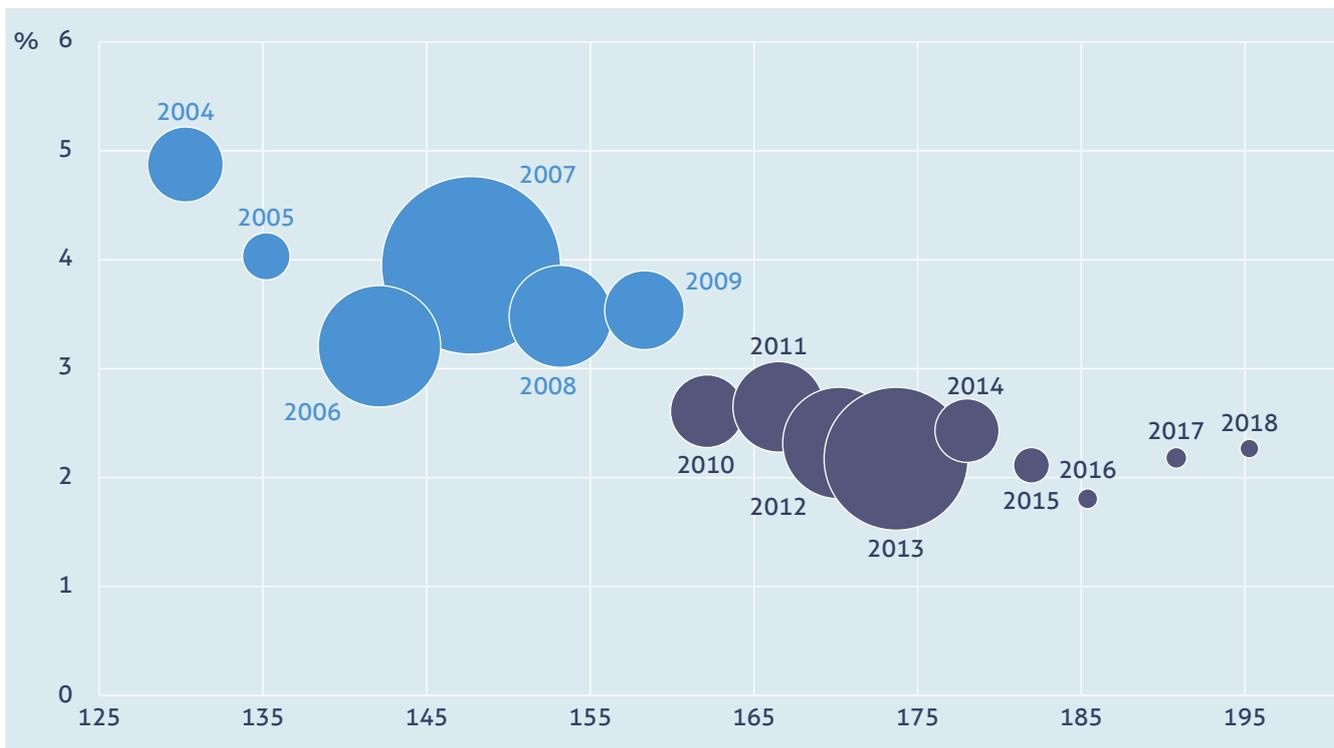
## Macro-level cost containment

Health is the second largest area of public spending in France. Health care and other social security deficits have been a persistent problem over the course of the 2000s. The specification of an overall expenditure target for health care, known as the National Objective for Health Insurance Spending (*Objectif National de Dépenses d'Assurance Maladie*, ONDAM), has been a key aspect of the French strategy to control health spending. This involves setting an a priori global budget for health each year. Traditionally, the French government has not played a proactive role in controlling overall health care spending, with independently operated compulsory insurance funds responsible for managing their own spending. ONDAM marked a significant break from this tradition and represents the reassertion of the government's control of health care spending (Barroy et al., 2014).

ONDAM is specified in monetary terms as the total amount of health spending for the forthcoming calendar year and gives all stakeholders a precise objective in terms of spending. The monetary ONDAM target is used to signal the percentage of health spending growth that the government is willing to accept in any given year. ONDAM's overall target is split into three sub targets for the main health service providers: ambulatory care, hospitals, and medico-social facilities. The budgets for hospital and medico-social facilities are further divided into two envelopes, one for public and private non-profit hospitals and one for private for-profit ones.

Initially set as objectives, ONDAM targets became binding over time with a dedicated committee following the evolution of health expenditures toward more responsibility and powers for the health insurance funds contain costs. Despite the initial uncertainty of its influence, the budgetary processes ushered in by ONDAM appear to achieve better containment of health expenditures as well as better working relations between stakeholders. The growth rate of health expenditures has been decreasing for a decade, and ONDAM targets have been successfully met since 2010 (Figure 1).

**Figure 1**  
Evolution of health expenditure growth against ONDAM targets



Source: CCSS, 2018. Note: The abscissa shows expenditure in billions of euro and the ordinate shows growth rate. The size of each bubble represents the extent of the deficit (in light blue) or surplus (in dark blue) with respect to the ONDAM target voted in the parliament. In 2018, total expenditure of health insurance funds was €195.2 billion, representing a constant growth rate of 2.3%, which is slightly under the set target. In comparison, the ONDAM target was 4% in 2004, while the actual growth rate observed was 4.9%.

## 2

### Price setting for ambulatory services

Health professionals working in the ambulatory sector and those working in private hospitals contract with the health insurance fund and are paid on a FFS basis. The prices of the services (consultations and procedures) provided by these professionals are set at the national level by the SHI fund.

#### Setting fees for primary care and outpatient specialist services

Primary care and outpatient specialist services are mostly funded on a negotiated FFS basis. However, recent initiatives from the SHI fund have tweaked the funding by introducing a pay-for-performance (P4P) scheme that is completed by structural bundled payments. The fees are set through formal negotiations between the union of statutory health insurance funds (UNCAM), the government, the union of complementary health insurance schemes (UNOCAM) and unions of health professionals, which led to a national collective agreement (*convention nationale*), a contract that aims to regulate the expenditure and activity of the ambulatory sector. These negotiations have been national since the 1970s and lead to uniform fees corresponding to official tariffs for reimbursement by SHI (Régereau, 2005). UNCAM first provides a proposal which takes into account financial constraints set by the sub-target of ONDAM for the ambulatory sector. The proposal sets the principles and modalities for respecting the expenditure target (notably, modification of tariffs or fees for services) as well as a range of measures for incentivizing better medical practice to achieve the priorities set by the SHI fund (such as better geographical and financial access to care, improving care coordination, health prevention and promotion and quality of care) (*Union nationale des caisses d'assurance maladie et al.*, 2016).

The UNCAM proposal is discussed with different provider unions. Medical professionals' unions exert considerable power through lobbying in the parliament. The Ministry of Health therefore plays a significant role in the negotiations, which can be complicated between UNCAM and unions of physicians, in particular. Unions obtaining more than 30% of the votes from their professional groups can sign the agreement on their own, while those obtaining between 10% and 30% of the votes need to sign the agreement together with the other unions. Agreements for each professional group cover a period of five years. At the same time, regular amendments occur (at least annually for doctors) to adjust for changes demanded by the Social Security Finance Act, which sets the ONDAM expenditure targets and defines new provisions and measures to reach the targets each year.

Traditionally the fees have been increased regularly, mainly by taking into account inflation and depend on the bargaining power of the professional unions (Figure 2). In 2011, the SHI fund had introduced a P4P scheme (see below) and froze the prices until 2016. However, in the national agreement of August 2016 (just before the presidential elections), physicians obtained a significant increase in tariffs (from €23 to €25 for a regular GP consultation and from €28 to €30 for a regular consultation with most specialists). This agreement introduced higher fees for consultations with complex patients (a tariff reaching €50) and very complex patients (with a tariff of €60) (CNAM, 2018c). These consultations are dedicated to patients with multiple, complex and unstable conditions, and to specific services with strong public health stakes (such as screening and prevention). The visits that can benefit from these new tariffs are defined by the SHI fund in the national agreement. Complex consultations include, for example, visits for contraception and prevention of sexually-transmitted diseases for teenagers, while very complex visits include, for instance, initial visits to organize treatments for severe chronic conditions, such as cancer and neurodegenerative disorders (*Union nationale des caisses d'assurance maladie* et al., 2016). Since 2016, the SHI fund has also offered a lump-sum payment (of €50 000) for physicians setting up their practice in a medically underserved region with a complementary payment of up to €5000 per year to compensate low revenues in less populated areas.

All medical professionals are subject to the terms of the national agreement, except if they explicitly choose to opt out (less than 1% of all physicians), in which case their consultation fees are not reimbursed at all. The SHI fund pays the social contributions, including the pension, of physicians who agree to charge patients on the basis of the nationally negotiated fees (called sector 1 contractors). About 75% of private physicians are sector 1 contractors and are generally not allowed to charge higher fees with very few exceptions<sup>1</sup> (France Assos Santé, 2017).

Some physicians and dentists are allowed by SHI to charge prices higher than the regulated fees (sector 2 contractors) based on their level and experience. Doctors working as sector 2 contractors are free to charge higher fees, but must purchase their own pension and insurance coverage. The creation of sector 2 contractors in 1980 aimed to reduce the cost of social contributions for the SHI fund, but did not have the expected impact, and the demand for the sector was much higher than predicted. Consequently, access to sector 2 has been limited since 1990; each year, only 1000 new doctors are allowed to work in sector 2.<sup>2</sup>

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1 When patients do not respect the gate-keeping system (*médecin traitant*) developed under the 2004 Social Security Finance Act to support coordinated care pathways, the physician is allowed to charge a supplemental fee (maximum 17.5% of the nationally negotiated fees) that complementary insurances are not allowed to cover.

2 The attributes of doctors allowed to work in sector 2 are listed in the national agreement and include doctors with previous public hospitals positions (former medical chief resident, former hospital assistant, hospital practitioner appointed permanently, and part-time practitioner with at least five years of experience) and physicians or surgeons in the army.

The amount exceeding the regulated price (balance billing) is not covered by SHI but can be covered by private CHI. Nevertheless, the generosity of CHI contracts varies largely with different price limits on extra billing. Around one quarter of physicians are sector 2 contractors, but this proportion shows strong variation across regions and medical specialties and is higher for specialists (43%) than for GPs (10%) (France Assos Santé, 2017).

**Figure 2**  
Evolution of ambulatory care spending

Type of spending	2016 (in million €)	2017 (in million €)	Percentage change (2016-17)	Contribution to growth (%)	Share of spending (%)	Mean annual growth between 2006 and 2016 (%)
<b>Medical fees</b>						
General practitioners	5889	6054	2.8	8.1	8.4	2.6
Specialists	9677	10008	3.4	16.3	13.9	2.9
Midwives	228	248	8.6	1	0.3	10.4
Dentists	2762	2807	1.6	2.2	3.9	1.4
<b>Allied health professionals' fees</b>						
Nurses	5384	5631	4.6	12.2	7.8	8.1
Physiotherapists	3233	3325	2.8	4.5	4.6	4.6
Speech therapists	605	628	3.8	1.1	0.9	5.8
Orthoptists	67	70	4.1	0.1	0.1	6.2
<b>Medical laboratories</b>						
Total	2899	2935	1.2	1.8	4.1	1
<b>Health products</b>						
Drugs	19361	19595	1.2	11.5	27.2	1.4
Medical devices	5395	5614	4.1	10.8	7.8	6.9

Source: CCSS, 2018. Based on data from SHI (*Caisse nationale de l'Assurance Maladie, Régime général*).

## Regulation of prices in sector 2

Prices set by sector 2 physicians above the regulated tariff may or may not be covered by CHI depending on the contract. This means that for some patients, out-of-pocket payments to see a physician may be too high, which raises concerns both on equity of access to care and health care expenditure growth, since unregulated prices could be highly inflationary. Therefore, the SHI fund has introduced several regulatory mechanisms and tools to control the prices in sector 2.

First, for emergency care and when patients are covered under low-income schemes (*couverture maladie universelle complémentaire*, CMU-C, or *aide au paiement d'une complémentaire santé*, ACS), balance billing is not allowed. These schemes are partly funded by the state with the objective of reducing the burden of cost-sharing for these populations. Sector 2 doctors have to charge national/ negotiated tariffs to patients with CMU-C and ACS.

Second, the social security code (Section L162-1-14-1) as well as the medical code of ethics impose that balance billings have to be a reasonable amount (*tact et mesure*). Until recently, there was no regulatory or legislative definition of the term "*tact et mesure*" or what is considered to be a reasonable amount. In 2012, under pressure from the SHI fund, the French national medical council (*Conseil national de l'ordre des médecins*, CNOM) recognized it as a fee exceeding three or four times the regulated prices.

More recently, SHI introduced a new contract in order to regulate prices charged by sector 2 physicians: "controlled tariff option" (*option de pratique tarifaire maîtrisée*, OPTAM), which is a yearly and optional contract. Physicians who choose this contract commit to freeze their fees (at the average of the three previous years) and not to charge more than double (100%) the regulated tariff. They are also asked to perform a share of their services at regulated tariff levels. In return, they receive a bonus proportional to the share of their activity respecting the rules. There is also an option with similar modalities for specialists who performed at least 50 surgical or obstetrical procedures/year in private practice or in hospitals (*option de pratique tarifaire maîtrisée chirurgie et obstétrique*, OPTAM-CO). In 2017, more than 12,000 doctors, representing close to 40% of sector 2 contractors, have signed this contract (Foult, 2017).

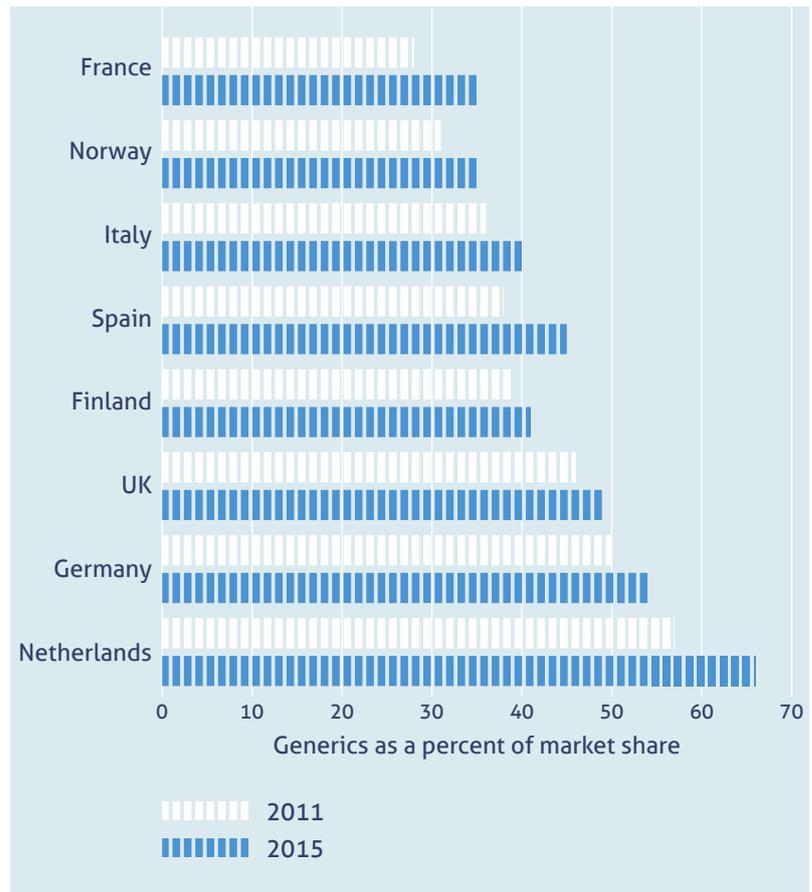
Penalties exist for physicians who do not comply with the requirements of their sector. They include an adjournment of the payment of social contributions by SHI for physicians in sector 1 or the adjournment of the right to extra bill for physicians in sector 2.

## A progressive shift towards value-based payment

While the existing system, based on collective negotiations, can be considered as effective for controlling prices of services, it is not entirely effective for assuring cost containment in the ambulatory sector. Overall, between 2006 and 2016, physician revenues have increased on average 2.8% annually, which is largely above inflation based on the consumption prices/index (Figure 2). Physicians appear to increase the volume of their services for achieving a target income. Increasingly, the SHI fund questions the value or quality of services provided with a progressive development of value-based payments in primary care. Given the high level of freedom of choice for patients, supporting GPs as gatekeepers in the system to improve both the quality and the efficiency of the care provision has been an important pillar of reforms in the past decade.

Since the 2005 national agreement, GPs have committed to improve the care coordination of their patients, promote prevention and improve their patients' prescription habits by respecting guidelines, reducing the overall volume of prescriptions and increasing generic prescriptions (which is very low in France – see Figure 3). In return, they have benefited from an increase in their consultation fees. However, these objectives were non-binding for individual physicians and have therefore had limited impact on GPs' practice. Therefore, in 2009, SHI introduced P4P contracts for improved individual practice (*contrats d'amélioration des pratiques individuelles*, CAPI) for GPs in an attempt to enhance and support the quality of primary care and more efficient prescribing. The development of these contracts was facilitated by the 2004 reform introducing the preferred doctor scheme, which enabled the identification of a patient list per physician. The contracts, initially proposed to primary care physicians and signed on a voluntary basis by individual GPs, had the same objectives in terms of improving clinical quality of care and encouraging prevention and generic prescription, but did not alter the existing FFS scheme. Participating physicians received additional remunerations on top of their normal FFS income if they met the targets set: up to €7000 annually if all targets were achieved or proportionally to their progress if objectives were not fully achieved (Bousquet, Bisiaux and Ling Chi, 2014). Despite a lack of evaluation of the impact on outcomes and costs, SHI decided to extend the scheme. It was generalized to all GPs in the 2011 national agreement, which stipulated that the payment of primary care providers could be related to their performance. The P4P scheme was renamed "the payment for public health objectives scheme" ("*rémunération sur objectifs de santé publique*", ROSP) and extended to other physicians.

**Figure 3**  
Market share of generic drugs in selected countries



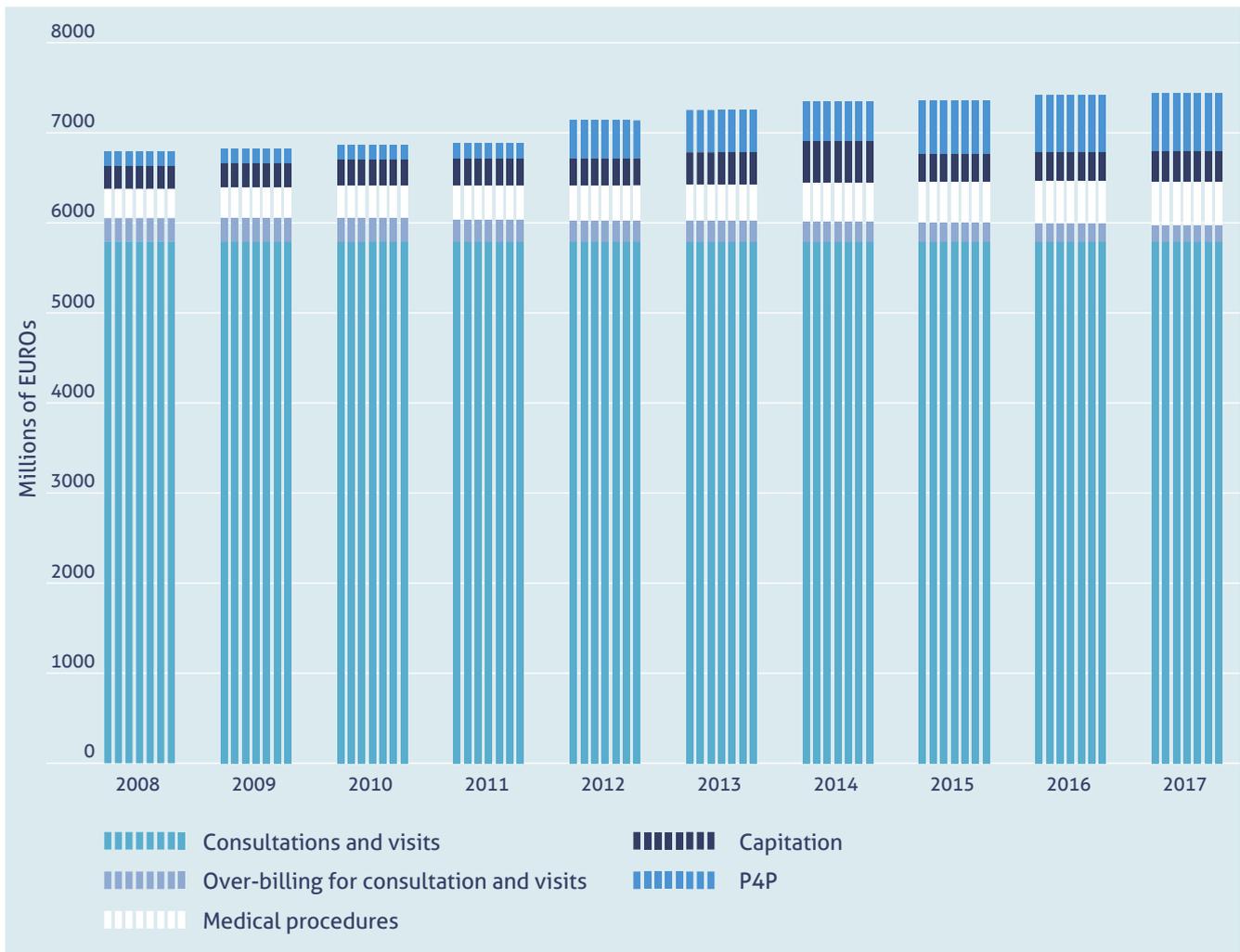
This P4P scheme represents a significant change in paradigm, as this new P4P scheme has officially replaced the traditional increase in the FFS tariffs, which were regularly obtained by physicians without being accountable individually for their results. This new scheme has been progressively extended to specialists, starting with cardiologists, gastroenterologists and endocrinologists, and now covers all physicians who signed the national collective agreement of 2016. However, physicians are allowed to opt out by writing to their local health insurance fund in the three months following the national collective agreement (*Union nationale des caisses d'assurance maladie et al., 2016*). There are 29 indicators in the latest version of the RO SP scheme (25 are calculated from the claims data and four rely on physicians' own statements). Initially the list included structural indicators (mostly related to organization of the office practice), but they now only focus on medical practice in three areas: prevention (for instance counseling for smoking cessation or vaccination) and screening (in particular for cancer); follow-up of chronic disorders (such as the follow-up of cardiovascular risk); and efficiency of drug prescriptions (with the objective of reducing inadequate prescribing and increasing generic prescriptions) (CNAM, 2018c). Indicators can vary according to the type of doctor involved (GP for adults or children, cardiologist, gastroenterologist or endocrinologist). Targets are fixed during the national collective negotiations between the stakeholders based on national good practice

guidelines or taking the average practice as baseline if there is no such guideline. There is no penalty for physicians who do not reach the targets.

It is difficult to make a conclusion on the cost efficiency of the P4P scheme in France since there is no proper evaluation of the reform. The national health insurance fund reports some improvements, in particular, concerning colorectal cancer screening and antibiotics prescription. However, it is difficult to disentangle the effect of the scheme from other programs introduced recently to improve the quality of care such as national awareness campaigns for cancer screening. The total annual cost of the ROSP scheme reached €250 million in 2017, with the average annual sum earned through that scheme reaching €4522 for GPs, €1726 for cardiologists and €1436 for gastroenterologists (CNAM, 2018c). While the introduction of ROSP appeared to be cost-neutral initially, with slower increases in prices and volumes, it is not clear yet what will be the impact of the latest increases in tariffs on overall expenditure. Therefore, while there has been a progressive shift towards more value-based payment with an annual growth rate of 9.1% in SHI spending dedicated to P4P between 2012 and 2016 and an increased number of physicians covered by P4P schemes, this still represents a small part of physician income (Figure 4).

In the 2016 national collective agreement with physicians, structural indicators previously including the ROSP scheme became part of a specific bundled payment for all physicians whatever their medical specialty. The bundle is divided in two parts: one for improving the organization of office practice (in particular the development of electronic records), and the other for providing better services to patients (such as participation in training, patient education, etc.; see Annex for the list of indicators used). Physicians earn a bundled payment, which can reach up to €1750 yearly, if they meet all the indicators. The total bundle is expected to increase to €4620 over 2019-2020 (CNAM, 2018b).

**Figure 4**  
Share of P4P in GP revenues: evolution between 2008 and 2017



Source: DREES, 2018.

### Setting fees for medical ambulatory procedures

Medical ambulatory procedures are funded on a FFS basis similarly to consultations and are also subjected to the same regulations of over-billing. They account on average for about 50% of the fees (revenues) received by private providers (CNAM, 2018a). However, since 2005, the prices of ambulatory procedures have been valued separately from consultations. The first step was the creation of a French classification of medical procedures (*classification commune des actes médicaux*, CCAM) defining the estimated time and costs of performing each procedure in order to assign a tariff. This classification has been developed during nearly a decade. The objective was to promote equitable fees for medical procedures for all doctors and between different specialties in order to avoid the selection of procedures based on their profitability (Bras, Vieilleribiere and Lesteven, 2012).

CCAM currently covers more than 8000 medical procedures and includes imaging procedures, technical medical procedures (such as diagnostic procedures), surgical, obstetrical and dental procedures as well as procedures of anatomo-cytopathology. Each act is hierarchized according to a methodology partly based on the Resource-Based Relative Value Scale (RBVRS) developed in the US for physician services (Hsiao et al., 1988). The tariff of each medical act in CCAM is calculated by adding an estimated cost related to medical work (*coût du travail medical*) to an estimated cost related to office practice (*coût de la pratique*). The cost related to medical work is expressed as a global score (*score travail*) and takes into account the effort to perform the procedure (time, stress, mental effort and technical skills) for a regular patient. This score is converted into a monetary value in euros by setting a conversion factor. Its value is set in the national collective agreement between UNCAM and health professionals, similarly to consultation tariffs. The costs related to medical practice cover structural costs supported by health professionals (staff, rent, social contributions, etc.) in each medical specialty (Bras, Vieilleribiere and Lesteven, 2012).

This complex system for fixing the prices of medical procedures has faced several difficulties. First, strong pressure from the unions of health professionals resulted in a situation where tariffs set for new procedures via this classification were never lower than the previous ones even when the cost scale from the classification suggested lower tariffs. Second, there has been no regular update of the estimated costs to take into account evolutions in medical practice and technology over time, except for imaging procedures. Third, the number of medical procedures considered in France appears important in comparison to other countries (for instance more than 8000 vs. 5200 in the current revision of the Australian classification of medical procedures) (Task Force "Réforme du financement du système de santé", 2019). In 2016, the national collective agreement decided that CCAM should be revised. A new commission is now in charge of grading medical procedures within CCAM and reducing the delays in registration of new procedures (Union nationale des caisses d'assurance maladie, 2016).

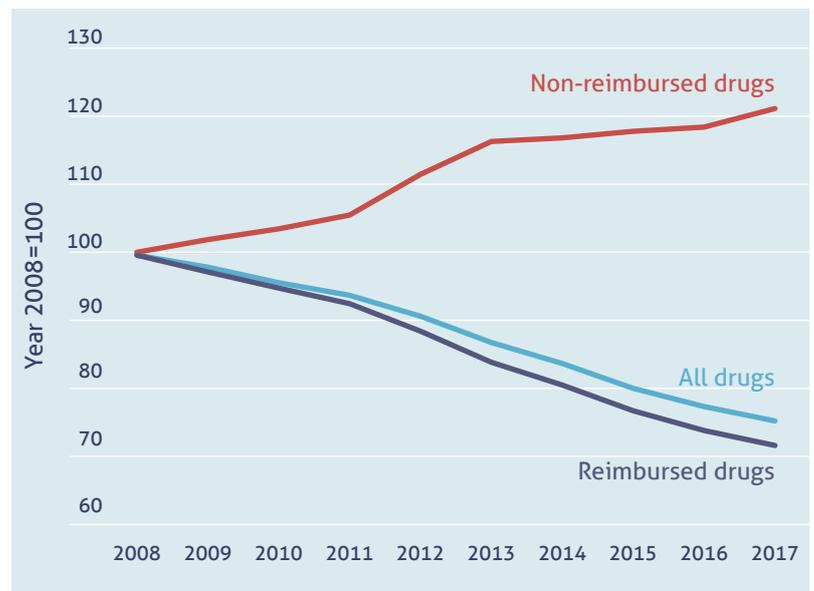
### Setting prices of drugs and medical devices used in ambulatory settings

The prices of drugs and medical devices are regulated through multiannual framework agreements between the state, which is represented by the Economic Committee for Health care products (*Comité économique des produits de santé*, CEPS), and the pharmaceutical industry since 1994 (Grandfils, 2008). The agreement defines common objectives for market trends (in terms of expenditure) as well as price setting mechanisms. The latest agreement was signed in 2016 for three years. In the frame of this agreement, prices of drugs are negotiated between each pharmaceutical company and CEPS. Prices are re-evaluated every five years according to similar modalities. The main elements that are taken into account in the negotiations include the added therapeutic value of the drug (*amélioration du service médical rendu*, ASMR), which is measured in comparison to the clinical benefits of existing drugs or therapies in the market and varies from 1 (the highest added therapeutic value) to 5 (the lowest therapeutic value), as well as its cost-effectiveness (since 2012), as assessed by the National Health Authority (*Haute autorité de santé*, HAS). In price negotiations, the prices of other drugs with the same therapeutic objective and the expected or observed volumes of sales are also taken into account. If there is no agreement between the two parties, CEPS sets unilaterally the price of drugs, but pharmaceutical companies benefit from some guarantees for drugs with a significant clinical added value. For drugs with an added value of 1, 2, 3 or in specific cases 4, the price set cannot be lower than the price in four reference European markets (Germany, Spain, Italy and the UK). This guarantee is to make France an attractive location for the early marketing of innovative drugs (Cour des comptes, 2017).

The price of a drug is set before the decision to include it (or not) in the public benefit package. To be reimbursed by the SHI fund, drugs have to be evaluated and registered in a positive list (*liste des spécialités pharmaceutiques remboursables*). The prices are defined by the Ministry of Health based on the advice from HAS and CEPS, while the reimbursement rate (65%, 30%, 15% or 0%) is defined by the SHI fund based on the therapeutic value of the drug (*service médical rendu*, SMR). SMR is assessed by HAS and takes into account the severity of the illness targeted by the drug, its effectiveness, its impact on public health and its side effects with regards to all other drugs or treatments targeting the same health condition. Traditionally, complementary insurance funds covered the remaining costs for patients of any reimbursed drug. Since 2012, the SHI fund encourages (with tax returns for responsible contracts) the CHI funds to reimburse only the cost of drugs with a major and important SMR, but the coverage of costs by CHI varies

significantly depending on the type of contract chosen by the beneficiary. For drugs reimbursed by SHI, the price set by CEPS serves as a basis for reimbursement, while the prices of drugs that are not included in the benefit package are not regulated. Between 2008 and 2017, the prices of drugs not reimbursed increased by about 20%, while the prices of drugs on the positive list (reimbursed) dropped by about 30% (Figure 5).

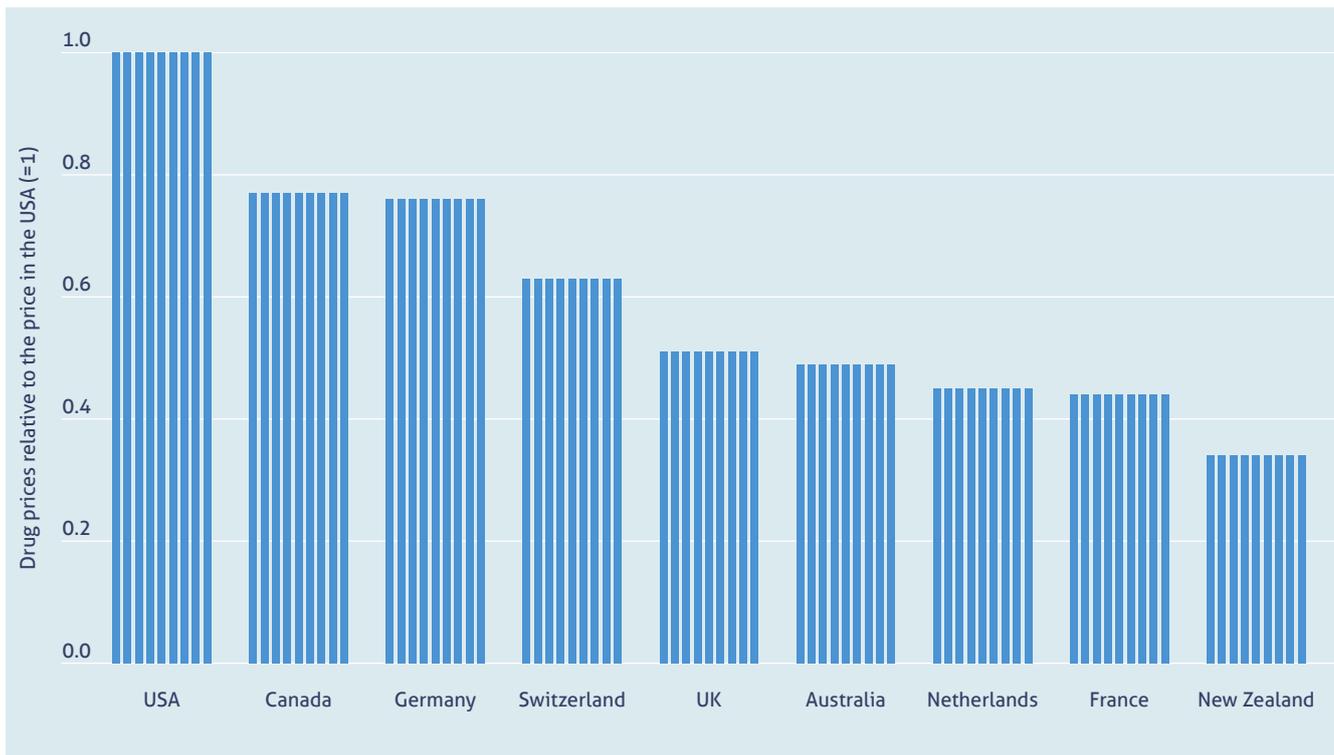
**Figure 5**  
Trends in drug prices over time (Price in 2008=100 as reference)



Source: DREES, 2018.

Therefore, this price setting mechanism in France appears to be successful, since drug prices in France are relatively low in comparison with other OECD countries (Figure 6).

**Figure 6**  
Drug prices for the 30 most commonly prescribed drugs,  
2006–2007



Source: Commonwealth Fund, 2019. Note: USA prices are set as reference at 1.0

### Definition of prices of pharmaceuticals and medical devices used in hospitals

The prices of hospital drugs were set freely via negotiations between pharmaceutical companies and individual hospitals without any regulation until 2004. Therefore, the same drug could have different prices in different hospitals depending on the hospital's negotiating power. With the introduction of activity-based payment (ABP), most drugs are now included in the tariffs of the diagnosis-related groups (DRG). While their price is not directly regulated and is still negotiated between the pharmaceutical industry and hospitals, drugs are reimbursed to hospitals by the health insurance fund in the limit of a maximum fixed tariff (*tarif de responsabilité*), which becomes in practice the regulated price. This tariff is set according to modalities similar to those used to set the prices of drugs in the ambulatory sector (through the involvement of CEPS).

Furthermore, there are some specific measures for regulating the costs of very expensive and innovative drugs. Their significant cost relative to DRG tariffs as well as the need for assuring quick access to innovation justified the development of a list of drugs for which payments are made on top of DRG tariffs. These drugs (mostly for cancer) are included on a specific list (*liste des médicaments facturables en sus des prestations d'hospitalisation*) based on strict criteria (a strong

added therapeutic value of the drug, a cost superior to 30% of the DRG tariff, and an indication for less than 80% of the patients included in the DRG). A specific targeted budget for this list of drugs is set in ONDAM, and the prices of these drugs are regulated via negotiations between each pharmaceutical company and CEPS mainly using European prices (in Germany, Italy, Spain and the UK) as a reference. While this procedure has been created as a temporary option for funding innovation (once a drug is part of regular treatment, it should be included in the DRG tariff), in practice the number of exclusions from the list overtime is low (Gandré, 2011).

Expenditure for these drugs and devices has increased by almost 20% between 2011 and 2015 (18.5% for drugs and 23% for medical devices) to reach €4.8 billion (5.3% of total hospital care spending). Rising spending is mostly driven by the public sector and by drugs for the treatment of cancer and autoimmune diseases. While there were 150 drugs on the list in 2015, 10 drugs accounted for two thirds of the total expenditure associated to the list (DREES, 2017).

## 4

### Price setting for acute hospital care

#### Hospital context

The French hospital sector is characterized by a high number of public and private providers. Patients can freely choose between them without a referral. While 90% of the hospital expenditure is funded through public health insurance, one third of this expenditure occurs in private-for-profit hospitals.

Public hospitals represent 60% of hospitals and 65% of all acute inpatient beds. They have the legal obligation of ensuring the continuity of care, which means providing 24-hour emergency care, accepting any patient who seeks treatment, and participating in activities related to national/regional public health priorities. The private-for-profit sector represents 25% of all inpatient beds, but 45% of surgical beds. The market share of private hospitals depends heavily on the type of hospital activity: more than half of all surgery and one fourth of obstetric care are provided by private-for-profit hospitals. Their market share goes up to more than 80% in some areas of elective surgery, such as eye surgery (cataract in particular), ear surgery, and endoscopies. In contrast, certain complex procedures are carried out almost exclusively by public hospitals, for example in the case of burn treatments (92%) or treatment of patients with surgery of serious multiple trauma (97%).

Until 2004, public and private hospitals were paid under two different schemes. On the one hand, public and most private not-for-profit hospitals had global budgets mainly based on historical costs, making little adjustment for hospital efficiency.

On the other hand, private for-profit hospitals had an itemized billing system that was inflationary with daily tariffs covering the cost of accommodation, nursing and routine care, and a separate payment based on the diagnostic and therapeutic procedures carried out, with separate bills for costly drugs and medical devices. In addition, doctors working in private hospitals are paid on a FFS basis unlike those working in public hospitals who are salaried.

The difference in payment between public and private hospitals has always been a subject of conflict. Public hospitals considered global budgets as an instrument of rationing, which strangled the most dynamic hospitals and was insensitive to changing demand. Private hospitals advocated that global budgets rewarded inefficiency and fair benchmarking; they believed that they would be more efficient and increase their market share under activity-based payment. Therefore, the introduction of ABP (*tarification à l'activité*, or T2A in French) in 2005<sup>3</sup> to pay for acute hospital services was very welcomed initially. The major objectives of ABP were to increase hospital efficiency, to create a 'level playing field' for payments to public and private hospitals, and to improve the transparency of hospital activity and management. The initial objective of shifting to ABP for funding rehabilitation facilities and psychiatric hospitals has been postponed several times due to difficulties in implementation and problems faced in the acute sector.

### Price setting in acute care hospitals: the DRG payment model

Under ABP, the income of each hospital is linked directly to the number and case-mix of patients treated, which are defined in terms of homogeneous patient groups (called GHM in French, *Groupe Homogène de Malades*). The classification system used in France was inspired initially from the US Health Care Financing Group classification (HCFA-DRG) but adapted to the French system and modified regularly over the years. The GHM classification has changed three times since the introduction of T2A, passing from 600 groups in 2004 to 2680 today (in 2018). The current version (version 11), introduced in 2009, significantly complicated the classification with four levels of case severity applied to most GHM, using information on length of stay (LOS), secondary diagnoses and age.

The institution responsible for developing the patient classification system and calculating prices is the Technical Agency for Hospital Information (*Agence technique de l'information sur l'hospitalisation*, ATIH). ATIH was created in 2002 and is an independent public administrative institution co-funded by the government and public health insurance funds. It has an advisory committee, involving representatives of public and private health care facilities, which make suggestions based on their experiences with the system.

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<sup>3</sup> Implemented progressively in the public sector between 2004 and 2008.

## Definition of GHM tariffs

The information for calculating prices (reference costs) comes from the hospital cost database (*Etude nationale de coûts à méthodologie commune*, ENCC), which provides detailed cost information for each hospital stay from voluntary hospitals. Until 2008, the cost database covered only 3% of public and private non-for-profit hospitals (about 40). The number of participating hospitals has increased slightly since 2008. In 2018, the ENCC covered 135 hospitals (of which 52 are private-for-profit) (ATIH, 2017).

GHM reference costs are updated annually by ATIH on the basis of information from the hospital cost database. However, there is always a time lag of two years between the year of the data and the year of the price application in hospitals. For example, hospital costs data from the years 2013, 2014, 2015 (three-year average) were analyzed during the year 2016 in order to define GHM prices for hospital payments in 2017.

GHM prices (tariffs) are set at the national level based on average reference costs by GHM calculated separately for public and private hospitals. Therefore, there are two different sets of tariffs: one for public (including private-non-profit) hospitals and one for private for-profit hospitals. Moreover, what is included in the price differs between the public and private sectors. The tariffs for public hospitals cover all of the costs linked to a stay (including medical personnel, all the tests and procedures provided, overheads, etc.), while those for the private sector do not cover medical fees paid to doctors (who are paid on a FFS basis) or the cost of biological and imaging tests (e.g. scanners), which are billed separately. The initial objective of achieving price convergence between the two sectors started in 2010 on about 40 GHM (highly prevalent both in public and private hospitals) and pursued until 2012, but was abandoned afterwards against fervent critics from public hospitals (where the tariffs are higher).

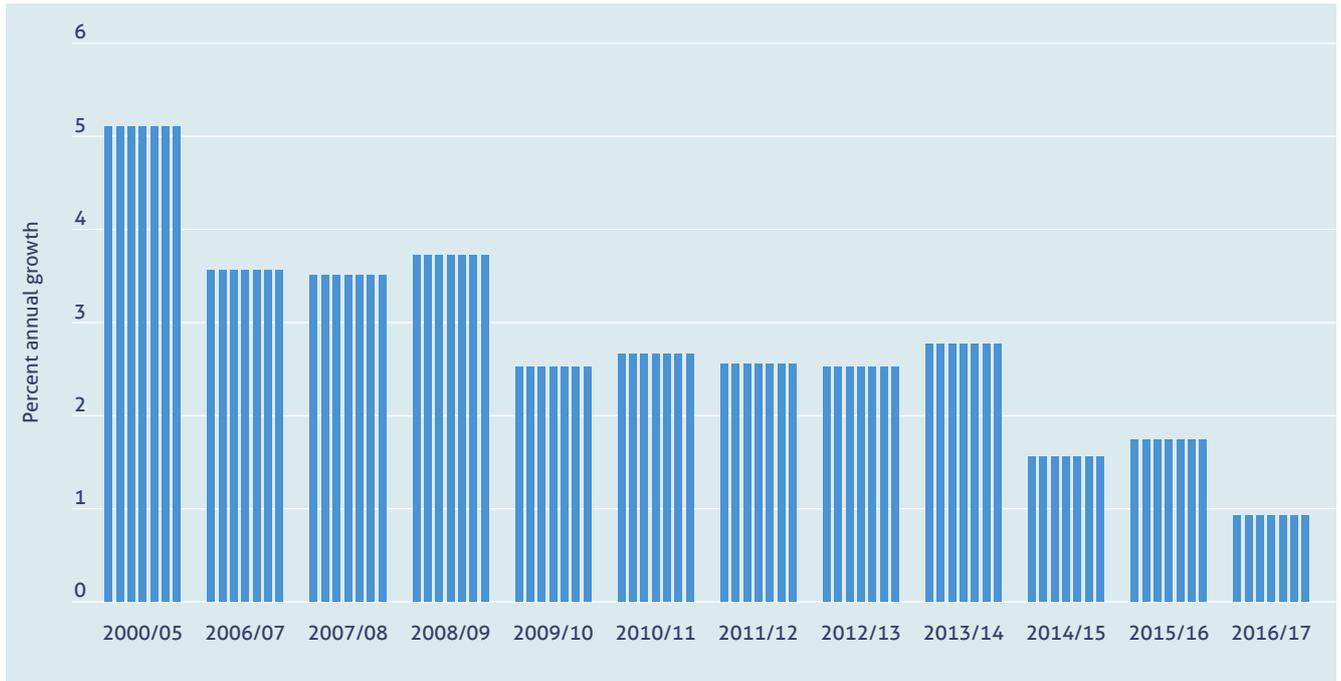
In principle, GHM prices are not adjusted to take into account "unavoidable variations" in the cost of delivering services, but public hospitals (and private hospitals participating in so-called 'public missions') receive additional bundled payments to compensate for costs linked to education, research and innovation related activities (MIGAC) and some public missions (activities of general public interest such as investing in preventive care, outreaching to under-privileged populations, etc.). Hospitals can also receive funding from regional health agencies (*agences régionales de santé*, ARS) to finance investments for quality improvement. The costs of maintaining emergency care and related activities are paid by fixed yearly grants, plus a FFS element taking into account the yearly activity of providers. Finally, a restricted list of expensive drugs and medical devices is paid retrospectively, according to the actual level of prescriptions made.

The actual prices per GHM are not exactly equal to reference costs. They are determined by the Ministry of Health taking into

account the overall budget for the acute hospital sector (ONDAM target expenditure) and public health priorities. In order to contain the level of hospital expenditure, national-level expenditure targets for acute care (with separate targets for the public and private sector) are set by the Parliament each year. If the actual growth in total hospital volume exceeds the target, prices go down the following year. The growth of activity volumes is not regulated at the individual hospital level but at an aggregate level (separately for the public and private sector). Prices have been adjusted downwards quite regularly since 2006, since the hospital activity volumes have been increasing consistently faster than the targets set. Furthermore, GHM reference costs ("raw" tariffs) are modified in an opaque way to integrate various objectives set by the government and the SHI fund each year when computing actual prices. For example, in 2009, ATIH noted that GHM prices were modified to adjust for the increase in the additional budgets for specific 'missions', including education, research and innovation related activities, the growth of expenditures for additional payments on expensive drugs, and national priorities (for cancer treatment and palliative care) as well as the evolution of overall activity volumes. However, it is not entirely clear how these different elements influenced the prices of different GHM.

Globally, this mechanism appears to be successful in containing overall hospital expenditures, since the share of hospital expenditures in total expenditure growth has decreased visibly since the introduction of ABP (Figure 7). In recent years (2014/15), the hospital sector managed even to underspend with respect to the target set by ONDAM. However, this macro-level regulatory mechanism has its downsides (Or, 2014). It created an opaque environment where it became very difficult for hospitals to predict their budget situation for the next year, since prices change every year as a function of overall activity. The lack of information on the specific objectives pursued with the payment policy also created frustration and resentment about T2A at the provider level. In the absence of clear price signals and lack of cost data for benchmarking hospitals, providers appear to be concerned mainly on balancing their accounts by increasing their activity.

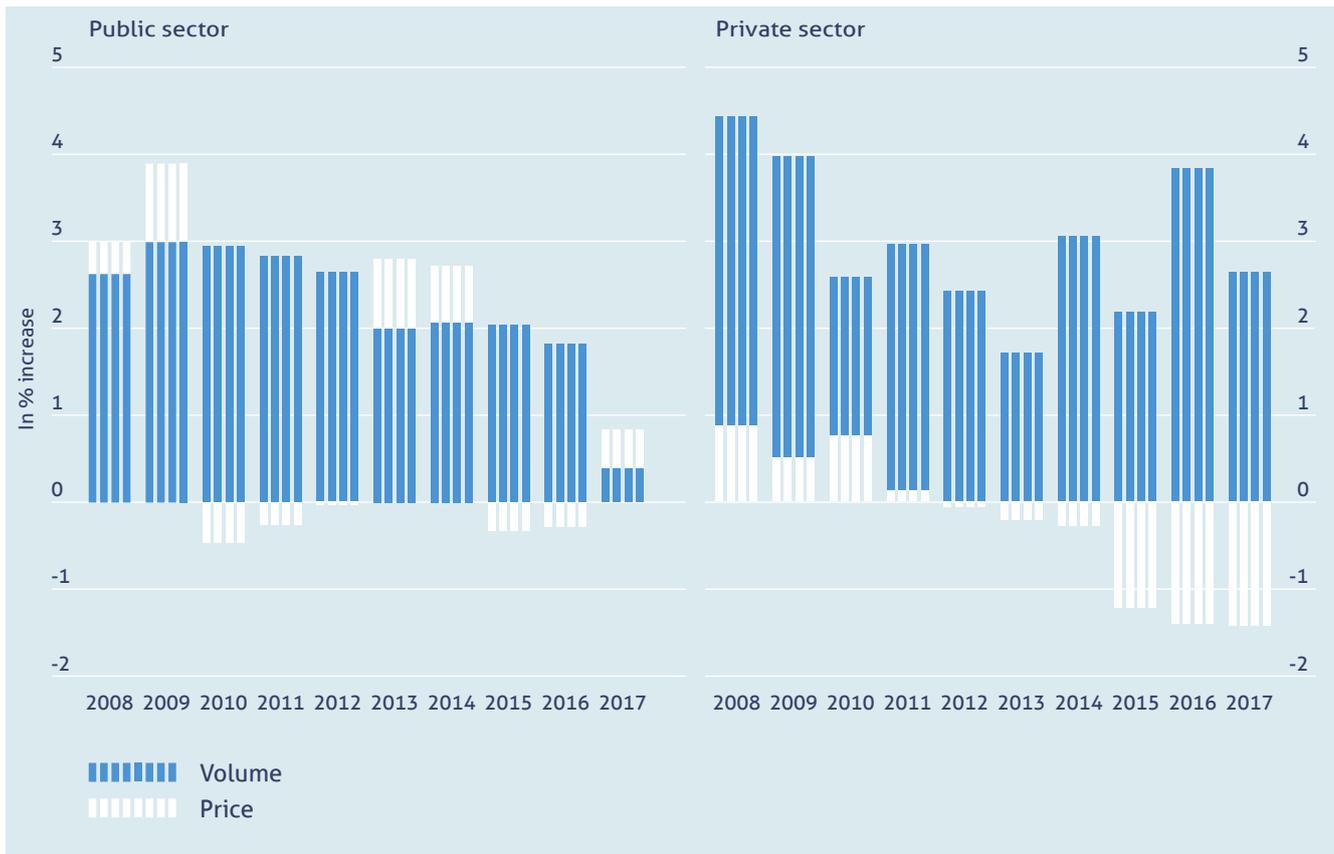
**Figure 7**  
Annual percentage increase in hospital expenditures



Source: DREES, 2018.

Despite a positive trend in productivity of public hospitals since 2004, with a strong rise in case-mix weighted production, there is also evidence of patient selection with increased specialization in the private sector and induced demand for some types of surgery (Or et al., 2013; Studer, 2012). Moreover, external controls carried out by SHI to identify “unjustified” billing of services show that up/incorrect coding was an issue, at least in the initial years of ABP. Between 2006 and 2009, three quarters of hospitals were audited at least once, and, among these, half were audited more than once. In 2006, more than 60% of inpatient stays (more than 80% for ambulatory episodes) had some kind of coding error or inconsistency in procedures billed (CNAM, 2009). If up-coding or incorrect coding is detected, hospitals have to reimburse received payments. In addition, they may have to pay financial penalties which can go up to 5% of their annual budgets. The revenues recovered from these penalties amounted to €51 million in 2008 and €23 million in 2010 (Daudigny et al., 2012). Overall, DRG-based payment addressed some chronic problems inherent to the French hospital market and improved the overall transparency of information concerning hospital activity. Nevertheless, it also created its own problems.

**Figure 8**  
Hospital expenditure growth: Price versus volume effect



Source: DREES, 2018.

Today, it is largely recognized that ABP provides incentives to develop hospital activity, sometimes beyond what is medically necessary, raising questions about the appropriateness of hospitalizations for certain procedures and conditions (Figure 8). A survey of the French Public Hospital Association showed that, according to hospital physicians, one-quarter of the procedures and medical tests carried out in hospitals were medically unjustified (*Fédération hospitalière de France, 2012*). Furthermore, there is a growing consensus that ABP does not favor cooperation between different providers or between different services within the same hospital to assure care coordination and a holistic approach in care provision.

In 2016, a quality-based payment scheme (*Incitations financières à l'amélioration de la qualité, IFAQ*) was introduced to encourage investment in quality. A modest proportion of providers' income is linked to the achievement of nationally set objectives concerning a battery of quality indicators (mostly of care process and structure/organization, but also patient satisfaction in 2018). The IFAQ payment framework can cover up to 1.5% of a hospitals' annual income, and this percentage is expected to increase in coming years. The current government is also planning to reduce the share of ABP in hospital payment, with several propositions for bundling payments beyond acute hospital reimbursement (especially for chronically ill and multi-morbidity patients) and including

rehabilitative services. However, this may be more difficult to bring about than initially thought due to the lack of robust cost data across providers.

### Using prices to regulate hospital activity

In parallel, DRG tariffs are used increasingly to influence hospital activity and incentivize better practice. In two areas, prices were used actively: for developing ambulatory surgery and for controlling caesarean section rates. The prices of ambulatory stays are aligned with non-complicated overnight stays for most common procedures in order to encourage hospitals to invest in ambulatory surgery. Increasing ambulatory surgery rates has been a long-term objective for the hospital sector, but it is only recently, since 2011, with price adjustments that rates have been picking up (from 44% in 2011 to 54% in 2016). As for caesarean sections, tariffs for uncomplicated programmed caesarean sections have been kept relatively low in recent years to make sure that the profit margins for these operations are very low. Currently, there is some discussion on identifying other areas where financial incentives may support good practice or on sanctioning unwarranted hospitalizations.

Since 2014, the Ministry of Health has introduced a volume-price control mechanism at the individual hospital level. For a number of high volume/fast growing DRGs (including knee prosthesis and cataract surgery), the Ministry sets a national rate of activity growth. If a hospital's case load (for a given DRG) grows faster than the threshold set, the tariff of the concerned GHM goes down by 20% for the hospital. There is not enough information on the impact of this policy on hospitals, but a very recent note from the Ministry of Health announced that there will be further measures for reducing interventions considered as "low value" care.

### Payments for acute psychiatric hospital care

The ABP system has not been extended to acute psychiatric hospital care. This is related to the difficulties in establishing a diagnosis for mental health problems, the diversity in the forms of psychiatric care provided, and the historical territorial organization of mental health care in France. In addition, there is no conclusive experience of the DRG-based payment system for acute mental health care abroad (Denk et al., 2011; Wolff et al., 2015; Lin et al., 2016; CNAM, 2018d). The psychiatric care in public and non-profit hospitals is therefore funded through an annual prospective global budget which is paid by SHI and allocated by regional health agencies on the basis of historical costs adjusted by the expected annual growth rate of hospital spending. The global budgets are defined in the frame of ODAM, which is a sub-objective of ONDAM for hospitals not funded through the activity-based model (*Cour des Comptes*, 2011). These global budgets include capital investments which do not benefit from specific dedicated funding. Payments to for-profit hospitals are based on predetermined daily rates

fixed according to the type of care provided (for instance full-time or part-time hospitalization). These rates are adjusted yearly at the regional level by the ARS in line with the national expenditure targets set by ONDAM for hospital care (*Cour des Comptes*, 2011).

Many successive institutional reports have criticized these funding mechanisms for acute psychiatric hospital care and suggested a global reform of the payment model (Piel and Roelandt, 2001; *Cour des Comptes*, 2011). Planned evolutions include an adjustment of the global budgets for public and non-profit acute psychiatric hospitals on the characteristics of the population served, including their socio-economic characteristics, from 2019 onwards. Adjusting budgets on indicators of quality of care, similarly to what is done for acute care hospitals, and harmonizing the payment models of the public and private for-profit sector are also listed as future reforms by the government (Task Force “*Réforme du financement du système de santé*”, 2019).

## 5 Price setting for rehabilitation and long-term care (LTC)

### Inpatient rehabilitation services

Rehabilitation in institutions (*soins de suite et de réadaptation*, SSR) were funded until 2017 based on a model similar to the one for acute psychiatric hospital care through an annual prospective global budget for public and private non-profit hospitals and through a daily fixed rate for private for-profit hospitals. Since 2017, the global budgets have been adjusted to take into account the volume and case-mix of the patients treated. Since 2010, a patient classification system applying the logic of homogeneous medical resource groups as in DRGs has been used. There are about 750 groups called GME (“*groupes médico-économiques*”) for services provided in these institutions. Reference costs for different groups of patients have been estimated and updated annually by ATIH. The process of fixing these reference costs is similar to the one for the DRG tariffs in acute care based on a cost database of a sample of voluntary hospitals (see section 4.2). Since March 2017 (i.e. seven years after the development of the first classification and costs in SSR), the funding of rehabilitation facilities has been mixed: 90% of the funding is calculated by former modalities (global budget or fixed daily rate), while 10% is activity-based using GME as reference tariffs.

### Long-term residential care for elderly

Older people who need medical attention or help with the activities of daily living if they cannot live alone at home are looked after in facilities which are medical nursing homes for dependent elderly people (*Etablissement d'hébergement pour*

*personnes âgées dépendantes*, EHPAD). The public funding of these facilities comes mainly from SHI concerning the cost of health care and from local authorities (*départements*) and the national fund for autonomy (*Caisse nationale de solidarité pour l'autonomie*, CNSA) to finance personal and social care.

The overall amount for residential care funded by SHI is set annually by a ministerial order. It corresponds to the medico-social fraction of the national health insurance expenditure target (ONDAM). This amount was about €9 billion in 2017 for the long-term care of the elderly. This funding is entrusted to CNSA, which is responsible for redistributing the funding to the ARS. The mission of ARS is to regulate the supply (authorization to open a facility, number of places, etc.), control the quality of care, and negotiate the health care portion of the funding in nursing homes.

Historically, the budget was negotiated according to the volume objectives of facilities and on the basis of past expenditures. In recent years, there has been a shift from cost-based funding to payments-based funding on the activity and characteristics of the care recipients. Today, facilities for dependent older people, whether private for-profit, private non-profit or public are paid by a three-part tariff: a care package, a long-term care (or dependency) bundle and an accommodation fee (Bonne, 2018).

**The care package**, financed by the SHI fund, is calculated for each facility according to a synthetic indicator, called the ISO-weighted care group (GMPS), which corresponds to the average care needs and dependency level of people living in the facility. Care needs are measured by the coordinating doctor of the facility<sup>4</sup> using a classification called “pathos”, which identifies 50 clinical conditions with 12 profiles of care required by these conditions constituting 238 couples of “condition-profiles” (CNSA, 2017). For each of these condition-profiles, eight resource groups were identified (physician, psychiatrist, nursing, rehabilitation, psychometrics, biology, imaging and pharmacy), which define the level of care resources required. For health professionals, this corresponds, for example, to the time required for patients with a given profile. The average resource level required for each of the 238 couples was defined by specialists (geriatric physicians) and reported in terms of points per cost item. For example, for the couple “heart failure” with the profile “close monitoring”, the specialists estimated that it requires 13 minutes of geriatrician time a day, 36 minutes of nurse time, etc. The average pathos score (PMP) is the sum of the points of care required in eight resource groups weighted by a coefficient depending on resource groups expressed on average per individual. The care bundle is also adjusted by the dependency level, which is calculated by the AGGIR (Gerontology Autonomy and Iso-Resource Groups) model, which assesses the autonomy of a person for carrying essential daily activities (CNAM, 2008). The dependency score (GIR) is based on 10 variables of physical

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<sup>4</sup> This evaluation has to be validated by two other external medical doctors appointed by the local county (*département*) and the regional health authority.

and mental activities (coherence, orientation, toilet, dressing, food, etc.) and seven variables of domestic and social activities (cooking, household, transport, etc.).

The amount of care payment for each facility is the average GMPS score<sup>5</sup> multiplied by the value of the point. The value of the point is defined by the Ministry of Health (at the national level) based on ONDAM for medico-social facilities.

**The long-term/dependency bundle** finances the care provided to the most dependent residents in helping them with the activities of daily living (cost of the caregivers). It is calculated according to the GMP (average GIR score) of the facility and the value of the departmental GIR point fixed by the county council (*Conseil départemental*). The value of the departmental GIR point, that is, the level of funding by the *département*, varies greatly between *départements*, ranging from €5.7 in the Alpes-Maritimes to €9.4 in the South of Corsica in 2017 as a function of local policy and income.

**Accommodation fees** are paid entirely by the residents. The rates vary depending on the “standing” of the facility (comfort of the rooms, quality of the cooking, etc.), but also on the agreement of the facility to receive social/public aid. Only private for-profit facilities are completely free in setting the accommodation prices, because the majority of non-profit facilities, whether private or public, are eligible for public support and cannot ask for a higher accommodation price than the one set by the *département* (based on past declared costs by the facilities).

For dependent elderly people living at home, medical and social care services are generally provided and paid separately. Health care is financed on the basis of prices fixed by the SHI fund with a fee for visits, procedures and medical devices with the possibility of balance billing. The personal and social care services (help with daily living, meals, etc.) are offered by the public, private or associative sectors. Prices are not regulated and vary according to supply and demand. There is, however, a reference tariff used by *départements* to calculate the amount of the financial aid (APA) for dependent older people (not mean tested, but depending on the “need” evaluated by the *département* using the grid GIR assessing autonomy). These reference rates vary from one *département* to another from €13 to €24 per hour. The nursing care at home is mostly provided by self-employed FFS nurses who are paid based on prices set by the SHI fund.

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5 The GMPS score of a facility is the average pathos score (PMP) plus the average GIR score of all residents.

## Annex 1

### Indicators taken into account for bundled payments to physicians

<b>Section 1: organization of office practice</b>	Availability of a software certified by the national health authority to help with prescriptions and compatible with shared electronic medical records
	Availability of a secure health messaging service
	Display of practice hours in the health directory
	Availability of the latest version of software (Sesam-Vitale) for billing electronically
	Rate of electronic transfers superior or equal to 2/3 of all consultation/prescription forms issued
<b>Section 2: involvement in services for patients within the office practice</b>	Capacity to code medical data
	Involvement in coordinated care pathways
	Specific services offered to patients
	Management and training of medical students
	Rate of dematerialization reached on a number of teleservices

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## Case study

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# Germany

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## Abbreviations

Abbreviation	German original (if applicable)	English translation
BÄK	Bundesärztekammer	German Medical Association
DKG	Deutsche Krankenhausgesellschaft	German Hospital Federation
DRG	Fallpauschale	Diagnosis-related group
FFS	-	Fee-for-service
gkv-Spitzenverband	Spitzenverband Bund der Krankenkassen	National Association of Statutory Health Insurance Funds
GP	Hausarzt	General Practitioner (Family Physician)
InEK	Institut für die Entgeltvergütung im Krankenhaus	Institute for Hospital Reimbursement
KBV	Kassenärztliche Bundesvereinigung	National Association of Statutory Health Insurance Physicians
KHSG	Krankenhausstrukturgesetz	Hospital Structure Reform Act
KV	Kassenärztliche Vereinigung	Association of Statutory Health Insurance Physicians
LTC	-	Long-term care
PKV-Verband	Verband der Privaten Krankenkassen	Association of Private Health Insurance Funds
PHI	Private Krankenversicherung	Private Health Insurance
P4P	-	Pay for Performance
SHI	Gesetzliche Krankenversicherung	Statutory Health Insurance

## Abstract

The German healthcare system features high levels of provision of care and a rigorous price-setting process which limits expenditure increases. The three investigated sectors (inpatient and outpatient sectors and long-term care), however, feature substantively different characteristics. The budgeting of health services, for example, ranges from no budgeting at all (private health insurance (PHI) outpatient sector) via budgeting on an individual level (inpatient sector) to budgeting on a state level (statutory health insurance (SHI) outpatient sector). This makes Germany an interesting, but fragmented and complex case study.

Germany pairs generous levels of supply of providers with reimbursement systems that set incentives on high volumes and low waiting times, and low prices compared to other OECD countries. This achieves low waiting times and high service volumes at the expense of overprovision and wasteful spending. Germany features far higher densities of providers per inhabitants than other OECD countries with twice as many hospital beds per 100 000 inhabitants than the OECD average. It ranks in the upper third of OECD countries in terms of physician and nursing home densities per 100 000 inhabitants. The country reimburses inpatient providers almost exclusively on the basis of DRGs, outpatient specialists largely on the basis of fee-for-service (FFS), outpatient general practitioners by a combination of FFS, budgets and other modes of reimbursement, and nursing homes on a per-diem basis.

The healthcare system is largely governed by associations of payers and providers on the federal, state and regional level. In selected sectors, however, competencies are assumed by or shared with the legislature. The planning, budgeting and reimbursement of the inpatient and outpatient sectors and long-term care are strictly separated. Furthermore, Germany features an SHI system, which insures roughly 90% of the population and a PHI system, which covers the remainder.

The price-setting in the inpatient sector and the SHI's outpatient sector follows the federal structure of this country. In both sectors, prices are calculated by a joint institute of payer and provider associations on the federal level. States can deviate from federal prices within a predefined range. In the long-term care sector, prices of nursing homes are negotiated on an individual level and benchmarked with the price-level of their neighbouring homes.

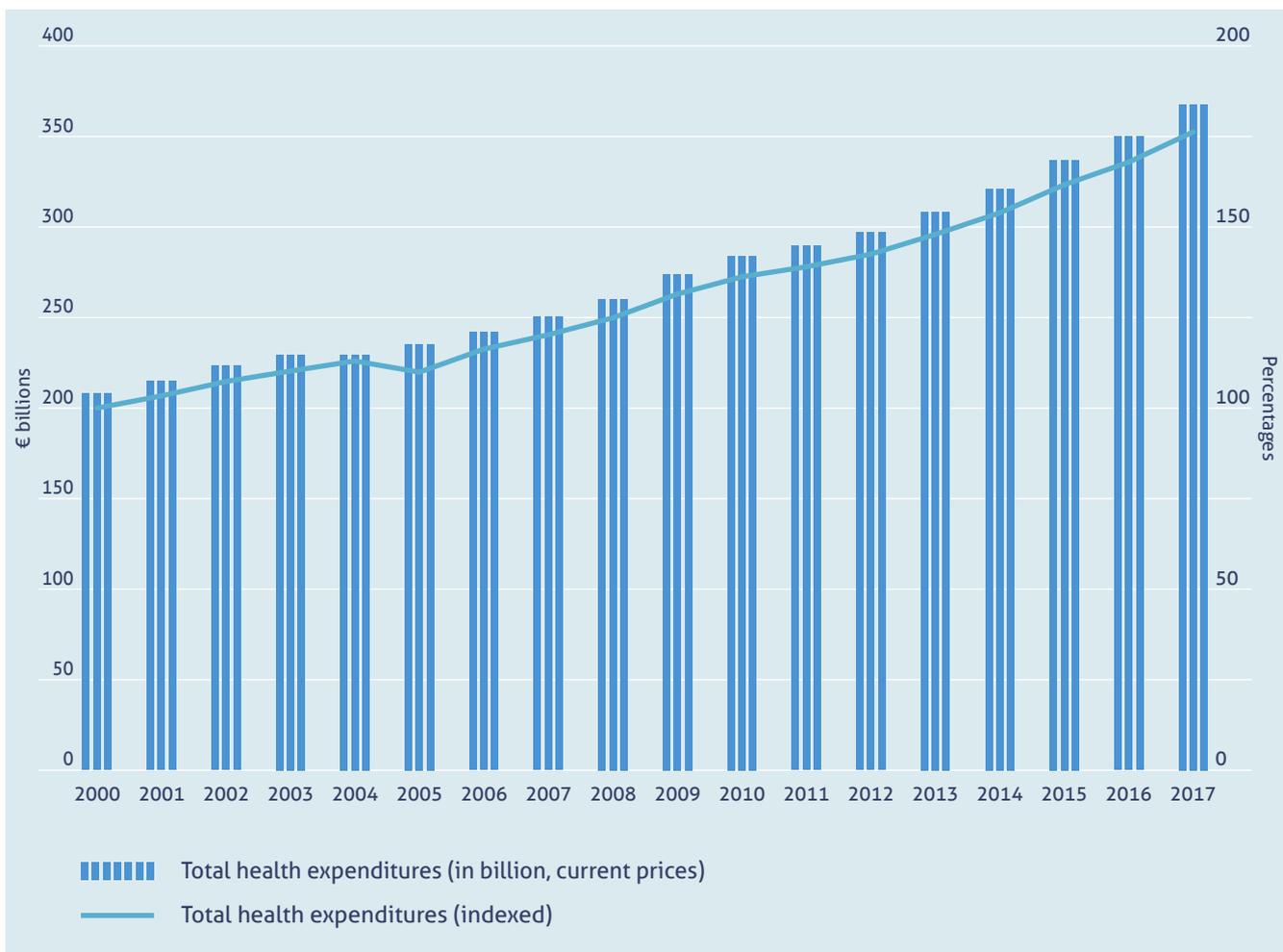
Services in the inpatient sector are budgeted on an individual level between a hospital and sickness funds which insure more than 5% of the hospital's patients. Services in the SHI's outpatient sector are budgeted on the state level and broken down to the individual physician. In contrast, services in the PHI's outpatient sector are not budgeted.

Germany still enjoys a positive GDP growth rate and solid finances. As a result, financial sustainability and cost containment have been and still are less of a concern than in other OECD countries. Attempts to reduce the number of providers, most notably of hospitals, have fallen short. As of today, the country joins other OECD member states in its quest for integrated care and quality of care. Several reforms are under way. In 2016, the country has introduced a comprehensive reform of the inpatient sector to improve quality of care, to reduce hospital volumes and to redistribute financial flows in a more adequate way. This reform makes an attempt to reorganize the governance structure by subtly shifting competencies to the federal level in exchange for a large financial benefit package. Discussions on harmonizing the SHI and PHI outpatient reimbursements and on improving the integration of the inpatient and outpatient sector systems have been started.

# 1 Introduction

In 2017, health care expenditures amounted to €374.2 billion (OECD, 2018a). This represented 11.3% of the country's GDP. Over the past two decades, expenditures have increased by 80% from about 200 billion in 2000 (see Figure 1) (OECD, 2018a). The annual increase has ranged between -0.3% and 5.3% with an average annual growth rate of 4% over the past decade (Figure 2). Over the same time, the GDP share has increased by 1.5 percentage points from 9.8% in 2000. Despite high variability in the first decade of the 21st century, the GDP share has stabilized at an annual growth rate of about 1% since 2012.

**Figure 1**  
Total health expenditures in current prices and price-indexed (2000=100) from 2000-2017



Source: OECD, 2018a.

**Figure 2**  
Changes in total expenditure, per capita expenditure and GDP share (2001-2017)



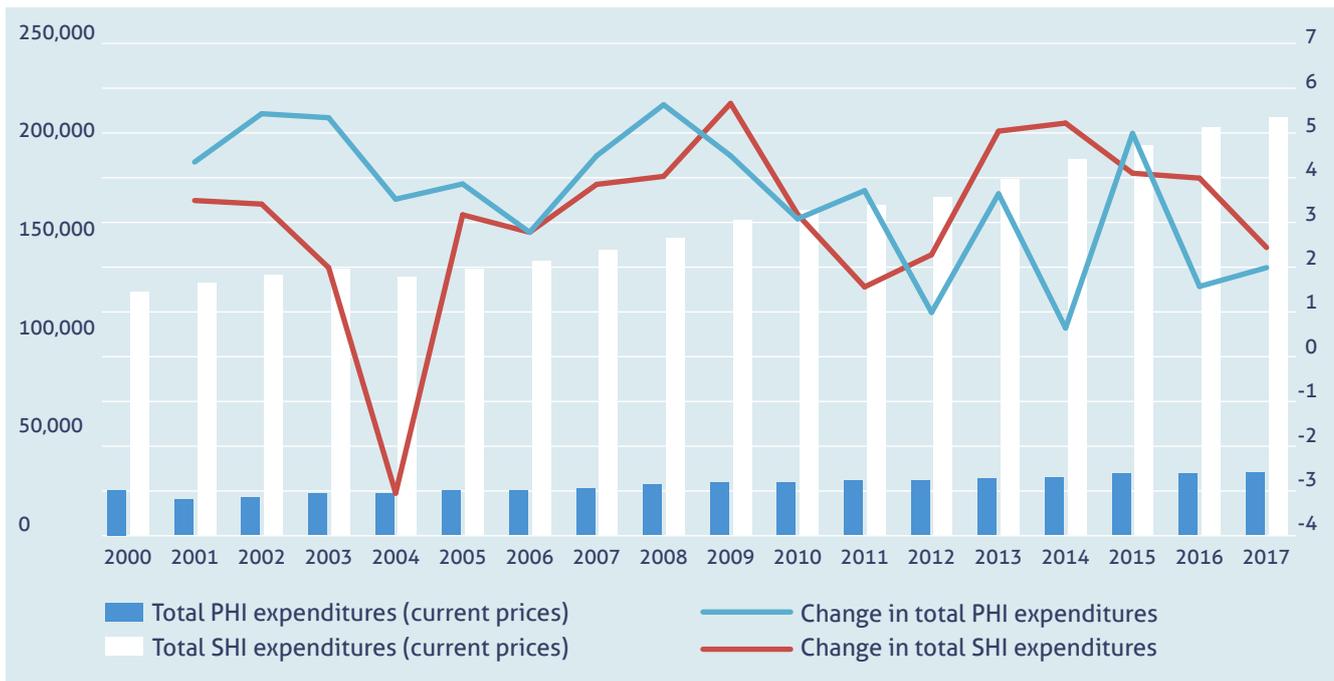
Source: OECD, 2018a.

### Germany is split into a SHI and a PHI system

Germany's health system is split into a statutory health insurance (SHI) system, which enrolls 90% of the population (72.81 million), and a private health insurance (PHI) system, which insures the remainder (8.77 million). PHI provides full coverage to employees whose income ranges above a pre-defined threshold (in 2019, annual gross income of €60 750 or greater) and the self-employed. In addition, it partially insures civil servants with a residual PHI ranging between 20% and 50%.

In 2017, the SHI system spent €233.89 billion on health care. This represented approximately 62% of the country's total health expenditures, which translated into expenditures of €3190 per capita (BMG, 2018a). From 2000 to 2017, SHI expenditures increased by 70%. Over the past two decades, the growth rate of SHI has ranged between 1.5% and 6%, with a pronounced exception of -4% in 2004 (Figure 3). In 2017, the PHI system spent €31.63 billion on health care (GBE, 2018), equalling approximately 8.5% of Germany's total health expenditures. From 2000 to 2017, PHI expenditures have increased by 80% from formerly €17.49 billion in 2000. Over the same period, the growth rate of PHI has ranged between 0.6% and 5.6% with a slightly downward sloping trend (Figure 3).

**Figure 3**  
**Total SHI and PHI expenditures in current prices and change rates from 2000 to 2017 (or latest year available)**



Source: GBE, 2018.

**A high density of providers, volume-incentivising remuneration systems and moderate price levels contribute to high utilization rates**

Compared to its neighbouring countries, Germany maintains a high density of providers, high utilization rates and low to moderate prices. It employs reimbursement systems, which set incentives on good access to care and low waiting times at the expense of volume growth and an oversupply of care. Germany's density of physicians ranks considerably above the OECD average (4.2 physicians per 1000 inhabitants against an OECD average of 3.4) (OECD, 2018b). It features the third highest density of hospital beds, with 8.1 beds per 1000 inhabitants, after Japan (13.1 per 1000) and Korea (12 per 1000), which is almost double the OECD average of 4.7 beds per 1000 inhabitants (OECD, 2018b). The number of beds in long-term care (LTC) facilities and nursing homes ranges in the upper half of OECD countries and is in line with Germany's neighbouring OECD countries (OECD, 2018c).

Germany's reimbursement systems set maximum incentives at service provision, but prices per service are low to moderate (Koechlin, Lorenzoni and Schreyer, 2010; Lorenzoni and Koechlin, 2017). Virtually all inpatient services are reimbursed on the basis of diagnosis-related groups (DRGs). As a result, waiting times in the inpatient sector are non-existent and lengths of stay have declined over the past two decades, while hospital volumes have increased (Statistisches Bundesamt, 2018). Similarly, outpatient services are reimbursed by a fee-for-service (FFS) system and a system of lump-sum

payments. The FFS component again leads to low waiting times but sets strong incentives to increase the number of services provided to patients.

The low-price level paired with high rates of provider densities and reimbursement systems, which reward volume growth, incentivized Germany's high utilisation rates of healthcare services. It ranks among the countries with the highest number of doctor consultations per capita and tops the list of hospital discharges per 100,000 inhabitants (OECD, 2018d). Germany also is among the countries which lead the list of surgical procedures per inhabitant (Kumar and Schoenstein, 2013; OECD, 2018d). Reimbursement systems have been subject to various policy interventions to limit expenditure growth, but they have been of mixed success.

### **Prices shall reimburse the average cost of providers**

The provision of health care services in the SHI system follows an efficiency principle (*Wirtschaftlichkeitsgebot*). Health services shall be sufficient, appropriate and efficient, and not range beyond what is deemed medically necessary. Such a restriction does not apply to the PHI system. Price setting intends to allocate resources among providers based on their contribution to the health care system and to reimburse average market costs of providers. Germany has made several attempts to increase the transparency, efficiency and accountability of health care providers by harmonizing prices on the national level.

There is no overall health care budget comparable to the English National Health Service (NHS). Instead, total expenditures are an aggregate of expenditures in different sectors and insurance systems. There is a strict separation between the sectors. Inpatient services, outpatient services (including specialist and primary care), and LTC are paid from three different budgets, and prices are set differently. Interaction between these sectors is low (Milstein and Blankart, 2016; Amelung, Hildebrandt and Wolf, 2012).

Thus far, cost containment has been less important in Germany than in other OECD countries. As of 2018, Germany still benefits from a positive GDP growth rate and solid finances, and SHI funds enjoy financial surpluses. In past years, Germany has experimented with various ways to reduce the high volume of service provision. These, however, have had limited effects so far. For example, the country operates with deductions to limit provider incentives that increase service provision and has increased the share of bundled payments at the expense of FFS reimbursement in the outpatient sector and for general practitioners (GPs), in particular. In the inpatient sector, Germany has introduced price deductions on services which are subject to economies of scale. However, the effect of these policies on cost containment and service volumes is disputed and has resulted in complex reimbursement systems which are hard to navigate for both payers and providers.

## 2 Governance of the health care sector

### Payers and providers are responsible for organising the delivery of care

The German healthcare system is governed by the so-called *Selbstverwaltung* (self-governance of the healthcare sector). The government has mandated payer and provider associations to organize the delivery of care. This structure dates to 1881. In the SHI system, payers and providers have formed collective agreements. SHI funds are obliged to contract all providers which have been licensed by the state or the provider association in accordance with national and state guidelines. The German Federal Ministry of Health assumes a supervisory function and can intervene in selected instances. Theoretically, it could revoke the entire mandate.

SHI funds are represented by the *Spitzenverband Bund der Krankenkassen* (GKV-Spitzenverband, National Association of Statutory Health Insurance Funds) at the federal level, and by state associations at the state level. In line with this organization, PHI funds are represented by the *Verband der Privaten Krankenkassen* (PKV-Verband, Association of PHI funds) with its respective state associations. The *Deutsche Krankenhausgesellschaft* (DKG, German Hospital Federation) and its 16 state federations represent the interests of inpatient providers. The *Bundesärztekammer* (BÄK, German Medical Association) represents all physicians who are licensed to practice. Outpatient physicians, who want to provide services to SHI patients and be reimbursed by the SHI, must obtain a licensure by one of the 17 *Kassenärztliche Vereinigungen* (KV, Associations of SHI physicians). At the federal level, they unite in the *Kassenärztliche Bundesvereinigung* (KBV, National Association of SHI Physicians).

### Price setting and budgeting reflect Germany's federal structure

In the inpatient sector, state associations of SHI that have closed an agreement with a state contract all hospitals in the state. These hospitals can apply for funding for investment costs from the state and are reimbursed by SHI funds. In return, they must adhere to the state's hospital plan including the amount of beds, medical units and selected quality criteria. In the PHI system, patients can access all hospitals and claim reimbursement from their PHI fund. Hospitals are reimbursed almost exclusively on the basis of DRGs. Prices are mostly calculated at the federal level. States can deviate from the overall price level within a predefined range. The budget of a hospital is negotiated between an individual hospital and SHI and PHI funds.

In the outpatient sector, state associations of SHI funds have closed collective agreements with their state's KV and consequently contract all physicians who hold a licensure with the KV. Physicians are reimbursed by the SHI funds and must adhere to location restrictions by their KV. Physicians are reimbursed by a mixture of FFS and lump-sum payments. Similar to the inpatient sector, prices are largely set on the federal level and tailored to specificities at the state level. In contrast to the inpatient sector, services are budgeted. SHI funds pay an aggregate budget to their state's KV. It is up to the KV to distribute the budget among its SHI physicians. Services to PHI patients are reimbursed differently, albeit by a FFS system. Patients can receive services from all physicians who hold a medical licensure to practice and claim reimbursement from the PHI fund depending on their health plan. As opposed to the SHI system, services are not budgeted.

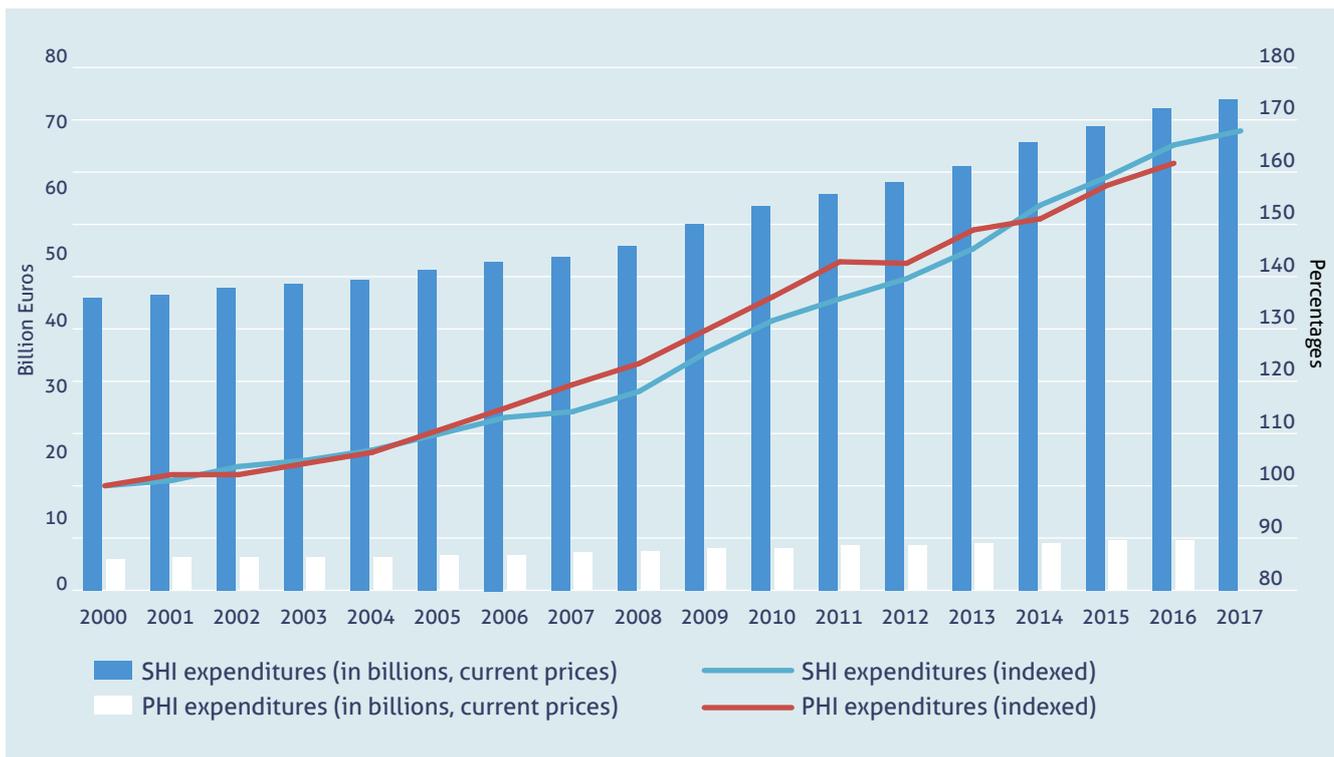
In LTC, state associations of LTC funds (both public and private) and state associations of nursing home providers have formed an agreement on the provision of nursing care in a given state. The provision of care is supervised by the respective state authority (generally, Ministry of Social Affairs or Ministry of Health). Nursing homes, which want to provide care within this agreement and be reimbursed accordingly, close a contract with sickness funds on the provision of nursing care to their enrollees. This holds true for both SHI and PHI funds. In return, nursing homes must adhere to quality criteria, such as staffing ratios. Prices are negotiated individually between a nursing home and LTC funds. They are split into a per diem nursing care charge, which is covered by a lump-sum payment of the LTC funds, and a copayment, costs for housing and meals, infrastructure, training and additional services, which are paid by the patient.

### 3 Price setting and budgeting by the health care sector

#### The inpatient sector

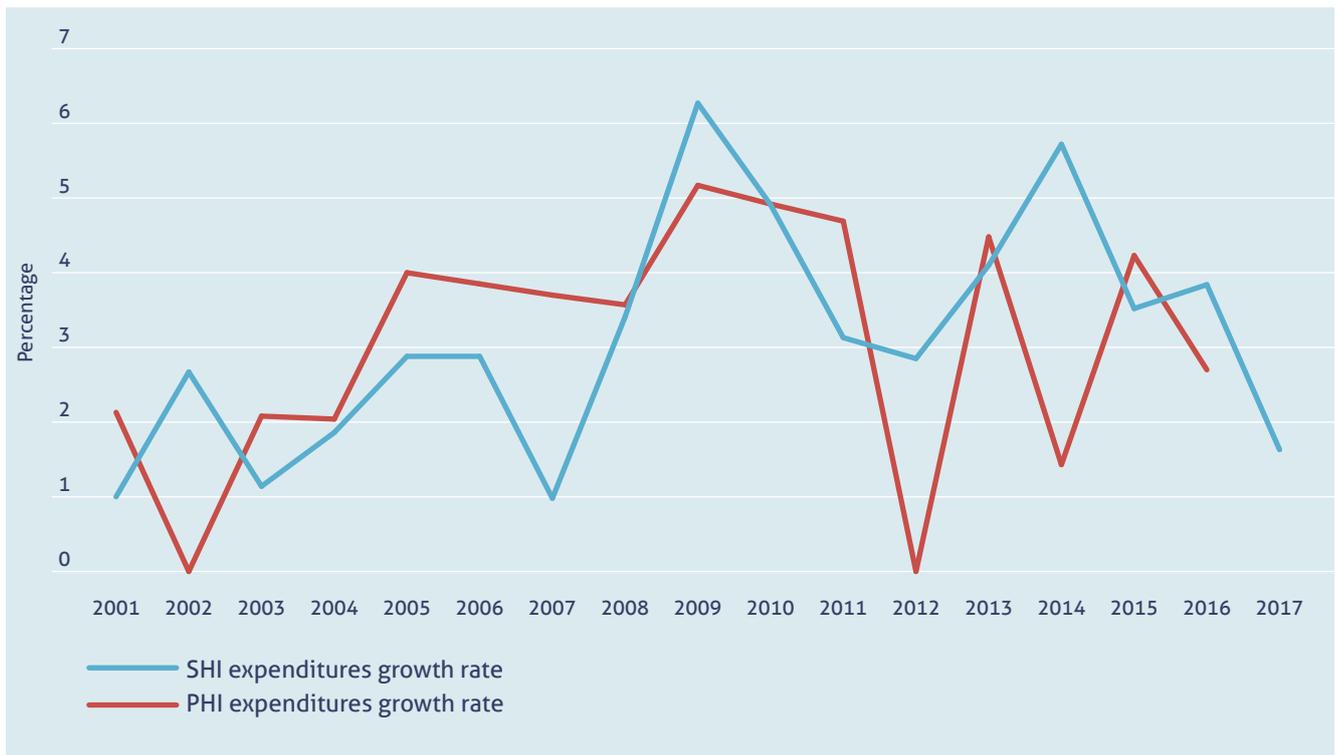
In 2016 and 2017, SHI expenditures for inpatient services amounted to €72.95 billion and €74.14 billion, respectively. In 2016, the PHI spent €7.59 billion on inpatient services (2017 data was not available). This is a 70% increase compared to 2000 (Figure 4). Over the past two decades, expenditures by both SHI and the PHI have increased at a similar pace (Figure 5). The increase in PHI expenditures was steeper in the first half of the past decade (2003-2008) but was overtaken by the SHI in the following years. In the past two years, growth rates in both SHI and PHI have declined.

**Figure 4**  
SHI and PHI inpatient expenditures in current prices and price-indexed (2000=100) from 2000 to 2017 (or latest year available)



Sources: BMG, 2018a; PKV-Verband, 2017. Note: PHI expenditure data for 2017 is not available.

**Figure 5**  
Growth rates of SHI and PHI inpatient expenditures from 2001-2017 (or latest year available)



Sources: BMG, 2018a; PKV-Verband, 2017. Note: PHI expenditure data for 2017 is not available.

### The distribution of hospitals is regulated at the state level

In 2017, Germany had 1942 hospitals totalling 497 182 beds, which translates into 6 beds per 1000 inhabitants (Statistisches Bundesamt, 2018). 37% (720) of all hospitals are private for-profit hospitals, followed by 34% private not-for-profit hospitals (662), and the remainder being public hospitals (560). With regards to hospital beds, however, the public hospitals provide the largest share with 48% of all beds (238 748), followed by private non-for-profit hospitals with 33% (165 245 beds), and private for-profit hospitals with 19% (93 189). In 2017, Germany had 35 university hospitals, and close to a quarter of all beds are concentrated in about 100 hospitals (Figure 6).

**Figure 6**  
Number of hospitals and total beds by bed category (2017)

Bedsize	0	1-49	50-99	100-149	150-199	200-299	300-399	400-499	500-599	600-799	800+
No. of hospitals	65	365	236	252	187	243	185	129	105	78	97
Total Beds	-	7374	17 063	30 894	32 452	60 141	63 209	57 165	57 148	53 729	118 007

Source: Statistisches Bundesamt, 2018.

The distribution of hospitals is regulated at the state level by the respective State Ministry of Health in accordance with the hospital association, the SHI and PHI associations at the state level, and additional partners that are deemed necessary by the respective state. Hospitals which conclude a contract with the state (so-called *Plankrankenhäuser*) are eligible for financial support from the state for their infrastructure, and SHI funds are obliged to reimburse services they provide. In return, hospitals can be mandated to provide certain services, run specific units, and to increase or decrease their number of beds. Roughly 98% of all hospitals have concluded a contract with the state.

The planning varies greatly between the 16 states. Historically, states have planned the distribution of hospital beds and have largely relied on the Hill-Burton formula to set target occupancy rates depending on the unit type leading to status quo maintenance. In the past few years, states have started to deviate from and begun to include quality criteria, such as staffing ratios, infrastructural prerequisites for specialized units, and minimum volumes (DKG, 2018).

### **Services are reimbursed almost exclusively on the basis of DRGs**

The running costs of hospitals are reimbursed almost exclusively on the basis of DRGs and mirror the real expenditures hospitals incur. Patients are allocated to a specific DRG based on their major diagnosis, co-diagnoses, procedures, length of stay, ventilation hours (if applicable), age, gender, weight (for newborns), medical unit, and type of discharge, such as “discharged as fully recovered” or “death”. The reimbursement that hospitals receive covers medical treatment, nursing care, the provision of pharmaceuticals and therapeutic appliances, board, and accommodation.

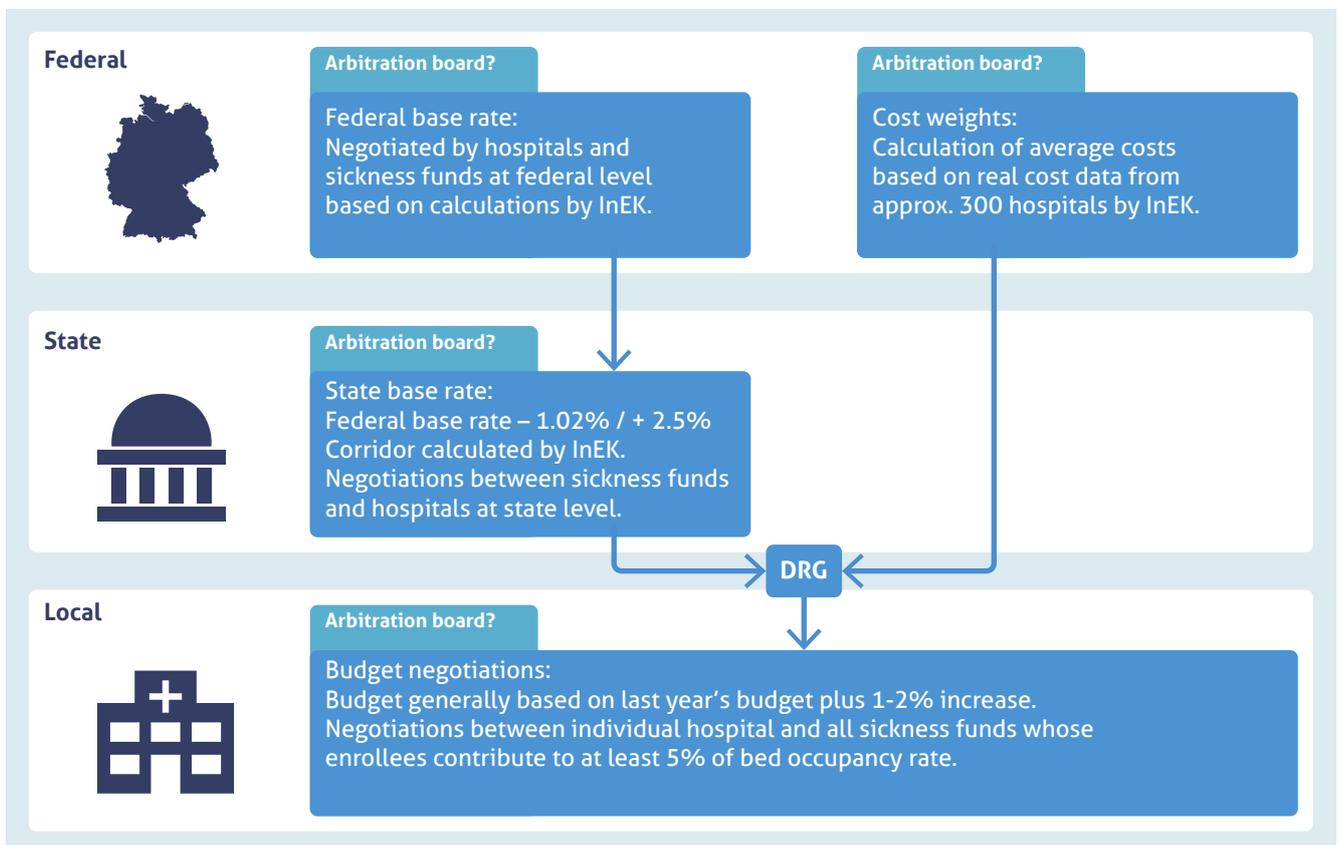
The German system is modelled on the Australian DRG system. In 2018, the German DRG system included 1292 DRGs and 205 add-on payments for patients with particularly high demand for nursing care or for the provision of additional services and pharmaceuticals which are not included in the DRG system yet. Each DRG can be split into up to five subcategories depending on the patient’s severity. The DRG system is revised annually to accommodate cost changes. DRGs are split into a cost weight (relative weight) and a base rate. The base rate defines the overall price level, whereas cost weights represent the severity of a diagnosis and its accompanying procedures vis-à-vis all other diagnosis. Accordingly, an increase in the base rate augments the prices of all DRGs, whereas an increase in the cost weight augments the price of one DRG compared to all others. Further, the base rate differs between all 16 states, whereas the cost weight is the same across the country. Both parts are calculated separately from one another as described below (Figure 7).

There is no difference between private, private not-for-profit, and public hospitals: DRG prices are the same for all hospitals contracted by the state. SHI is obliged to reimburse services hospitals provide. In return, hospitals can be mandated to provide certain services, run specific units, and to increase or decrease their number of beds.

The German DRG system was introduced in 2003 and implemented nationwide in 2005, replacing per diem payments. DRGs were introduced to increase transparency and efficiency in the health care sector and to decrease the average length of stay in hospitals. In contrast to other OECD countries, attempts to reduce costs did not motivate the introduction of DRGs.

Since the introduction of DRGs, the average length of stay has decreased by 17%, the number of cases has increased by 18%, and the number of nursing days has remained rather stable with a 1% decrease (Statistisches Bundesamt, 2018). This has been part of a longer trend. Since 1990, the average length of stay has halved, and the number of cases has increased by 30%. The number of nursing days had decreased by 30% up to the mid-2000s and has remained constant ever since (Statistisches Bundesamt, 2018). Prior to the introduction of DRGs, Germany had already experimented with mixtures of per diem payments and case-based remuneration systems.

**Figure 7**  
From price to budget calculation in the inpatient sector



Source: authors.

### **Cost weights are calculated by averaging cost data from a sample of hospitals.**

Cost weights are calculated annually by the *Institut für das Entgeltsystem im Krankenhaus* (InEK, institute for hospital reimbursement), a joint institute by the DKG, the GKV-Spitzenverband, and the PKV-Verband. Cost weights reflect the average expenditures of a sample of hospitals.

To calculate the weights, the institute collects data from roughly 300 hospitals that participate on a voluntary basis. These data include patient-level data on the major diagnosis and other diagnoses, clinical interventions (such as medical procedures), patient characteristics (age, gender, and weight of newborn children), cause of hospital admission and discharge, as well as accompanying cost data, such as workforce and technical resources and pharmaceuticals. Based on that information, the InEK groups patients into DRGs and assigns cost weights to each of the DRGs. In a first step, diagnoses are clustered into 23 Major Disease Categories. The cost weight of the specific DRG in question is determined by the procedures, comorbidities, and clinical severity. Following that, the InEK averages the contributing cost data of each and every DRG to determine the cost weights. In conjunction, it also determines the average length of stay and its accompanying range. If a patient stays below the lower or above the upper limit of what is deemed an appropriate length of stay for his DRG (known as "outlier"), the hospital receives a depreciation on a per diem basis.

The InEK can mandate hospitals to submit cost data and select hospitals randomly. Hospitals can sue the InEK at the administrative court and some have made use of that option. In 2017, the InEK mandated 120 hospitals to submit data; 28 hospitals did not submit data, and 13 hospitals filed lawsuits against the InEK. However, the first court ruling on that matter has dismissed the case.

The catalogue of cost weights is approved annually by the DKG, the GKV-Spitzenverband, and the PKV-Verband. These three parties also define the overall framework and methodology to determine relative weights to which the InEK has to adhere. If the parties fail to come to an agreement, the federal arbitration board decides. It consists of 21 members, with one non-partisan chair being among them, two additional non-partisan members, nine representatives of the DKG, eight representatives of the GKV-Spitzenverband, and one representative of the PKV-Verband. The non-partisan members are appointed by a joint decision of hospitals and sickness funds. If they fail to come to an agreement, the President of the Federal Social Security Court appoints three members. Decisions of the arbitration board are intended to be binding. In very few cases has one of the negotiating parties filed a lawsuit against the arbitration board at the Superior State Social Court. The entire procedure is supervised by the German Federal Ministry of Health. If negotiations between the DKG, the GKV-Spitzenverband, and the PKV-Verband fail, the Ministry

can also intervene and overrule the parties by decree. This was the case in 2003 when the negotiating parties failed to agree on the reimbursement of semi-inpatient services.

### **The federal base rate is adjusted annually to reflect changes in hospital costs and contributions to SHI funds**

The growth rate of the federal base rate is negotiated annually by the DKG, the GKV-Spitzenverband, and the PKV-Verband. In 2018, the federal base rate was set at €3467.30. The three negotiating parties are obliged to mandate the InEK to calculate the federal base rate. These calculations are based on the state base rates, the total expenditures and the case mix of the preceding year. The growth rate of the federal base rate is based on two parameters: the average change rate of contributions by SHI enrollees (*Grundlohn-Veränderungsrate*) and the average change rate of hospital costs (*Orientierungswert*). The latter is calculated annually by the German Federal Statistical Office. If the change rate in contributions is higher than the cost increase, this rate is chosen automatically. If costs increase at a higher rate, the DKG, GKV-Spitzenverband, and the PKV-Verband negotiate on an increased rate, which has to range between both rates. If the parties fail to come to an agreement, the aforementioned federal arbitration board decides.

This regulation, however, has been subject to frequent interventions and changes by the legislature. In the past, the change rate of the federal base rate has ranged between 2.5% and 3%.

The growth and cost rates have been criticized. Changes in contributions by SHI enrollees are not related to changes in the hospitals' costs and revenues. Changes in hospital costs, on the other hand, do not take expenditures and cost reductions into account, for example, due to technical innovation. Finally, regulations on how to determine the change rate have been modified on a frequent basis, but several exceptions apply (GKV-Spitzenverband, 2018a; 2018b).

### **States can deviate from the federal base rate within a predefined range**

Once the federal base rate has been defined, each of the 16 states define their state base rates. They can deviate from the federal base rate by -1.02% to +2.5% (€3431.93 or €3553.98). In practice, the states increase their state base rate by the growth factor of the federal base rate. The so-called "corridor" within which states can deviate from the federal base rate is also calculated by the InEK and negotiated between the DKG, the GKV-Spitzenverband, and the PKV-Verband. It forms part of the negotiations on the federal base rate.

Negotiations on the state base rate take place between the state's hospital association, the state associations of SHI funds, and the state association of PHI funds, and should be finalized by 30 November of the given year. The decision has to be

approved by the respective State Ministry of Health. If the parties fail to reach an agreement, the dispute is handed over to an arbitration board. The latter is composed of a neutral chair and representatives of hospitals and sickness funds in equal representation. It is supervised by the State Ministry of Health. About two out of 16 states appeal to their arbitration board per year (Vdek, 2018a). Arbitration boards should finalize their decision by 1 January of the given year, but often take until April. Furthermore, all of the negotiating parties at the state level can contest the decision of the arbitration board. However, the legal process is not properly defined. It is not clear whether the party has to sue the arbitration board or its opposing party, and which court holds the judicial competence.

### **Each hospital negotiates its annual budget with sickness funds**

Once both the state base rate and cost weights are defined, each hospital negotiates with sickness funds, which enrol at least 5% of the cases of the hospital's patients, on the hospital's annual budget. The budget has to be approved by the State Ministry of Health. If the parties fail to reach an agreement, an arbitration board decides on the budget. As in the preceding steps, parties can sue one another or the arbitration board. In theory, budget negotiations should be concluded prospectively for the following year. In practice, however, this is seldom the case and negotiations tend to be finalized between March and September of the given year. By and large, the prospective budget equals the budget of the year before plus 1-2%.

SHI funds can mandate the medical service of SHI funds to investigate whether hospitals have coded and billed diagnoses and treatments correctly. If not, the hospital has to repay the difference between what it has received and what it should have correctly received to the SHI fund. If the SHI fund has erred, it has to pay a compensation to the hospital. Furthermore, both parties can sue one another at the Social Court.

### **Additional reimbursements supplement the DRG reimbursement**

In addition to the DRG reimbursement, hospitals can receive additional payments or may be subject to deductions and penalties as a disciplinary measure. In 2018, there were 29 different add-on payments and deductions or penalties (GKV-Spitzenverband, 2018c). In the majority of cases, these are negotiated individually as part of the annual budget negotiations of the respective hospital. In selected cases, they are decided at the state or federal level. They can either be negotiated between provider and payer associations at the state or federal level, or be set by the Joint Federal Committee, Germany's highest decision-making body of the *Selbstverwaltung*. Add-on payments and deductions are used to impact the behavior of hospitals via financial incentives and to compensate for deficiencies in the DRG system.

First, add-on payments compensate for the provision of specific hospital structures and services that are not appropriately reflected in the DRG system. Among them are additional payments for medical education, specialized units and medical centres or the delivery of care to medically demanding patients. In line with that, hospitals enjoy add-on payments if they are located in financially unattractive regions but are vital to provide medical services to the region.

Second, deductions are used to incentivize hospitals not to deviate from the negotiated budget. If a hospital performs more services than agreed upon, it receives only 35% of the reimbursement it would normally receive for this service (*Mehrerlösausgleich* [surplus compensation]). If a hospital performs fewer services than negotiated, it receives a reimbursement of 20% for the services it should have theoretically performed (*Mindererlösausgleich* [deficiency compensation]). These deductions are not adjusted based on hospital characteristics, such as size and provider status.

Third, hospitals face penalties as a disciplinary measure. For example, they receive a deduction if they refuse to participate in the provision of emergency delivery of care (€60 per case) if they fail to submit requested data or if the data are of insufficient quality. However, the effect of these deductions is limited. By and large, it is financially favourable for a hospital to pay a penalty rather than to entertain an accident and emergency (A&E) department or to hire additional staff for submitting data.

### **In spite of a strict and detailed costing approach to determine DRGs, some problems in price setting exist**

Generally, the German DRG system follows a very detailed, standardized, strict, and unique costing approach to determine DRGs. However, there are still some problems in price setting (Schreyögg, Tiemann and Busse, 2006). For instance, it does not include any adjustment based on hospital or regional characteristics, such as the Market Forces Mechanism in England or the Medicare Wage Index in the United States (Schreyögg et al., 2006). Hospitals in rural regions have lower infrastructural and staffing costs but receive the same remuneration as their counterparts in urban regions of the same state. For the time being, there are 16 different price levels resulting from 16 different state base rates, but these follow historic developments and cannot be explained by patient or hospital structures or different wage levels (RWI, 2013). Germany still aims to align state base rates to one uniform price level with the federal base rate. The transition phase has been expanded to 2021. The introduction of a Market Forces Factor or a similar adjustment mechanism has not been presented as a potentially successful policy proposal yet. Thus, the council of experts on Germany health care recently proposed the introduction of a regionalization factor considering the hospital-specific price level of a respective region, such as county level (Advisory Council on Health Care, 2018).

One further problem is that the sample of hospitals, which submit their cost data to the InEK and/or their case-mix changes annually, is not representative of the country's hospital structure (SVR Gesundheit, 2018). To improve the latter, the DKG, GKV-Spitzenverband, and PKV-Verband have authorized the institute to oblige hospitals to submit data, but this option has only been introduced in 2016 and results in lengthy legal disputes with hospitals. It is not clear yet whether this authorization will finally make the sample more representative.

Finally, under the German DRG system, each hospital receives the same reimbursement per case irrespective of the level of care provided by a hospital. For instance, academic medical centres receive the same DRG payment for a given patient as a community hospital on the countryside, even though the facilities provided by the hospitals may differ especially at the cost level. The council of experts therefore recommends that the DRG system evolve to consider the variation of hospital costs per case at the different levels of care provision (such as acute care, specialized care, or highly specialized care), for instance, by using multipliers on the relative weights (Advisory Council on Health Care, 2018).

### **Germany still lacks instruments to control inpatient care volumes**

As already mentioned, Germany has experienced steady increases in volumes of inpatient care, while many other OECD countries have observed declining inpatient volumes in recent years. The expansion of volumes is particularly high among patients with lengths of stay of 1-3 days (approx. +50% over the past decade) or without overnight stay (roughly +20% over the past decade) but attempts to treat these patients in outpatient settings have failed thus far. Current reimbursement incentive systems for hospitals to substitute inpatient care with outpatient care are low. Additionally, the country faces a structural overprovision of hospitals and hospital beds. At the same time, it maintains a DRG system with a large number of DRGs (1292), with half of them being driven by at least one medical procedure, which sets strong incentives on volume growth and surgical interventions. In addition, states only partly fulfil their financial obligations to cover infrastructural costs. This exerts financial pressure on hospitals. As a result, hospitals expand volumes beyond what is medically necessary to cross-finance infrastructural costs. Sickness funds argue that they find themselves in a disadvantageous situation to exert budget control. As they still enjoy financial surpluses, they have limited power to reasonably call for cost containment.

As part of the Hospital Structure Reform Act, or *Krankenhausstrukturgesetz* (KHSG) from 2015, policy-makers have developed an instrument to address the problem of rising inpatient volumes. Since 2017, hospitals have received a so-called "deduction for the cost digression of fixed costs" (Fixkostendegressionsabschlag) of 35% on DRGs that feature economies of scale. This deduction only applies to *additionally*

negotiated services, meaning a share of the additional 1-2% negotiated between the individual hospital and its sickness funds. This instrument is in place to disincentivize hospitals to ask for ever-growing budget increases, particularly on interventions that are subject to economies of scale, such as hip and knee replacements. This instrument was introduced in 2016 and replaced the former "deduction on additional services" (Mehrleistungsabschlag), which operated in a similar way, but occurred at irregular intervals and with varying rates. Originally, the DKG, the GKV-Spitzenverband, and the PKV-Verband were set to negotiate individual deductions for all DRGs that feature economies of scale. Because the parties failed to close agreements and because negotiations ended at arbitration boards on a recurring basis, the legislature intervened and set a digression of 35% for all DRGs that are subject to economies of scale. In addition, a second opinion procedure has been introduced for selected procedures that underwent sharp increases in volumes in the past. Although, in 2017, volumes reduced slightly, it is still unclear if this is the start of a new development or just a short break in the trend of rising inpatient volumes.

The KHSG has also introduced broader reforms of the German DRG system. It has made a first attempt to improve quality of care in the inpatient sector. It introduces structural quality indicators for selected hospital units, allows selective contracting on the grounds of quality, and introduces pay-for-performance (P4P). The design of the latter, however, is still in process; P4P should have been introduced by the end of 2017 already.

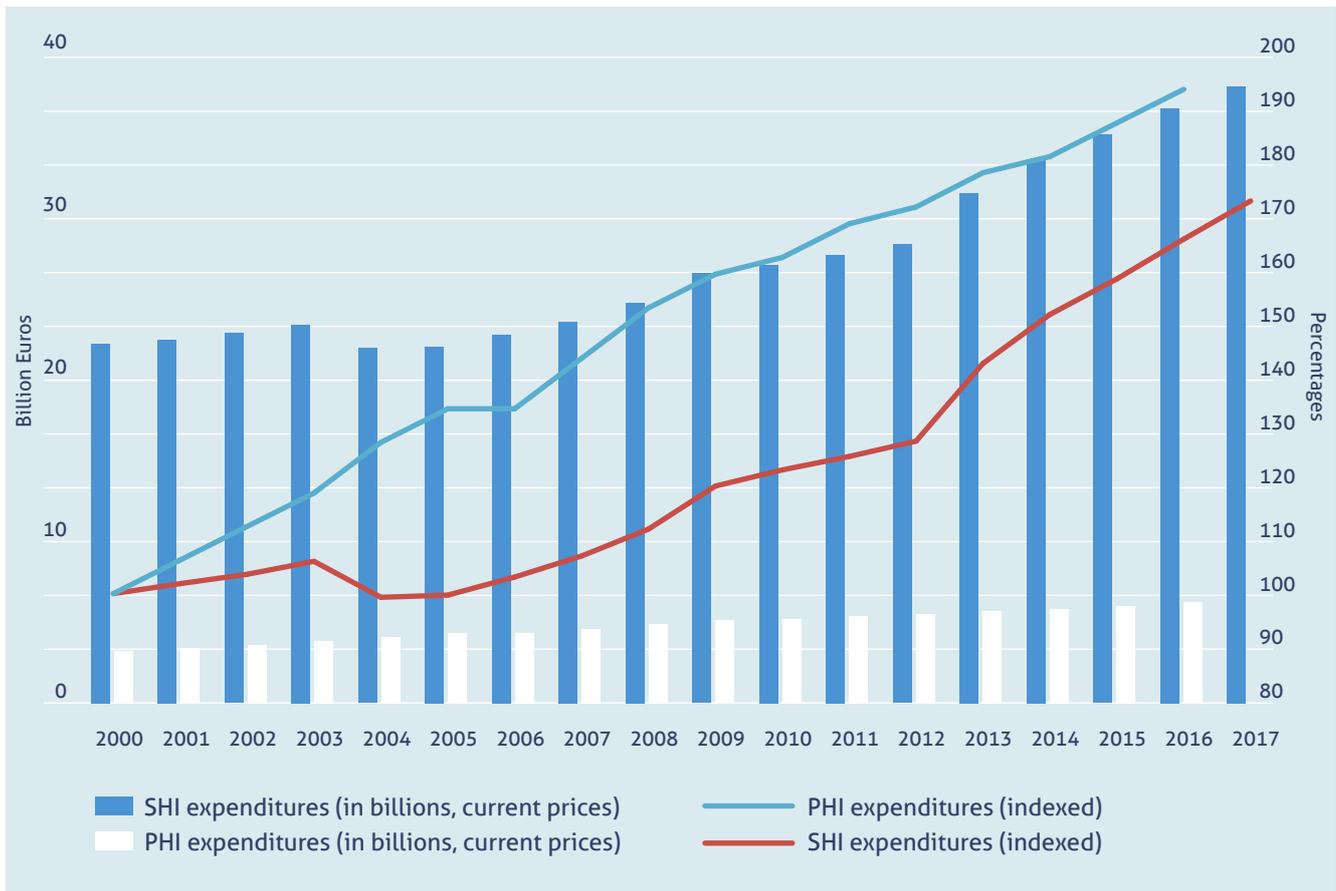
The 2018 Nursing Workforce Strengthening Act (*Pflegepersonalstärkungsgesetz*) represents a notable change to the DRG system. Thus far, the DRG system has set incentives to increase the number of physicians who directly contribute to hospital volumes, while keeping constant the number of nurses. According to nurse representatives, this has led to a significant deterioration of working conditions of the nursing workforce. A policy report (Schreyögg and Milstein, 2016) indeed found that in several hundred hospitals, nursing ratios largely deviated from the median of nursing ratios in German hospitals. The report also confirmed for Germany that low nursing ratios are associated with low quality of care. In 2016, the legislature has introduced minimum nurse staffing ratios, which will come into effect on 1 January 2019. This was deemed insufficient by nursing unions and left-wing parts of the government. As a result, the legislature has decided to exclude nursing costs from the DRG system. The latter will effectively come into force in 2020.

### **Primary care and outpatient specialist services**

In 2016 and 2017, expenditures for outpatient services in the SHI system amounted to €36.53 and €38.09 billion, respectively. In 2016, the PHI system spent €4.59 billion on outpatient services (2017 data was not available) (Figure 8).

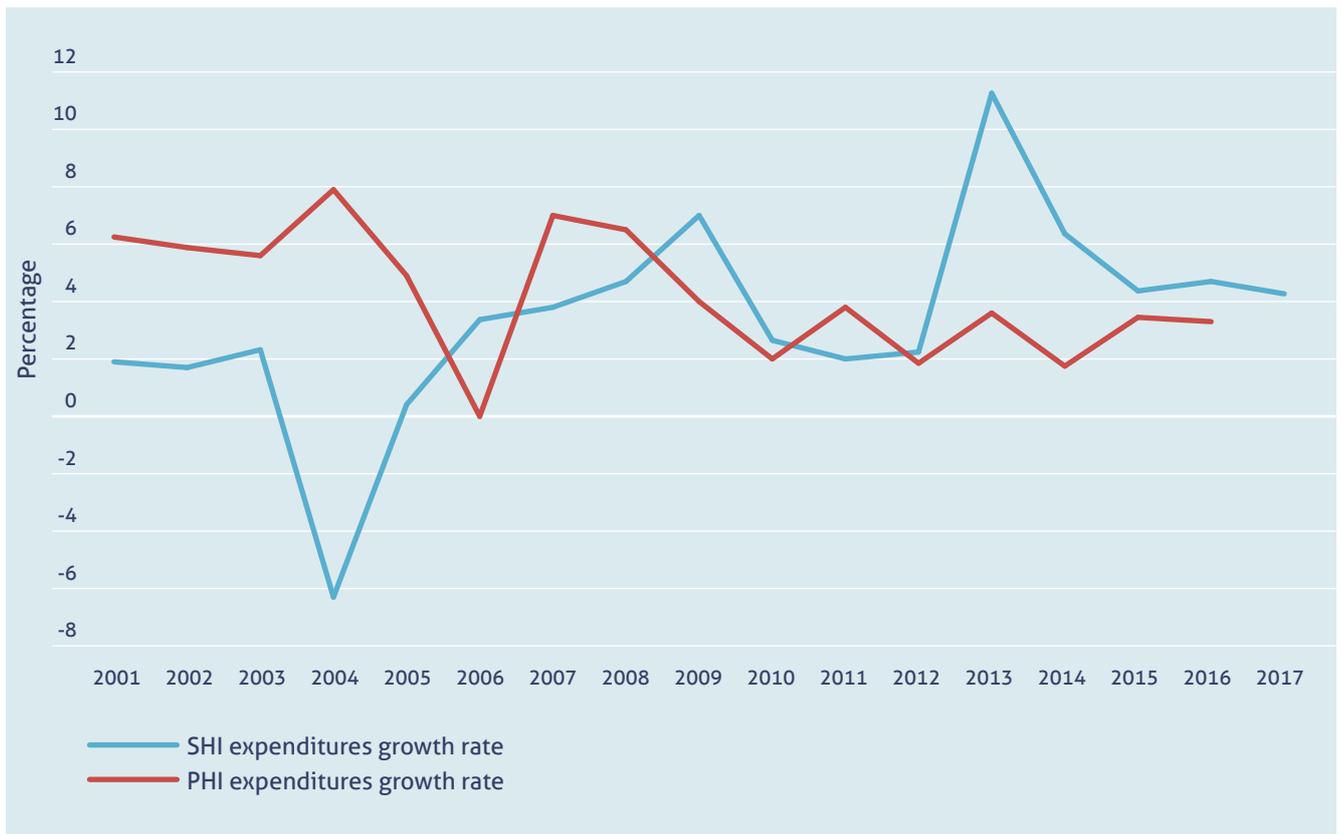
From 2000 to 2017, PHI expenditures have almost doubled. SHI expenditures have increased by 80% over the same time. Up to 2012, expenditure growth in the SHI system had been significantly lower than in the PHI system (Figure 9). Since 2012, however, the growth rate of the SHI system started to overtake the growth rate of the PHI system.

**Figure 8**  
**SHI and PHI outpatient expenditures in current prices and price-indexed (2000=100) from 2000 to 2017 (or latest year available)**



Sources: BMG, 2018a; PKV-Verband, 2017. Note: PHI expenditure data for 2017 was not available.

**Figure 9**  
Growth rates of SHI and PHI outpatient expenditures from 2001-2017 (or latest year available)



Sources: BMG, 2018a; PKV-Verband, 2017. Note: PHI expenditure data for 2017 was not available.

In contrast to the inpatient sector, the reimbursement of outpatient services provided to SHI patients differs from the services to PHI patients. Both systems use a different fee schedule. Services in the SHI system are limited by budget restrictions, but not in the PHI system. Within both systems, the reimbursement of primary and outpatient specialist care follows the same structure. This section first reports on the SHI system and next on the PHI system.

### Reimbursing outpatient services: Statutory Health Insurance

In Germany, the KBV and the GKV-Spitzenverband have formed a nationwide collective agreement: all SHI funds annually and prospectively pay an aggregate lump-sum to the KV for all enrollees which they insure in that given state. The aggregate budget is roughly based on the volume of all services of the preceding year. In return, the KV guarantees the provision of outpatient services to all SHI enrollees. KVs distribute the aggregate budget among their SHI physicians in quarterly intervals. This chapter first reports how prices in the SHI system are calculated. Then, it guides through the stepwise approach from the determination of the aggregate budget to the individual reimbursement physicians receive for providing services to SHI patients.

### **The distribution of physicians is regulated at the KV level**

In 2017, there were 147 350 outpatient physicians practicing in the SHI system. A bit more than a third of them practiced as GPs (37%, or 54 741) (KBV, 2017). The distribution of physicians is regulated by the KV in accordance with the national planning guideline to ensure sufficient and equal access to SHI physicians (*Bedarfsplanungsrichtlinie*). The planning differs between GPs and specialist physicians. To plan the distribution of GPs, the country is divided into roughly 950 planning regions. A region is designed as “100% served” if a ratio of 1 GP to 1671 inhabitants times a demographic weight is met (GBA, 2018). A region is designated as a looming shortage area and a shortage area if the quota falls below 90% and 75%, respectively. KVen employ a range of measures to attract physicians to those areas, such as scholarships for medical students in exchange for a return-of-service obligation or financial support for practice openings in those areas. If the density exceeds 110%, no additional licensures to practice are granted. In 2016, there were 86 planning areas with a percentage share of less than 90% and eight areas with less than 75% in contrast to 384 areas with a coverage of 110% and more (Klose and Rehbein, 2017). For specialists, the ratio and the size of the geographic planning entity varies depending on the specialty in question. KVen can deviate from this regulation in selected instances if necessary.

### **Physicians are reimbursed by the SHI medical fee schedule**

Physicians are predominantly reimbursed on a combination of FFS and global budgets. They bill their services at the patient’s SHI fund based on the nationwide medical fee schedule of the SHI system (*Einheitlicher Bewertungsmaßstab*) (Figure 10). Prices in the SHI schedule are similar to DRGs, albeit for procedures rather than for diagnoses. The prices are composed of points, which reflect the intensity of a service (similar to cost/relative weights for DRGs) and a base rate, which is expressed in euros (corresponds to the base rate for DRGs). An increase in the number of points for a selected service increases the intensity of that service compared to other ones. An increase in the base rate increases the reimbursement of all services. In 2018, one point equalled €0.106543. The SHI medical fee schedule was introduced in 1978 to harmonize different fee schedules. Prior to that, SHI funds had negotiated their own schedules with the KBV and the KVen.

**Figure 10**  
Simplified excerpt of the physicians' fee schedule

Number	Service	Points	Euros
01102	Consultation of SHI physician on Saturdays between 07:00 and 14:00 h.	101	10.76
03000	Flat rate for general treatment of patients aged 19-54. Coordination of medical treatment. Data collection and diagnostics. Has to include personal contact. GP-only.	122	13.00
03220	Add-on to No. 3000 if patient suffers from at least one clearly identified chronic disease. Treatment of chronic disease in accordance with medical guidelines. Support of treatment of chronic disease. Revision of pharmaceutical plan, if necessary. GP-only.	130	13.85

Source: KBV, 2018.

There are three types of services in the schedule. First, there are services which can be billed by all physicians irrespective of their medical specialty. Second, there are services which can only be billed by physicians with the corresponding specialty. This section is subdivided into primary care and 23 specialties and covers the vast majority of services. Third, there are services which can be provided by all physicians, but require additional approval by the KV, such as additional education and training, and specific structural prerequisites in the medical practice.

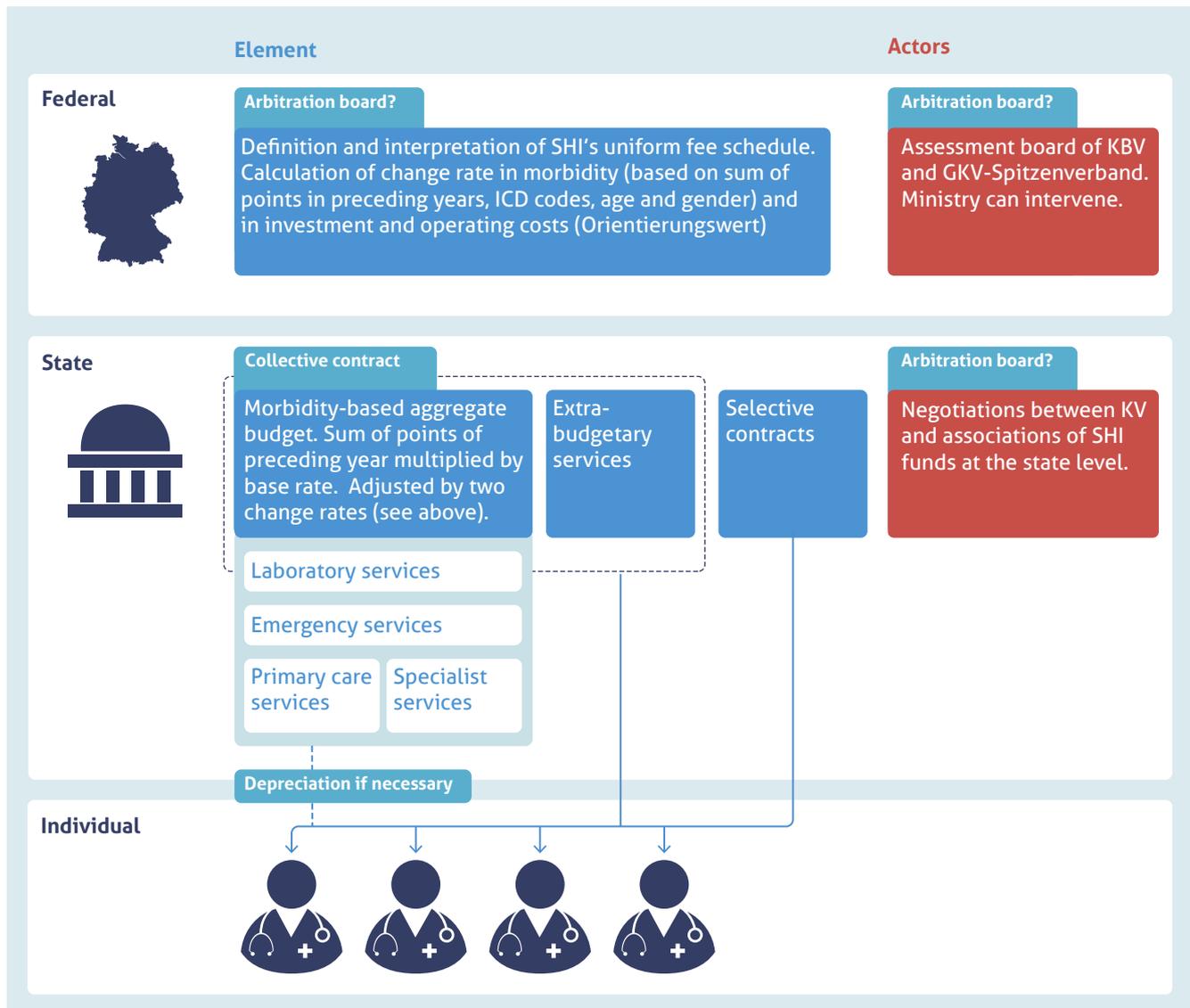
### **Prices shall reflect real prices physicians incur**

The services in the SHI medical fee schedule, their definition and interpretation, and their corresponding points and base rate are defined at the federal level by an assessment board (*Bewertungsausschuss*), which is a joint decision-making body of the KBV and the GKV-Spitzenverband (Figure 11). Points are defined by working groups of the assessment board. For this purpose, the board collects claims and cost data to determine the resource intensity of services. Medical associations can submit proposals to the working groups. Working groups invite external experts to support their work. The base rate was introduced in 2009 based on cost data from the two preceding years. The annual change rate of the base rate is determined based on the cost data of SHI physicians. It reflects increases in investment and operating costs while taking into account inefficiencies and economies of scale. It is determined by a working group as well.

The assessment board consists of three representatives from the KBV and three representatives from the GKV-Spitzenverband. Decisions have to be made unanimously and should be finalized by 31 August of the given year. If the board fails to reach an agreement, decisions are handed over to the extended assessment board (*erweiterter Bewertungsausschuss*),

which adds three non-partisan members – one at the decision of the KBV, one at the decision of the GKV-Spitzenverband, and a chair, which is determined in a joint decision of the KBV and the GKV-Spitzenverband. The entire process is supervised by the German Federal Ministry of Health. The extended assessment board can file a complaint or entirely revoke the mandate. The KBV and the GKV-Spitzenverband can file a suit against interventions by the Ministry at the Superior State Social Court. Vice versa, the KBV and GKV-Spitzenverband can also sue the assessment board at that Court. Both have taken place on a recurring basis in the past.

**Figure 11**  
From aggregate price setting to the individual physician's reimbursement in the SHI system



Source: Adapted by the authors based on KVRLP, 2017, and KVT, 2017.

## **SHI funds pay aggregate budgets to the KVs based on the preceding year**

Every KV annually receives an aggregate budget from SHI funds for all enrollees who live in that given KV. The aggregate budget consists of a morbidity-adjusted part and extra-budgetary services. The morbidity-adjusted part represents about 70% of all services. It is based on the sum of all points of services which have been provided to SHI patients in the preceding year (similar to the case mix), multiplied by the base rate. This budget changes annually based on two factors: the sum of points is adjusted to accommodate changes in age, gender and morbidity composition of enrollees in a given KV; the base rate is adjusted annually to reflect changes in investment and operating costs.

The change rates are proposed by the aforementioned assessment board, which calculates the KV-specific changes in morbidity for every KV separately, as well as the federal change rate of the base rate (see section above). Following from that, KV negotiates with all state associations of SHI funds on the aggregate budget of their KV. They define their regional base rate based on the change rates proposed by the assessment board. They can deviate from the board's calculations and decide on how to weight both change rates or choose entirely different rates. Furthermore, the parties can add additional services to the medical fee schedule, which only apply to their KV, and negotiate add-on payments to services and service providers, which are understood to need additional financial support. Negotiations on a state level should be finalized by 31 October of the given year. If the negotiating parties fail to reach an agreement, an arbitration board, which consists of representatives of the KV and state associations of SHI funds on equal terms, decides. All parties can sue the arbitration board's decision at the respective state's Superior State Social Court.

The remaining 30% of services are not morbidity-adjusted and not subject to budget constraints. This part includes, among others, outpatient surgeries, prevention, pain therapy, rheumatology, or selected anaesthetics. Additionally, it covers additional services which result from agreements on a federal or state level, for example, vaccinations or the provision of outpatient services to cancer patients.

## **The KV breaks down the aggregate budget to the individual physician**

Following from the agreement on the aggregate budget, the KV distributes the morbidity-adjusted part among its physicians on a quarterly basis. This follows a step-wise approach.

In the first step, services are split into four subgroups, namely laboratory, emergency, primary care, and specialist services. Primary care services are subdivided into GP services and paediatrics, whereas specialist services are subdivided into 14 medical speciality groups. The financial volume of these groups is distributed separately from one another. There is no financial

redistribution from one subgroup to another, such as from GPs to specialists. This shall guarantee that expenditure increases in one subgroup do not take place at the expense of another one.

### **Financial deductions shall disincentivize volume growth**

In a second step, the KV determines the quarterly service volume (so-called standard service volume (*Regelleistungsvolumen*)) for every SHI physician. All SHI physicians have their own financial budget, which is dependent on the average number of cases physicians from that medical specialty treat. This budget is reassessed in quarterly intervals.

To determine the standard service volume, the amount of cases of the individual physician of the preceding quarter is multiplied by the case value of the specialty and a demographic weight to reflect the age composition of the physician's patient cohort. To calculate the case value, the financial volume of all standard service volumes of a specialty is divided by the number of patients. If a physician outperforms his colleagues within his specialty by more than 150%/170%/200% of the average number of cases, the service volume of these additional services receives a deduction of 25%, 50%, and 75%, respectively. As such, the deduction is roughly comparable to deductions on additionally negotiated cases in the inpatient sector. This intends to reduce incentives of SHI physicians to augment the number of services beyond the average volume of their peers. At the same time, as the overall budget for all physicians of that specialty is fixed, an increase in the total number of patients treated leads to a reduction of the financial amount a physician receives per patient. Due to that, physicians are dependent on the notion that their colleagues do not excessively increase their number of patients. The thresholds of the stepwise depreciation apply to all KVen. However, selected KVen have decided to suspend the depreciation for selected specialties, and GPs and/or physicians who practice in medical shortage areas.

If physicians exceed their quarterly service volume, the reimbursement of services beyond that is depreciated as well. It follows a stepwise depreciation as described in the step above. Each KV determines the steps for each group individually. As the number of physicians changes quarterly, the steps change accordingly. The reimbursement of services which exceed the individual service volume can also be entirely suspended. This penalty shall incentivise physicians to remain within their predefined volume.

In addition to their reimbursement stemming from the morbidity-based aggregate budget, SHI physicians separately receive reimbursement for extra-budgetary services. In general, these services are not budgeted. However, in the past, this has been subject to change. For example, in 2011 and 2012, the total financial volume growth rate of extra-budgetary services was limited to 0.75% following larger growth rates in the years before. As a result, selected KVen introduced cost-containment measures on extra-budgetary services. Furthermore, they

receive financial contributions from selective contracting agreements. The specificities of these reimbursements are based on the individual arrangements in these contracts. By and large, they are similar to the reimbursement for extra-budgetary services.

KVen only have to inform SHI funds on how they distribute their aggregate budget. KVen and SHI funds inspect whether physicians bill their services correctly. Individual physicians can sue their KV for reimbursement at the Social Court and do so on a recurring basis.

### **The German reimbursement system is overly complex and fragmented**

The current reimbursement system is extremely complex and bureaucratic. Attempts to improve the SHI's outpatient system have increased its complexity and led to diverging incentives. Since 2005, the reimbursement of SHI services has moved from a pure FFS-system to a combination of FFS, budgets, and bundled payments. Since then, physicians receive a lump-sum payment per patient, which they can bill on a quarterly basis. The share of lump-sums was increased considerably in 2008 and 2013. For GPs, it ranges around 60% and is generally lower for specialists (KVRLP, 2017; KVSH, 2013).

Since the early 2000s, the legislature introduced various modes of selective contracting to increase competition in the SHI system that bypass the collective agreement (Milstein and Blankart, 2016). For example, since 2000, SHI funds and physicians can close integrated care contracts to experiment with innovative forms of delivery of care. There are more than 6400 integrated care contracts, but this number has not been updated since 2012 (Milstein and Blankart, 2016). In 2004, Germany attempted to introduce a gatekeeping system by introducing GP contracts. Enrollees enjoy slightly lower premiums but have to use gatekeeping services. In 2017, there were at least 1200 GP contracts in Germany (BVA, 2018).

KVen have to disentangle services provided in selective contracting arrangements from those under the collective agreement, have to reimburse neighbouring KVen if patients have accessed medical services there, and subtract various exceptions from the individual physician's standard service volume. This poses a significant bureaucratic burden on KVen. The low financial volume of many of these contracts raises the questions whether the bureaucratic burden might be worth disentangling costs.

### **Budget control performs below potential**

The GKV-Spitzenverband criticizes the lack of cost containment. According to the association, physicians provide an increasing number of extra-budgetary services as a loophole to escape budget constraints. In the past 5 years, the share of services which are not subject to budgeting has increased from 25% to 33%. In addition, KVen suspend budget restrictions for

selected groups of physicians, such as GPs and physicians who practice in underserved areas. Finally, physicians exceed their individual budgets despite financial deductions.

Price negotiations between the KBV and the GKV-Spitzenverband lead to severe disputes on an annual basis despite having established a joint institute for the calculation of the different price components. The GKV-Spitzenverband argues that the reimbursement of physicians has increased at a much steeper rate than expenditures (GKV-Spitzenverband, 2018d). In return, the KBV argues that increases in the reimbursement do not keep up with increases in investment and operating costs.

The KBV and its corresponding organisations on a state level are also confronted with disagreement from within the medical community and find themselves in a difficult situation. On the one hand, they represent the interests of SHI physicians vis-à-vis the GKV-Spitzenverband and other interest groups, but on the other hand, they have to enforce budget restrictions, control medical bills, and revoke medical licensures of their own members. The split of the aggregate budget by medical specialty and the prices for selected services within the SHI medical fee schedule are much contested. For example, over the past years, GPs have called for an increase in reimbursements for home visits and higher lump-sum payments for the provision of basic services.

### **Reimbursing outpatient services: Private Health Insurance**

Similar to the SHI system, PHI physicians are also reimbursed on a FFS basis. Physicians use a medical fee schedule to translate their services into points. This schedule is also used for services which are not provided by SHI and paid on an out-of-pocket basis by the patients themselves. In contrast to the SHI system, where the benefit-in-kind principle is applied, PHI uses the cost-reimbursement principle. Thus, patients insured under PHI pay their physicians directly. Following from that, they hand in their bills to their respective PHI fund to claim the refund of their medical expenditures. Because physicians are paid directly by PHI patients, they can sue patients for payment. Patients, in return, can sue their PHI fund to refund their payments. There is no budget ceiling in place. For civil servants, the state uses the same reimbursement mechanism as the PHI.

The medical fee schedule for PHI services is set by the German Federal Government and has to be approved by the Bundesrat. In 2018, one point equals €0.0582873. This value dates back to 2001, when prices in Deutsche Mark had to be converted into euros. It has not been adjusted since then. The PHI medical fee schedule consists of roughly 2000 services and more than 900 add-ons for the provision of services to children, during out-of-office hours, additional diagnostic services, and use of additional technologies. It functions like the SHI medical fee schedule.

**Figure 12**  
**Thresholds of weighting factors for PHI prices**

	Physician services	Technical services	Laboratory services
Simple factor	1.0	1.0	1.0
Standard maximum (threshold) factor	2.3	1.8	1.15
Maximum factor	3.5	2.5	1.3

Source: PKV-Verband, 2008.

Physicians can weigh the points for the provision of medical services with a factor of up to 3.5 (maximum factor) depending on the medical complexity and time needed to provide the service (Figure 12). The weighting factors are defined in the fee schedule as well. For physician services such as personal consultations, physicians can weight their services with a factor of up to 2.3 (standard maximum/ threshold factor) without explanation. Weighting factors beyond this threshold have to be explained in a written note to the patient and agreed between both parties. The same applies to technical and laboratory services, with the thresholds being set at 1.8 and 1.15, respectively. If physicians exceed the maximum factor of 3.5 (2.5 for technical services and 1.3 for lab services) and if patients want to claim refund for these expenditures, physicians need written consent from the patient. The patient has to negotiate with his PHI to confirm whether the PHI covers the higher medical costs. In 2016, 77.43% of physicians used the standard maximum threshold factor, 4.18% as a lower one and the remainder a higher one (PKV-Verband, 2017). The simple and threshold factor for physician and technical services were defined in 1982 and have not been changed since. The maximum factor and factors for lab services were added in 1995 and have not been modified since.

Disputes on how to interpret the PHI medical fee schedule are resolved by the "central commission on questions concerning the medical fee schedule" of the BÄK. This commission consists of four representatives from the BÄK, one member of the German Federal Ministry of Health, one member of the German Federal Ministry of the Interior, and one member of the PKV-Verband. It is headed by a physician who has been appointed by the board of the BÄK. Next to the interpretation of the medical fee schedule, this commission is mandated to add further items as so-called analogue services. These are listed in a separate list and allow physicians to bill services which are not officially listed in the PHI medical fee schedule. To some extent, these items have been proposed by the BÄK and agreed upon by the German Federal Ministry of Health, the German Federal Ministry of the Interior, and the PKV-Verband.

## **The PHI medical fee schedule is outdated, and reforms are stuck**

The current medical fee schedule of the PHI is outdated. It dates back to 1982, and the latest proper revision of parts of the medical fee schedule took place in 1995. As a result, many new procedures, such as minimally invasive surgical interventions, are not included. Physicians criticize the medical fee schedule because the value of a point has not been increased since 2001, and the weighting factors originate from 1982 and 1995.

The BÄK and the PKV-Verband officially began revising the fee schedule in 2013. This reform attempts to update the schedule to the latest state of medical innovation. It shall make the billing of services more transparent, less disputable, and easier to understand. Furthermore, it is expected to properly reflect expenditures physicians incur without putting a necessary financial burden on patients. In a first step the BÄK, the PKV-Verband, and state representatives (on behalf of civil servants) agree on a draft proposal which is then reviewed by the Federal Ministry of Health. All partners have to agree on one joint proposal, with the German Federal Ministry of Health having the final decision-making power on the proposal. Upon approval by that Ministry, the German Government and the German Bundesrat jointly adopt the new medical fee schedule. Thus far, 137 medical associations have revised the fee schedule in working groups and commented on proposals. The latest proposal adds 2444 new services, increasing the number of services from 2916 to 5360 (Rheinhardt, 2018). In late 2017, negotiations on the schedule concluded.

Negotiations on how to price services are still in process. New prices shall reimburse real costs physicians incur. The weighting of services will be composed of the labour intensity of the physician and other staff, technical resources, and overheads (Rheinhardt, 2018). Each of the four categories will be composed of a time and a severity factor. The commission investigates claims data from physicians as well as data on physician characteristics from the physicians' registry, the PHI's supervising authority, and the Federal Statistical Office, among organizations. The entire process is accompanied by roughly 300 representatives from medical associations who disentangle cost data and services from one another. The new schedule will not include a weighting factor at the physician's disposal anymore. Instead, there will be a uniform pricing system which will be equal to the former prices times a cost weight of 2.3.

To date, it is not clear how comparable prices in the SHI system are to those in the PHI system. PHI prices which are not weighted are understood to be roughly similar to SHI prices. Due to weighting factors in practice, however, expenditures for PHI services are about two to three times higher than for comparable services within the SHI sector (Niehaus, 2009). Besides different price levels, services within the SHI service are subject to a budget ceiling. This is not the case in the PHI system, where budgets restrictions do not apply.

PHI funds have little means for cost containment. The PHI system relies on a reasonable consumption behavior by patients, which is a very optimistic assumption. Patients are responsible for controlling their medical bills and to object when they question selected items, such as the provision of a service or its weighting factor. PHI funds can close contracts, which include cost-containing elements with their enrollees. For example, PHI funds can decide to refund only 80-90% of the expenditures enrollees incur, and/or only beyond a predefined deductible, or to only reimburse specialist services if patients have consulted a GP before.

### **The dualist system is contested**

The dualist structure of prices is highly contested by policy-makers, patients, physicians, and sickness funds alike; thus, there have been attempts to change it. The status quo has led to a heavily distorted outpatient system with preferential treatment of PHI patients at the expense of SHI patients.

Physicians enjoy considerably higher reimbursements for services to PHI patients compared to SHI patients for roughly the same services, and the provision of services is not limited by budget controls. As a result, PHI patients enjoy lower waiting times than SHI patients (Roll, Stargardt and Schreyögg, 2011). Physicians reduce their services to SHI patients at the end of each billing quarter, such that patients can face difficulties scheduling appointments with a physician if the physician's budget has been exhausted (Himmel and Schneider, 2017). Thus far, providers and payers have rejected attempts to merge both systems or to harmonize the reimbursement structure. The GKV-Spitzenverband fears higher prices and a cost increase for their enrollees without any substantial gains. The PKV-Verband fears losing its competitive advantage of low waiting times and additional services, but at the same time aims to limit its expenditure growth. The KBV desires to suspend the budgeting of services. Their position to a joint medical fee schedule remains unclear. The BÄK has been very outspoken in rejecting a joint schedule. It fears an overall decrease in the reimbursement of services, increased supervision, and interference by the legislature.

The German Federal Ministry of Health has established an expert commission (KOM-V), which has been mandated to draft a proposal on how to reform the reimbursement of outpatient services. A federal reform is earmarked for 2021.

### **Nursing homes and long-term care**

In Germany, LTC forms a separate sector with its own insurance system. LTC insurance is compulsory for everybody. Those who are enrolled in the SHI system are automatically enrolled in the SHI's LTC insurance as well. Those who are enrolled in a PHI fund choose among private LTC insurance providers. By and large, both SHI and PHI funds have to follow the same rules and regulations. LTC insurance was introduced in 1995. In 2017, 3.5 million inhabitants enjoyed contributions from LTC insurance,

out of which 3.3 million were covered by SHI and the remainder by PHI (BMG, 2018b). Of all cases, 2.7 million received contributions to outpatient services, whereas 0.8 million profited from support for inpatient facilities (BMG, 2018b). As of 2017, Germany had 14 480 nursing homes. Nursing homes form a contract with LTC funds at the state level in accordance with the respective regional authority of social services in which the nursing home is located (generally, counties). Nursing homes have to meet infrastructural and staffing prerequisites, which are set on a federal and state level to be eligible to close an agreement. Upon successful closing, nursing homes can bill the SHI's LTC funds and enrollees. In return, they have to adhere to federal and state regulations and are subject to quality inspections by the medical service of the SHI and its counterpart of the PHI. The following section focuses on inpatient services in the SHI system.

In contrast to SHI funds, which still enjoy financial surpluses, LTC insurance incurs losses and has had difficulties to keeping up with cost increases due to the ageing population. Since its introduction, the number of people who are dependent on outpatient facilities in the SHI's LTC has more than doubled, from 1 million in 1995 to 2.5 million in 2017. Furthermore, the amount of people receiving inpatient support doubled from 0.4 million in 1996 to 0.8 million in 2017. In line with these changes, expenditures have more than tripled from €10.25 in 1996 to €35.54 in 2017 and more than doubled since 2000 (€15.86 billion) (BMG, 2018b).

Financial contributions by LTC insurance are limited depending on the enrollee's need for nursing care. If enrollees want to receive contributions from their LTC insurance, they have to apply to their insurance and must have contributed to the insurance for at least two years to be eligible. If so, the medical service of the SHI assesses the patient's need and allocates the patient to one of five levels based on the physical, medical, cognitive, and psychological assessments, and the ratings of the patient's ability to live independently as well as the patient's social interactions. Patients are graded on a scale from 0 to 100 and allocated to one of the levels, accordingly. All patients who receive care in an outpatient setting receive monthly lump-sum contributions of €125 for short-term inpatient care, semi-inpatient services at night, or for services which support relatives (Figure 12). In addition, they receive a monthly contribution of €316 to €901 if services are entirely provided by the family and relatives at home, €689 to €1995 for professional outpatient services, and €700 to €2005 for inpatient services.

**Figure 13**

Monthly contributions to LTC services depending on the care level in euros

Care level	Short-term care (outpatient)	Care provision by relatives	Professional outpatient services	Professional inpatient services
Level 1	125	-	-	-
Level 2	125	316	689	700
Level 3	125	545	1298	1262
Level 4	125	728	1612	1775
Level 5	125	901	1995	2005

Source: BMG, 2018c.

### **Nursing care charges are negotiated between LTC funds and individual nursing homes**

LTC funds cover nursing and medical care up to the monthly limit displayed in table 4. Prices are calculated on a per diem basis, and nursing homes are generally reimbursed monthly with one month counting as 30.42 days. Prices differ between levels and mostly reflect the staffing costs of the nursing workforce, additional personnel, and medical devices and other material costs. If the monthly sum of nursing care charges is higher than the monthly lump-sum payment (Figure 13), a patient has to pay the average difference irrespective of his level (see section below). Furthermore, the medical service of SHI funds investigates whether nursing homes bill the services correctly.

Nursing care charges are negotiated individually between a nursing home, welfare organisations, and LTC funds whose enrollees contribute to at least 5% of the nursing home's nursing days. These negotiations are subject to state rules and regulations. Nursing homes can apply for negotiations on their nursing care charges whenever they deem it necessary. Nursing homes submit all cost data to the opposing parties including among others, staffing costs, aggregate patient data, and infrastructural and material costs. To date, it is not clear which data nursing homes have to submit. Thus far, only few states have implemented state-wide regulations on the matter.

By and large, negotiations follow a two-step approach. In the first step, nursing homes explain why higher nursing care charges have become necessary and are appropriate, for example, due to tariff increases, additional personnel, and increases in material costs ("plausibility check"). If approved, nursing home cost data is benchmarked with other nursing homes of similar size in the same county ("external comparison"). Nursing homes with costs in the lower third are deemed cost-efficient. Nursing homes above that benchmark are further investigated.

Negotiations on nursing care charges are limited to six weeks. If the parties fail to reach an agreement, an arbitration board decides as the second step. The board is composed of representatives of nursing insurance funds (both public and private) and the nursing home on equal terms, a non-partisan chair, and two non-partisan members. The non-partisan members are appointed by the decision of the two parties and drawn by lot if necessary. If they fail to reach an agreement, the State Ministry of Health appoints. It also supervises the arbitration board and defines its rules of operation. Both parties can sue the decision of the arbitration board at the Superior State Social Court.

### **Patients contribute to nursing care charges, cover housing and utilities, education and infrastructural costs**

Patients in nursing homes contribute to nursing home costs in five different ways. First, they contribute to nursing care charges with a nursing-home-specific copayment. It is the same for all patients within the nursing home irrespective of their severity and reflects the average difference of the sum of nursing care charges minus the sum of lump-sum contributions by LTC funds. More precisely, nursing homes and LTC funds take the sum of all nursing care charges at a given date and multiply it by 30.42 to receive the monthly rate. Then, they deduct all monthly financial contributions by LTC funds in relation to the patients' care levels. Finally, they divide the remainder by the number of inhabitants.

Copayments have only been harmonized since 2017 to improve the price transparency and comparability of nursing homes. Prior to that, copayments increased by level of care. As a result, patients refrained from applying for level upgrades despite a deterioration of their health status. Copayments remain contested, because patients in less expensive care levels cross-finance more expensive patients. Furthermore, LTC funds expect a severe cost increase on top of their already problematic financial situation (Vdek, 2018b). Second, patients cover costs for housing, including utilities, and meal plans. The nursing home-specific copayment and costs for housing and utilities are negotiated between every nursing home on the one side and LTC funds on the other. As a result, prices vary between nursing homes. However, they do not vary between patients within a nursing home, or between a nursing home and different LTC insurances. If the parties fail to reach an agreement, an arbitration board decides. Third, patients cover investment costs of nursing homes including costs for the building, equipment, and maintenance. In contrast to nursing home-specific copayments and costs for housing and meal plans, investment costs are not negotiated, but calculated by the nursing home in accordance with state law and requires approval by the relevant authority. The nursing home can sue the state at the Social Court. Fourth, patients pay a training levy. This levy varies among states and nursing homes, and the precise details are set by the state. For example, in selected states, the training levy only applies to nursing homes which

train nurses, whereas in other states, all nursing homes pay into a training fund. Fifth, nursing homes can charge patients for additional costs, such as wellness services, superior housing, and individual meal plans.

### **Prices are very heterogeneous**

Because prices are negotiated individually and because rules and regulations are generally often defined at the state level, prices are extremely heterogeneous. In January 2018, average prices per stage varied between €1082 in Saxony-Anhalt and €2331 in North Rhine-Westfalia, excluding training levies (Vdek, 2018b). Average copayments ranged from €214 in Thuringa to €841 in Berlin, housing and meal plan costs from €531 in Saxony-Anhalt to €1004 in North Rhine-Westfalia, and infrastructural costs from €280 in Saxony-Anhalt to €636 in North Rhine-Westfalia.

The LTC system was subject to comprehensive reforms in 2016 and 2017. The criteria to quality nursing care have been widened and loosened. Stages were subdivided from a three-level scale to a five-level scale to better reflect differences in care needs. The legislature considerably increased contributions by LTC funds and added new services to and stricter regulations on nursing homes, for example, staffing ratios. As a result, more enrollees have qualified for LTC contributions, and LTC funds face a much higher financial burden. Following these reforms, in 2018, calls to increase the financial contributions by enrollees to LTC funds have emerged. Different modes on how to distribute the burden have been put on the table.

## **4 Conclusions**

Thus far, Germany has given preference to high volumes and low waiting times over cost containment and potential overprovision of care. It entertains a high density of providers, comparatively low prices, and reimbursement systems that support high turnover of patients. This combination has ensured that the country's targets are met. This approach works well if countries want to explore the full potential of the service provision of their health care providers, but less so if cost containment is a higher priority.

For the time being, the growth rate of the health care sector and its subsectors is not anchored to the federal level as it is in the case of England, France, or the Dutch inpatient sector. Instead, the growth rates of the inpatient and outpatient sectors are an aggregate of budget negotiations at lower levels. Germany records three different ways of negotiating its healthcare budgets. Budget negotiations in the inpatient sector and nursing homes take place at the individual level between the respective hospital or nursing home and the sickness funds or LTF care funds that cover their residents or patients and are largely based

on the preceding year. Budget negotiations in the PHI's outpatient sector are non-existent. Budget negotiations in the SHI's outpatient sector take place between the KV and the SHI funds at the state level and are largely based on the preceding year plus an increase calculated by a third party. Subsequently, the KV is tasked with distributing resources among its physicians. This puts the KV into a delicate position. On the one side, it represents its SHI physicians and negotiates in their favour. On the other hand, it has to organize the distribution of financial resources, making it vulnerable to fights between specialists and GPs and between specialists. Given that the budget growth factor is largely calculated at the federal level, the KV is limited in its potential to succeed in budget negotiations and reduces the risk that budget negotiations are misused for political purposes. This dualist role shifts the responsibility for mediating conflicts among physicians from the government level to the physicians themselves. It also, however, requires a clear framework within which the KVen operates. Compared to other OECD countries, if budget constraints are the overarching priority, setting a national cap on budget growth rates might be a more powerful tool than negotiations at lower levels.

In the inpatient sector and the SHI's outpatient sector, Germany entertains sophisticated price-setting mechanisms, which are largely based on real costs providers incur. The calculation of both the price level and cost weights are executed by a third party within a defined framework, which reduces the influence of providers and sickness funds on price setting. These processes lead to generous data collection that can be used to monitor and compare the behavior of providers. It is worth noting that Germany's inpatient data is the *result* of the DRG introduction rather than a prerequisite. To date, Germany could improve considerably on a more representative sampling of providers who submit their data. This is particularly apparent in the inpatient sector. The legislature has responded to this issue and equipped the InEK with the competency to mandate hospitals to submit data, but it is not clear yet whether this will make the price calculation sufficiently representative. In contrast to other OECD countries, the inpatient reimbursement is not adjusted based on hospital and environmental characteristics, such as a Market Forces Mechanism or a wage index or an adjustment for hospital size. This leads to a significant distortion in the inpatient sector, and add-on payments have not sufficiently succeeded in softening it.

The price calculation is accommodated by a complex system to resolve conflicts. The parties involved can invoke for arbitration boards at virtually every step of price setting and budgeting. This may lead to lengthy and cumbersome price setting but originates from Germany's historic experience of the partial suspension of a functioning and objective legislative. Henceforth, limiting the role of arbitration courts will not take place. Price setting the PHI's outpatient sector is largely outdated and rather opaque in the nursing home sector. In the PHI sector, however, reforms to update the fee schedule are being undertaken.

Germany has a chequered history with policy attempts to contain hospital costs and volumes. Because the country is still financially sound, policies to reduce budget growth have difficulties to find a majority. In the inpatient sector, attempts to reduce the high density of beds, to anchor hospital volumes, or to limit growth rates have performed below potential. Hospitals have generally found a way to bypass budget restrictions, but reductions in hospital beds are countered by severe political pressure. From a financial point of view, the introduction of DRGs has gone unnoticed. Attempts to shift surgeries to ambulatory care settings have resulted in an increase in outpatient surgeries *and* inpatient stays because hospitals could use the increased capacities from the newly opened beds for additional inpatient stays. Based on Germany's experience, if cost containment is the preceding policy goal, singular policies to target selected parts of the health care budget should be viewed with caution. England, France, and the Netherlands have a much more successful experience with setting global budget growth targets at the federal level, but these have to be broken down among providers.

In the past, the quality of care has not been understood to be an integral part of price setting but is an integral part of other health policy areas. In the inpatient sector, hospitals are obliged to annually and publicly report their quality results. These "structured quality reports" have improved quality of care, albeit not due to changed patient preferences or flows, but thanks to increased comparisons and benchmarking of hospitals with their competitors. However, these efforts have been deemed insufficient. In response, the KHSG has introduced three federal policies to improve inpatient quality of care: quality contracts, quality criteria for hospital planning, and P4P. As of March 2019, the design of a P4P programme is still under discussion.

In the SHI's outpatient sector, KVen are responsible for ensuring the quality of care of their physicians. Physicians are subject to a rigorous quality assessment. All physicians have to participate in continuous education or face penalties ranging from financial deductions to the total revocation of licensures to practice. Physicians who offer additional services, for example, diagnostic procedures such as ultrasound, long-term ECG, and MRI, or perform additional treatments and procedures, such as disease-management programmes and surgeries, have to apply for additional licensure to bill these services and have to undergo additional training and meet infrastructural requirements. Furthermore, they can be subject to annual quality checks, which can include inspections of the practice and its infrastructure, or the investigation of patient data and footage of the procedures. Sanctions range from written notifications to the entire revocation of the license to practice. In contrast to the inpatient sector, the results of individual physicians or practices are not published. In the PHI's outpatient sector, there is no quality control. In the past, price setting in the SHI's outpatient setting has been used to harmonize the delivery of care and first attempts to enhance a more comprehensive understanding of

service provision have been made. This, however, has led to a confusing mixture of different reimbursement schemes with diverging policy goals. For example, the introduction of lump-sum payments to SHI physicians has coincided with a perceived increase in waiting times. As a result, the Ministry of Health now discusses and experiments with policy options to lower waiting times.

For the time being, Germany's healthcare sectors remain strictly separated and are financed from entirely different budgets. To improve transparency and continuity of care, the Ministry of Health has installed a commission to reaffirm the reimbursement of outpatient SHI and PHI and a working group of federal and state governments to foster the integration of the different healthcare sectors (*Bund-Länder-Arbeitsgruppe zur sektorenübergreifenden Versorgung*). The first results are expected in 2020. If countries are serious about the integration of health services, they should upfront consider harmonising the different healthcare budgets.

In summary, Germany's price setting ensures that the budget increase in health care costs is limited due to limited price growth rates. Germany has built a sophisticated and rigorous way to determine prices in the inpatient and SHI's outpatient sector, albeit with much room for improvement. However, because Germany still enjoys a financially sound situation and has not set cost containment as its overriding policy goal, it does not operate with caps on aggregate budget growth rates. The introduction of quality of care and integration as components of price setting are relatively new and thus still under construction.

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## Case study

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# Japan

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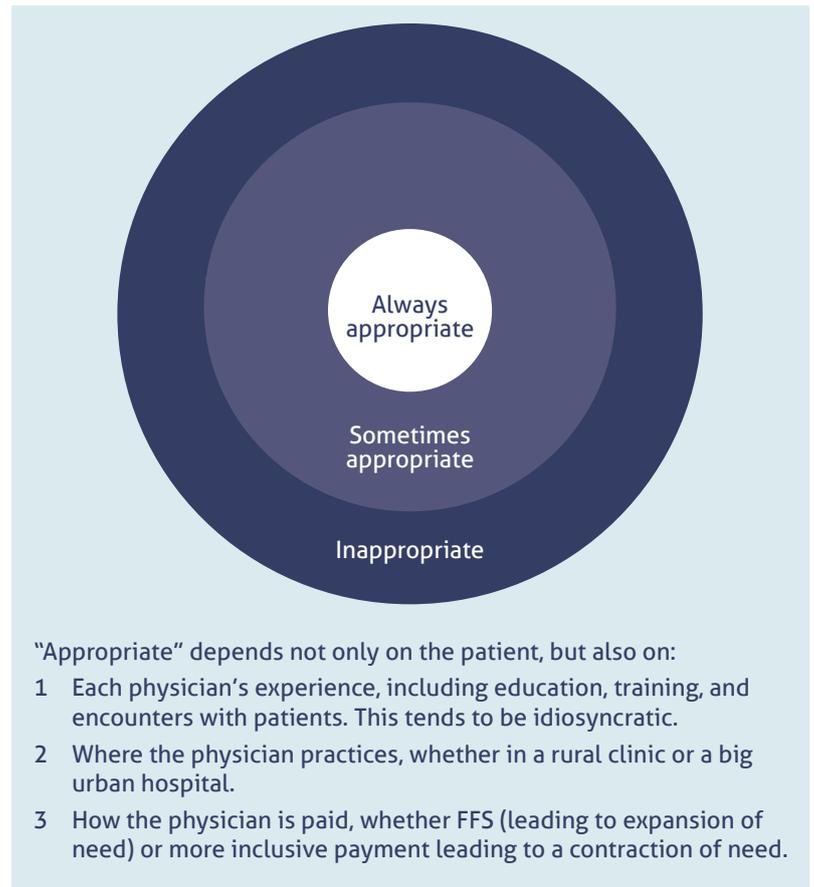
Japan

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The following aspects should be noted when reforming the payment system. First, services are determined not only by the patient's needs, but also on how the needs are interpreted by the physician. As Fig. 1 shows, the definition of "appropriate" differs according to the physician's education and training, the resources available (big urban hospital or rural clinic), and the method of payment (fee-for-service or fixed salaries). Thus, it would be difficult to define an "appropriate" package of services that meets the needs of every patient.

**Figure 1**  
Defining appropriate treatment



Source: author.

Second, even if there is agreement on the services and the amount of time required, there is no consensus on how much physicians should be paid relative to the average worker for delivering the services. Should their income be twice or ten times that of the average worker? There are big differences in this ratio even among high-income countries (Conover, 2013). The labour costs of nurses and other allied health care workers, and the extent of task-shifting, also vary across and within each country. The national average is often used, but whether the current levels should be maintained is disputed from those within and outside the health care sector.

The above implies that payment reform should focus less on economic theory and data from cost studies, and more on negotiations with physicians and hospital organizations. Japan once tried to radically redesign its payment system. A huge cost

## Abstract

study was made in 1950, in which truck-loads of data were collected. However, it was not possible to set fees according to the standard cost of each service item, because costs varied greatly across hospitals (Matsuura and Oomura, 1983). Moreover, the government and the Japan Medical Association (JMA) had very different ideas on how much physicians should be paid on an hourly basis when compared with average workers. Since then, the government has relied mainly on structured negotiations with the JMA and other provider organizations in setting and revising fees.

The two major goals pursued by the government have been containing costs and nudging providers towards policy goals, such as decreasing the lengths of hospital stays and promoting home and community care. Whether costs have been contained is debatable. Total health expenditures to the GDP are 10.7%, the sixth highest ratio in the world (OECD, 2018). However, the fact that Japan has the highest percentage of elders 65 and over in the world (27.7%) and that expenditures for long-term care (LTC) are relatively high (Campbell et al., 2016) should be taken into consideration.<sup>1</sup> The lengths of hospital stays are still long, but many “hospitals” in Japan are de facto nursing homes. Regarding quality, the macro indices of health are excellent, and the outcomes for specific clinical conditions are the same or better than those reported for other countries (Hashimoto et al., 2011). This report will explain how the payment system functions to provide possible lessons to other countries.

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1 The percentage of total health expenditures (THE) to GDP jumped from 9.2% in 2010 to 10.6% in 2011. This occurred only in Japan and is probably due to the fact that virtually all LTC insurance expenditures were first included in THE from 2011 (IHEP, 2016).

# 1 Historical development

## Before and after Western influence

Payment reform should take a historical perspective because the physician's behaviour and values have been rooted in the past. In Japan, private practitioners were well established by the middle of the 18th century. At that time, physicians were paid for the medication they dispensed and not for the services they provided. It was professionally and legally not appropriate for physicians to demand payment for services, because treating patients was a humanitarian act. However, payment for medication was appropriate, because physicians must earn their living and the ingredients had to be purchased (Fuse, 1979). At that time, prescribing and dispensing were intricately linked; physicians were also referred to as "kusushi" (apothecaries). Dispensing continued to be a major source of the physicians' income until well after the end of the Second World War. At its peak in 1980, payment for pharmaceuticals, which would include the profits providers made from dispensing, composed 38.7% of national medical expenditures (Kenkou Hoken Kumiai Rengoukai, 2017).

The development of hospitals was also different. In Western countries, hospitals began as charity institutions for the poor. In Japan, hospitals were built by the government from the latter half of the 19th century as part of the general policy to Westernize the country. The objectives lay in the following: treating soldiers, educating medical students, and isolating patients who had communicable diseases. However, these government hospitals remained few. Most hospitals were built by physicians adjacent to their clinics for patients who were able to pay. As a result, there was no clear distinction between clinics and hospitals. In general, hospitals did not provide nursing care. Patients were cared by their families, and nurses were trained to assist physicians. It was only after the reforms made by the occupying forces after Japan was defeated in World War II that patient care was legally defined as a nurse's responsibility (Ikegami, 2014).

## Development of the Fee Schedule

When Social Health Insurance (SHI) was implemented in 1927, the government became the insurer for the Government-managed Health Insurance (GMHI), which covered manual workers employed in small companies with less than 300 employees. At that time, the services were overwhelmingly delivered by private practitioners who were paid on a fee-for-service basis for the services and the medications they dispensed. Thus, in the GMHI's Fee Schedule, the basic unit ("point") was for a consultation that included one day's dosage of a basic pharmaceutical (such as bicarbonate of soda) dispensed by the physician (Aoyagi, 1996). Other fees were set

relative to this basic unit and expressed in points. The Fee Schedule was very simple and is said to have been designed overnight by the JMA President (Fuse, 1979).

The conversion rate of the “point” to yen was negotiated between the JMA President and the Director of the Social Affairs Bureau in the Ministry of Interior, who was responsible for the GMHI. The rate was set below the customary level. The JMA agreed to this rate, partly because GMHI-enrolled patients composed only a fraction of their patients (other patients would continue to pay in full) and partly because physicians would no longer be at risk of not being paid. Funding came from premiums, half of which were levied on GMHI enrollees and half on their employers, plus another 10% from general revenues. This subsidy was justified because SHI would make workers more productive, and thus increase the nation’s wealth (Shimazaki, 2011). Averting the risk of a socialist revolution was also an objective. The conversion rate varied in each prefecture: if the physicians in the prefecture billed more “points” per GMHI enrollee than the national average, then the conversion rate would be lower.

The GMHI Fee Schedule was adopted by Society-managed Health Insurance (SMHI) plans, which enrolled employees of large companies, and the Mutual Aid Associations (MAA) plans for public-sector employees in 1943, thus unifying the fee schedules of all employment-based health insurance (EHI) plans. In that year, the conversion factor of the “point” to yen became fixed irrespective of the volume of services. The war-time inflation and general shortage of supplies had made it difficult to set the conversion rate based on the volume of services delivered.

For those not formally employed, Community-based Health Insurance (CHI) plans were legislated in 1938. CHI was focused on improving the health of the rural population, which composed more than half of the total population at that time. The army needed to draft more men because of the escalating war with China. Strong pressure was put on municipalities to establish CHI plans. To pay providers, each plan could set its own way of payment and individually contract with providers. In rural areas, the facility established and operated by the CHI was de facto the only provider of services. Few CHI plans contracted with providers outside of their prefecture.

In 1956, the government formally announced the implementation of Universal Health Coverage (UHC) in order to establish a welfare state. By that year, the country's GDP had recovered to the level before the Second World War had started. UHC was achieved not by restructuring the SHI system, but by expanding CHI. The CHI New Act legislated in 1958 had the following mandates:

1. All municipalities must establish a CHI plan for their residents
2. Everyone residing in the municipality not enrolled in an EHI plan must enroll in the municipality's CHI plan
3. All CHI plans must adopt the Fee Schedule of the EHI

The first mandate forced big cities, such as metropolitan Tokyo, to establish CHI plans. The second mandate forced everyone to enroll in a SHI plan. The two mandates led to the whole population becoming covered in 1961. The third mandate led to both services covered and payment to providers becoming the same for all SHI enrollees.<sup>2</sup> In order to finance the expansions of benefits, the national government increased its subsidies to CHI. Subsidies to GMHI had to be also increased because the income level of their enrollees who were employed in small companies was lower than that of SMHI enrollees. These subsidies from general revenues now compose a quarter of SHI expenditures, amounting to a tenth of the national government's general expenditures budget and twice that for defense (Ikegami et al, 2011). As a result, the revision of the Fee Schedule has become an integral part of the budgeting process, as will be explained later.

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<sup>2</sup> Those on public assistance are not enrolled in SHI. However, they are entitled to the same benefits, and the providers are paid according to the fees set in the Fee Schedule.

## 2 General structure of the payment system

### Present health service delivery context

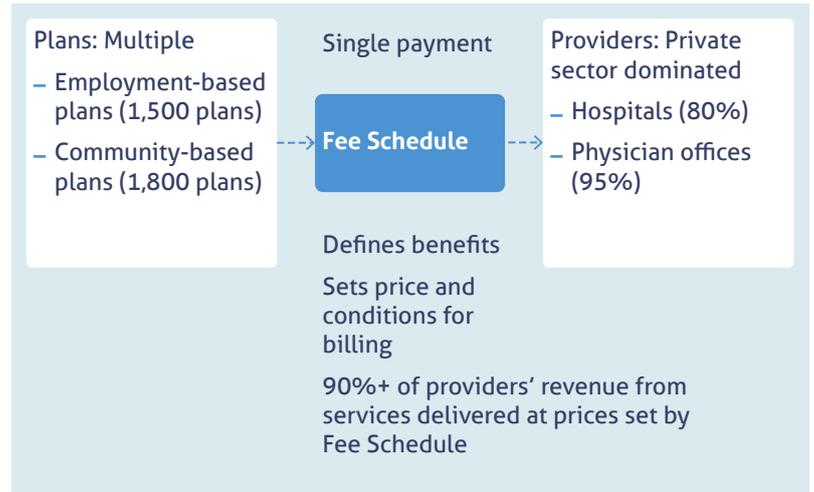
The number of physicians per 1,000 population is relatively low at 2.43 (OECD, 2018). Some 32% practice in clinics, and 63% in hospitals. Among clinics, the greater majority are proprietary-owned solo practices (MHLW, 2018a). Physicians based in clinics do not have access to hospital facilities, and the majority focuses on primary care services. Among hospitals, virtually all physicians are employed by the hospital, and their wages are generally set based on their seniority and do not reflect the revenue they generate for the hospital.

The number of hospital beds per 1,000 population is high at 13.1 (OECD, 2018). Of these beds, 57% are general beds for acute and post-acute care. Among hospitals, 69% have less than 200 beds (MHLW, 2018c), and 81% are in the private sector, which in many cases are owned by the physicians' family. In general, high-tech care tends to be provided by public or quasi-public sector (such as the Red Cross) hospitals, and post-acute care and chronic care by the private sector. Investor-owned for-profit organizations are not allowed to open hospitals. The hospital director must be a physician who usually continues to practice.

### Key role of the Fee Schedule

Although the delivery system is fragmented, it is effectively controlled by the Fee Schedule. As Fig. 2 shows, the Fee Schedule simultaneously sets the benefits for enrollees of all SHI plans, and the service fees and the prices of pharmaceuticals and devices for virtually all providers in Japan. Both physician fees and hospital fees are listed in one Fee Schedule. In principle, payment is made to the facility and not to individual physicians. From this revenue, providers pay wages, purchase pharmaceuticals and other material, and retain profits so that investment can be made to meet future needs. This system may seem at odds with the fact that the Fee Schedule was originally designed to pay for the services of private practitioners. However, at that time, services were overwhelmingly delivered by solo-practice clinics, so that paying the clinic meant paying the physician.

**Figure 2**  
**Role of the Fee Schedule in Japan**



Source: author.

The fees are officially set by the Ministry of Health, Labour and Welfare (MHLW) and are revised every two years based on the decisions made by the Central Social Insurance Medical Council of the MHLW.<sup>3</sup> This Council is composed of seven members from payers (SHI plans, business and labour groups), seven members from providers, and six members who represent public interests (academics), plus ten specialist members (representing nurses, pharmaceutical and device industries, etc.). However, council members do not vote. Indeed, the six members representing public interest are not allowed to speak unless asked by the chair (Morita, 2016). The Council exists to authorize negotiations that the MHLW officials in the Medical Affairs Division of the Health Insurance Bureau have made with provider organizations, such as the JMA, hospital associations, and specialist groups.

People in the Medical Affairs Division number 84 in total, including 20 physicians, 2 dentists, 2 pharmacists 2 nurses, and 12 career bureaucrats, with the rest being administrative staff. None have received formal training on the Fee Schedule, and except for the administrative staff, they are rotated every two to three years to different positions within the MHLW. However, they are responsible for all the work needed to revise and manage the Fee Schedule. The only exceptions are ad hoc studies contracted out to private companies on a tender basis.

<sup>3</sup> Services not listed in the Fee Schedule include normal delivery (when SHI was first legislated, the enrollees were manual workers and male) and preventive services such as health screening. Services covered by accident insurance and other publicly funded programs use the fee schedule.

## Restricting extra billing and balance billing

The percentage of providers' revenue not controlled by the Fee Schedule is about 10% on average from the data available (MHLW, 2017b).<sup>4</sup> The services that hospitals can set prices and directly charge patients are very limited. Extra billing, that is the billing of services and pharmaceuticals not listed in the Fee Schedule together with those listed, is mainly limited to new technology being developed by the hospital. Before being allowed to extra-bill the patient, the hospital must submit a request to the MHLW. If approved, the hospital conducts clinical trials to collect data on the service's efficacy and safety. If the results are positive, then the procedure would be approved and listed in the Fee Schedule, with its fee reduced from the amount that had previously been extra-billed. This was how heart transplants came to be listed in 2006 (Japan Organ Transplant Network, 2006).

Balance billing, that is billing the patient for the balance between the fee set by the Fee Schedule and the fee set by the hospital, is mainly limited to beds with better amenities. Hospitals may only balance bill if the bed meets amenity standards set by the MHLW and the proportion of the extra charge for beds in the hospital is less than 50% of the total for private sector hospitals and less than 30% for public hospitals. Note that physicians are not allowed to balance bill no matter how renowned they may be. "Gifts" (money packets) used to be given, but this is now much less prevalent.

Other than the above exceptions, if the patient wants to receive services or pharmaceuticals not covered by SHI, then he or she must pay for all costs out of pocket and not just the extra- or balance-billed amount. If a hospital was later found to have extra-billed or balance-billed patients for services not permitted, it must return the entire amount that they had billed the insurance plan for the services covered by SHI. Because of the benefit-in-kind principle, the bill cannot be divided into covered and uncovered services (except for those explicitly allowed). This strict interpretation has been attacked by pro-market economists as restricting the patient's choice (Ikegami, 2006). However, only minor concessions have been introduced, such as increasing the number of healthcare facilities that can extra bill non-approved pharmaceuticals mainly for cancer.

Because of these restrictions, complimentary private health insurance has not developed. The MHLW has maintained that all services and pharmaceuticals which have been evaluated for their efficacy and safety will be listed in the Fee Schedule. Substitution private health insurance plans do not exist in Japan because all residents in Japan are legally required to enroll in SHI plans. Thus, although 88.5% of households are enrolled in private health insurance plans (Seimei Hoken Bunka

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<sup>4</sup> The revenue from extra-charge beds and from preventive screening services are 1% each. 8% comes from non-health care activities. This ratio is 16% in local government hospitals because of subsidies, but is only 2% in private hospitals (earnings from investments). Disease-specific hospitals (such as for psychiatry) and hospitals that derive 2% or more of their revenue from LTC Insurance services are excluded from these data (MHLW, 2017b).

Center, 2018), they have not played a role in the setting or negotiating of prices in Japan. The greater majority offer cash benefits, irrespective of the out-of-pocket amount, for the days hospitalized or the visits made, or as a lump sum, when diagnosed and treated for cancer or other serious diseases.

The basis of these strict rules on extra billing and balance billing lies in the fact that SHI benefits are in kind (services) and not in cash (as would be the case for an indemnity insurance that reimburses part of the costs incurred by the enrollee). This principle dates to days when SHI was first implemented. At that time, there were no coinsurance, and the SHI plan paid providers directly for the services delivered to their enrollees. This benefit-in-kind principle has been maintained even after coinsurance was levied on dependents when they were covered in 1938 and later in 1984, when coinsurance came to be levied on the employees themselves.

### **Nationally uniform fees**

The same fee is set for the same service throughout Japan. As previously explained, when the Fee Schedule was first introduced, the conversion rate of the points to yen differed according to the volume of services that had been delivered in each prefecture. However, the conversion rate became fixed in 1943 regardless of the volume. At that time, there were three rates reflecting urban-rural differences in the cost of living. This was reduced to two rates in 1948 and became one rate in 1963.

The fact that fees are nationally uniform may have contributed to a more equitable distribution of physicians and nurses. All facilities receive the same fee for delivering the same service. Out of this revenue, big city hospitals can recruit physicians at relatively low wages because they offer non-monetary rewards, such as allowing them to focus on their sub-specialty and to use high-tech equipment. However, they must pay nurses higher wages because the cost of living is higher. In rural hospitals, the reverse is true: there are higher wages for physicians and lower wages for nurses. Supporting data are available from public hospitals. In hospitals established by big cities (over 700 000 inhabitants), the annual wages were 13.6 million yen for physicians and 5.1 million yen for nurses. In hospitals that are established by towns and villages (less than 30 000 inhabitants), the wages were 17.9 million yen for physicians and 4.6 million yen for nurses (MIAC, 2017). Although there are no data for private sector hospitals, the differences are likely to be greater because their wages tend to be less seniority based.

The extent to which paying the same fee for the same service item has contributed to a more equitable geographical distribution of physicians and nurses is difficult to evaluate. However, as a method, it is simpler than setting fees to reflect the cost of living and then paying a bonus to physicians who work in rural hospitals. Currently, the age-adjusted per capita

medical expenditures differ by a quarter between the highest and lowest of the 47 prefectures (MHLW, 2017a).

### Defining items and the conditions of billing

Providers are basically paid on a fee-for-service basis for the service items they have delivered. Each item is precisely defined. As an example, the fees for physician consultations are divided into the fee for an “initial” visit and a fee for a “repeat” visit. The fee for the former is four times that of the latter, reflecting the fact that the time and effort required for an initial consultation are much greater than that required for a repeat consultation. In the Fee Schedule, an “initial visit” is defined as a visit made 29 days or more from the previous visit and without having the physician ask the patient to make the next visit 29 days or more after the previous visit.

Conditions of billing effectively control the volume of each item. They have been set to contain costs and assure quality. For example, to bill for rehabilitation therapy, the hospital must employ more than the defined minimum number of experienced physicians and therapists, have a therapy room with a floor space of 150 m<sup>2</sup> or more, and so forth. To target resources and contain costs, patients must have had a stroke within 180 days, an injury within 150 days, and so forth.<sup>5</sup> For positron emission tomography (PET) scans, the hospital must meet facility standards such as having an experienced radiologist on site, and patient standards such as those who have a confirmed diagnosis of cancer (so that it cannot be billed for screening purposes). To bill for the bonus of managing the dietary needs of inpatients, the physician and staff must have attended designated seminars.

The most complex conditions have been set for basic hospitalization fees. The general rule has been higher fees for higher nurse staffing levels. This was introduced in 1951 as an incentive for hospitals to hire more nurses and not depend on the family for the care of the patient. Since then, the Japan Nursing Association (JNA) has lobbied to increase the staffing ratio to improve labour conditions and enhance their professional status. In addition to the staffing level, night duty must be less than 72 hours per month, and the proportion of registered nurses (as opposed to licensed practical nurses) in the hospital must be 70% or more. Work intensity was initially only measured by the hospital’s average length of stay: 18 days or less for the billing of higher staffing levels. However, from 2006, more specific conditions, such as the proportion of patients in the unit who have had a major surgery or have cognitive problems and so forth have been added and have since been made more detailed.

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<sup>5</sup> The period is extended to patients who have designated diseases. Maintenance rehabilitation is provided by the long-term care insurance.

These definitions and conditions of billing have made the Fee Schedule very complex. In 1960, the manual had only about 100 pages. The 2018 version has more than 1700 pages in fine print, with about 4000 items and conditions of billing listed. In addition, there are separate manuals for the DPC (Diagnosis and Procedure Combination; the Japanese version of the Diagnosis-related groups [DRGs]) grouping book, for pharmaceuticals and devices.

### Classification of the service items

Physician and hospital service items are classified as below. In each section, items are identified by a three- or four-digit code. For many items, the patient's and facility's conditions for billing are set. Note that Section F, Prescribing and dispensing, and Section G, Injections, are independent sections despite the fact they compose only two pages each, reflecting their historical importance. Section C, Home care services, became a separate section in 1988 in recognition of its expanding role.

- A. Basic outpatient consultation and inpatient fees
- B. Specific outpatient consultation and inpatient fees
- C. Home care services
- D. Tests (laboratory and physiological)
- E. Imaging
- F. Prescribing and dispensing
- G. Injections
- H. Rehabilitation
- I. Psychiatric treatment
- J. Procedures (of eyes, ears, etc.)
- K. Surgical operations
- M. Anesthesia
- L. Radiation therapy
- M. Pathological diagnosis
- Medical procedures performed in LTCI health facilities for elders

## Reflecting advances in technology

New items will be listed in the Fee Schedule if they are clinically distinct from existing ones and have significantly higher costs. For example, laparoscopic surgery was listed when it came to be widely used. Their fees are set 10% to 70% higher than that of an open surgery to compensate for the cost of the laparoscope and the skills needed to perform the procedure. The physicians' specialist associations submit a request, which is reviewed by the MHLW. If justified, the item will be listed in the Fee Schedule at the time of the biennial revision.

For equipment, fees are based more on their efficacy and less on costs. When magnetic resonance imaging (MRI) was first listed in 1982, its fee was set at twice that of computed tomography (CT) scans. At that time, the price of purchasing a MRI equipment was more than ten times that of purchasing a CT scanner (Hisashige, 1994). However, despite the low fee, providers purchased MRI equipment because it attracted more physicians and patients to the hospital. Meanwhile, the manufacturers gradually lowered the price of MRI equipment, which led to more hospitals purchasing the equipment. Thus, market forces have worked even when fees were regulated, and probably worked better because they were regulated.

Note that there is no government or quasi-government agency that is officially responsible for systematically conducting technology assessments. However, there is an expert committee within the MHLW that evaluates requests for new technology to be delivered as an extra-billed item, assesses efficacy based on the data collected, and recommends listing in the Fee Schedule. The division in charge of the Fee Schedule serves as the secretariat. Pharmaceuticals and devices are evaluated for efficacy and safety, but their costs are independently calculated. This will be described in the next section.

## 3 Pharmaceuticals and medical devices

### Setting the price of a new pharmaceutical

Pharmaceutical companies must conduct clinical trials according to the guidelines set by the Pharmaceuticals and Medical Devices Agency (PMDA), an independent government agency. The PMDA evaluates the product's reliability based on ethical and scientific standards, and its efficacy and safety based on effectiveness standards. The Agency then gives a recommendation to the Pharmaceuticals Affairs and Food Safety Council of the MHLW to list the product in the National Formulary. When doing so, the dosage and the clinical conditions for on-label use will be specified in detail.

After approval, the Pharmaceutical Price Organization of the Central Social Insurance Medical Council evaluates the product's innovativeness, efficacy and safety, based on which it recommends the price. If the new product has a comparator, the price will be based on the comparator, with mark-ups for innovativeness, efficacy and safety. If there is no comparator, it is set by calculating the costs of research and development (R&D) and production based on the method set by the MHLW. The product's sales volume as estimated by the manufacturer will also be a key factor. If the volume is predicted to be small, then a high price will be set to allow the company to recover its R&D costs. The list prices in the USA, UK, Germany and France are also used to set the Fee Schedule price; the price must be set less than 1.25 times and more than 0.75 times the average price of these countries.

The government officially started to use pharmaco-economic analysis from 2019. The analysis is performed by the manufacturer, and the results are evaluated by the MHLW. The results will not be used to decide whether the product should be listed in the Fee Schedule but are used to provide additional data for setting the price. However, since the price of the new product is determined by many factors, the impact of the pharmaco-economic analysis results on the price are not clear. Parenthetically, the use of willingness-to-pay studies has been tabled because of the difficulties in conducting and interpreting the results (MHLW, 2018b).

### Revising pharmaceutical prices

Pharmacies, hospitals and clinics purchase pharmaceuticals from wholesalers at prices which are usually lower than that set by the Fee Schedule.<sup>6</sup> They may retain the balance. To contain

<sup>6</sup> For this reason, dispensing used to be done by hospitals and clinics. However, the profit margin has decreased, while the fee that physicians can bill if they dispense to a free-standing pharmacy has increased. The ratio of prescriptions dispensed within hospitals and clinics has declined to 30% of the outpatients' prescriptions (Federation of Social Insurance Associations). However, many of the pharmacies have strong ties with the hospitals and clinics that write the prescriptions. To discourage this trend, dispensing fees are reduced if the proportion of prescriptions from one hospital or clinic is more than 70% of the total number.

costs and the profits providers derive from dispensing pharmaceuticals, the MHLW conducts a survey of the wholesalers' and providers' books to calculate the volume weighted market price of every pharmaceutical product listed in the Fee Schedule. Based on these data, the MHLW revises the Fee Schedule price so that it will be just 2% higher than its volume weighted market price.<sup>7</sup> This rule applies for both brands and generics (generic products are "branded generic" in which each has its specific Fee Schedule price).

In addition to the above mechanism, prices will be reduced for new products that have sales greater than had been predicted by the manufacturer. The government justifies this reduction on the grounds that the manufacturer would be able to recoup the investments made for research and development from increased sales. For example, the price of OPDIVO was halved in 2017 following the expansion in the clinical conditions of its use.

### Medical devices

Expenditures for devices are about one tenth that of pharmaceuticals. They have many characteristics in common, such as being produced by for-profit companies. However, the price of devices is set by the functional group into which the device is categorized. A new functional group will be set only when the new device differs significantly from an established group. For example, coronary stents are categorized only into a drug-eluting functional group and a non-drug-eluting functional group. There are now 212 functional groups for devices. The hospitals will only be reimbursed at the functional group price. The hospital might have to pay more than this price for a stent made by a manufacturer, but it is not allowed to balance bill the patient.

The price of a functional group is revised using basically the same method used for pharmaceuticals, but with the volume weighted market prices of the device by each manufacturer aggregated at the functional group level. For example, if the market price of a drug-eluting stent made by Manufacturer X having a 20% market share in volume is found to be 10% lower than its Fee Schedule functional group price, then the price of the functional group is reduced by 2%.

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<sup>7</sup> The method for revising pharmaceutical Fee Schedule prices has changed. When the survey-based method was first introduced in 1967, it was set at the 90th percentile from the lowest price; it became the 81<sup>st</sup> percentile in 1983 and, from 1987, was based on the volume-weighted average. The allowable margin (the "reasonable" zone concept) was introduced in 1994 in response to demands from the United States to make the transaction process more transparent as part of the Market Oriented Sector Selective negotiations. The "reasonable" zone was initially set at 15% but has since been gradually decreased to the present 2% from 2000.

## 4 Revising the Fee Schedule

Revisions of the Fee Schedule are made every two years for service fees and every year for the price of pharmaceuticals and devices (CAO, 2017).<sup>8</sup> The process is composed of the following three steps: first, setting the global revision rate; second, revising pharmaceutical and device prices, and third, revising service fees on an item-by-item basis. The global revision rate sets a de facto global budget for health expenditures within which the prices of pharmaceuticals and devices and the fees of service items are revised. Although the revisions may not be publicized in this order, and the global rate might have to be finely adjusted to reflect the terms negotiated in the second and third steps, the process is easier to understand if explained in the order below.

### Setting the global revision rate

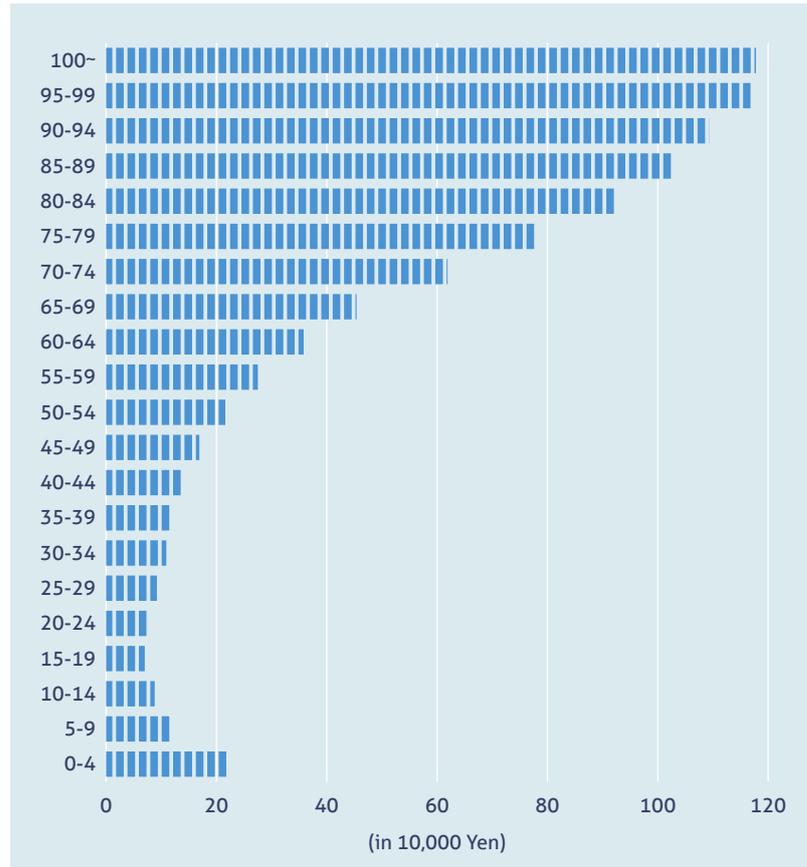
The first step is deciding the global revision rate, which sets a de facto global budget for all SHI and public expenditures in the next fiscal year. Next year's expenditures are determined by the equation below:

$$\text{Next year's expenditures} = \text{This year's expenditures} \times [1 + (\text{the increase rate from population ageing} + \text{the increase rate from "other" factors}) \pm (\text{global revision rate})]$$

The impact of population aging is calculated from changes in the population for each five-year age group. As Fig. 3 shows, expenditures vary greatly by age group. For example, the per capita expenditures of the 75-79 age group are ten times more than that of the 35-39 age group so that the increase in the 75-79 population will have much greater impact on expenditures than the decrease in the 35-39 population. It is assumed that per capita differences in health expenditures across age groups will remain the same.

<sup>8</sup> Pharmaceutical and device prices will be revised annually from 2018 so that any decreases in market price are reflected more quickly in the Fee Schedule. The first revision in which they are revised independently from service fees will be made in 2019.

Figure 3. Per capita health care expenditures by five-year age group in Japan (2013)



Source: MHLW, 2018b.

Increases not due to aging (i.e., residuals) are referred to as “other factors.” This is calculated by subtracting the annual rate of increase for aging from the increase rate of health expenditures, and then averaging the rates of the past three years. Population aging and “other factors” combined have increased health expenditures by about 2 to 3% every year. Thus, if the global revision were set at -4 to -6%, then healthcare expenditures will remain the same because this would cancel out the increases due to population aging and “other factors” in the next two years. This is why the Ministry of Finance (MOF) would like to set the global revision rate at -6%.<sup>9</sup> As has been noted, the national government’s allocation to health care is one of the largest items in the budget, composing about one tenth of the total. This proportion has been relatively stable because the national government’s contributions to SHI plans are statutory defined and the national budget has increased at about the same pace as that of SHI expenditures.

However, a -6% global revision rate would be vigorously opposed by providers. They would protest that a decrease of this magnitude would bankrupt them, thus denying access to patients. To arrive at a middle ground, the revision process begins with the two ministers of the MOF and MHLW, together

<sup>9</sup> The greatest decrease so far was in 2006. The -3.16% revision rate was blamed for the closing of hospitals, resulting in newspaper headlines such as the “collapse of the healthcare system.” Decreases of this magnitude would be politically difficult to make in the future.

with their top civil servants, discussing possible options. The final decision is made by the prime minister based on his evaluation of the political and economic situation. This decision will be made in mid-December annually, so that the national budget can be set before the country shuts down at the end of the calendar year (which will allow the new fiscal year to start smoothly from April).

In making this decision, the following two factors play key roles. One is the market survey of pharmaceutical prices. If the survey shows that the cumulative volume weighted market price of pharmaceuticals is 8% below the Fee Schedule price, then after allowing for the 2% margin, cumulative prices will be reduced by 6%. This 6% reduction will increase the global budget for medical services by 1.5%, because pharmaceuticals compose about one quarter of medical expenditures. In addition, there will be further savings by reducing the prices of new products that have sold more than the amount estimated by the manufacturer. These savings have been used to negate or soften the impact of decreases in the global revision rate. However, in the 2020 Fee Schedule revision, they would have less impact because pharmaceutical prices would already have been revised in 2019 to reflect the results of the 2019 market price survey.<sup>10</sup>

The second factor is data on the financial conditions of healthcare facilities from the Health Economic Survey (MHLW, 2017b). This survey is conducted in the year preceding the Fee Schedule revision, and the results should show that the facility expenditures are balanced by the facility revenues.<sup>11</sup> If the results show that the deficit has increased, it would be difficult for the MOF to argue for a negative revision rate. On the other hand, if conditions have improved, it will be difficult for the MHLW to argue for a positive revision rate. However, the results tend to differ by the type of provider. Thus, the Health Economic Survey tends to have more impact on how resources will be allocated among the various types of providers in the item-by-item revisions.

### Setting item-by-item revisions

The global health care budget is appropriated to the medical, dental and dispensing services based on the relative share of each. About 80% of the total service budget is appropriated for medical services. Next, within the global budget, item-by-item revisions are made based on the equation below:

$$\text{Global budget for medical services} = \sum (\text{Fee of each item revised } \downarrow \uparrow) * (\text{Volume of each item increased or decreased by loosening or tightening the conditions of billing})$$

<sup>10</sup> Service fees will be revised together with pharmaceutical prices in October 2019, because of the introduction of the consumer tax. This tax is not levied on health care services so that fees and prices listed in the fee schedule must be increased to pay for the additional costs incurred by the providers.

<sup>11</sup> With the exception of local government hospitals (as noted in reference 4), the proportion of subsidies is small. National hospitals have not received subsidies after they were reorganized into the National Hospital Organization in 2004 (Ikegami, 2014).

The left and right sides of the equation must be equal. That is, the cumulative effect of revising each item fee and its conditions of billing must be equal to the amount that has been set by the global rate and the increase rate from the “natural” increase and the savings that have been made from reducing pharmaceutical prices. The adjustments are made in a huge spreadsheet, in which item fees are individually revised so that the cumulative amount would be equal to the global budget. The volume of every item is available from the National Claims Database (NDB), which is compiled from the claims submitted by providers. Although the effect of tightening or loosening the conditions of billing on the volume cannot be predicted exactly, if the volume were to increase sharply, then the conditions of billing could be tightened in the next Fee Schedule revision or revised by ad hoc directorates from the MHLW if more immediate actions are needed.

Note that even small changes would have a big impact on costs if the volume is large (such as repeat consultations), while big changes would have little impact if the volume is small (such as complicated surgical procedures). Revisions could be targeted on specific items. For example, MRI fees have generally been decreased because their volume has increased rapidly, and because the price of purchasing a MRI equipment had been driven down as manufacturers competed to sell their products. The MHLW reported that increases in expenditures were blunted when fees were reduced by 30% in 2006 (MHLW, 2018c). Reductions of this magnitude had to be made to contain expenditures to the amount set by the global revision rate of -3.16%. Since then, fees have been increased for MRI equipment that have higher density in their imaging. These increases have been offset by reducing the fees of MRI equipment that have low density.

In general, fees have been revised to achieve the following policy objectives:

1. To contain expenditure increases by lowering the fees of items that have had rapid increases in volume and/or can be delivered at lower costs by providers.
2. To maintain appropriate profit levels across all hospital types so that they can continue to deliver services and make investments for future needs.
3. To provide incentives to physicians to deliver services in line with policy goals such as providing end-of-life care at the patient’s home.

If providers do not deliver services in line with policy goals, then the conditions of billing could be rewritten in the next revision. Thus, item-by-item revisions could be regarded as a pay-for-performance (P4P) payment implemented at the national level.

## Lobbying by provider organizations

The above does by no means suggest that providers have been passive in the Fee Schedule revisions. On the contrary, they have vigorously lobbied for an increase in the global revision rate. However, once the global revision rate is set, then the item-by-item revisions divide providers into those who gain and those who lose, which can facilitate negotiations for the government. Moreover, the JMA, which is the best organization among providers, has focused on increasing payment for primary care services, because their most powerful constituents are private practitioners. For example, the JMA lobbied for a new fee that physicians can bill for giving directions on improving lifestyle to patients with diabetes, hypertension or hyperlipidemia. This fee was introduced in the 2002 Fee Schedule revision. Billing of this item has been restricted to clinics and hospitals having less than 200 beds.

The Association of Surgical Specialties for Social Insurance succeeded in increasing surgical operation fees by 30% in the 2010 Fee Schedule revision. This revision was based on the results of their 2007 report (Gaihoren, 2007). The Association had conducted its first cost study in 1982. However, the increase owes much more to the change in the ruling party which brought in a surgeon as the vice minister. The Association's success prompted the Association of Internal Medicine Specialties for Social Insurance to conduct similar studies, but these have not had a similar impact.

The JNA has been lobbying for increases in basic hospitalization fees. As noted, to bill for higher basic hospitalization rates, the hospital must not only have to meet nurse staffing levels, but also the percentage of registered nurses must be 70% or more, and the night duty hours be less than 72 hours per month. When a higher level was introduced in the 2006 Fee Schedule revision, hospitals rushed to meet the required level because the increase in their revenue would more than offset the cost of hiring more registered nurses. However, in the 2018 revision, the JNA suffered a set-back when the higher fees were made more dependent on the patient's acuity level.

As the above examples illustrate, revisions of the Fee Schedule tend to be determined by politics. Perhaps for this reason, hospitals have not conducted cost studies that drill costs down to the level of each item. Instead, they have focused on the revenue and expenditure of clinical departments to decide which departments should be expanded or reduced. Studies have shown that the clinical departments that are more weighted to inpatient care, such as surgery, orthopedics and so forth tend to have bigger profit margins than those weighted to outpatient care such as dermatology (IHEP, 2008). This is because the Fee Schedule is structured to discourage hospitals, especially big hospitals, from delivering primary care services.

Note that the lobbying continues to the last minute so that the precise details of the conditions of billing may not be finalized

until the middle of March annually, just before the revision is implemented in April 1, when the new fiscal year begins. This means that software vendors of claims data must work day and night to reprogram their claims software. Hospital directors must estimate their revenue in the revised Fee Schedule, which may change the method of billing or how services are delivered.

### Monitoring compliance to regulations

Compliance with the Fee Schedule regulations is first checked by the quasi-government organizations established in Japan's 47 prefectures. The main role of these organizations is to sort claims and bill the SHI plans for the services that have been delivered to their enrollees. However, they have a panel of renowned physicians in the community who review the claims and deny payment for items that are not appropriate. These physicians perform their task about five afternoons per month for which they are paid about US\$ 1500. "Appropriateness" is evaluated by cross-checking the services and pharmaceuticals billed with the patient's diagnosis written in the claims form. If evaluated as being inappropriate, payment will be denied for that item. The amount denied composes only 0.3% of the total billed, but it has had a signal effect of alerting providers on what is permitted. Both payers (SHI plans) and providers can contest the decision. The panel will vote in favor of the contested cases in about one-third of the cases.

The second line check is by on-site "guidance", which is conducted by the regional office of the MHLW. "Guidance" is given to the facility every three to eight years: facilities that had more problems cited previously will be visited more frequently. The team, headed by a physician, comes with 20 to 30 claims forms that had been filed by the facility about six months before the visit. They will examine the medical records and closely question the physicians and other staff about the items billed. Should the documentation and responses be judged as being inadequate, then that item will be deemed as having been inappropriately billed. The facility will then be asked to retrospectively go through the claims filed in the past six months and return the amount that had been inappropriately billed. If the amount returned is judged to be too little, then the audit team will return and go through the records themselves.

The third line check is by "audit". Should the "guidance" reveal that the health care facility had intentionally and/or systematically submitted inappropriate claims, the "guidance" becomes an audit. The audit may lead to a temporary or permanent cancelling of the health facility's contract with SHI, which would effectively mean shutting down the facility. From 2005 to 2015, only 11 to 54 facilities each year have had their contracts cancelled, but the threat has served as an effective deterrent (Kenkou Hoken Kumiai Rengoukai, 2017).

## 5 Focused analysis

### Primary care and specialist services

Primary care and specialist services are not differentiated in Japan. Most physicians have been trained as specialists. However, when they go into private practice, most focus on primary care because they will not be able to use hospital facilities to perform surgical operations and other complicated procedures. In contrast, hospital physicians can focus more on their specialties. However, many of their patients come without referral, and the physicians tend to continue treating their patients in the outpatient department after they have been discharged.

The government has long tried to functionally differentiate hospitals from clinics by the payment system. Fees have been set for physicians to write referrals (referred to as “information provision fees”) from clinics to hospitals and from hospitals to clinics. However, the functions of hospitals, especially small ones, overlap with clinics. To take into account subtle differences reflecting the hospital’s size, some outpatient service fees differ by the number of beds: 99 beds or less, 100 to 199, 200 to 399, and 400 and above. Incentives have also been introduced on the patients’ side: if patients visit hospitals that have 400 or more beds without a referral, they must pay an additional amount.

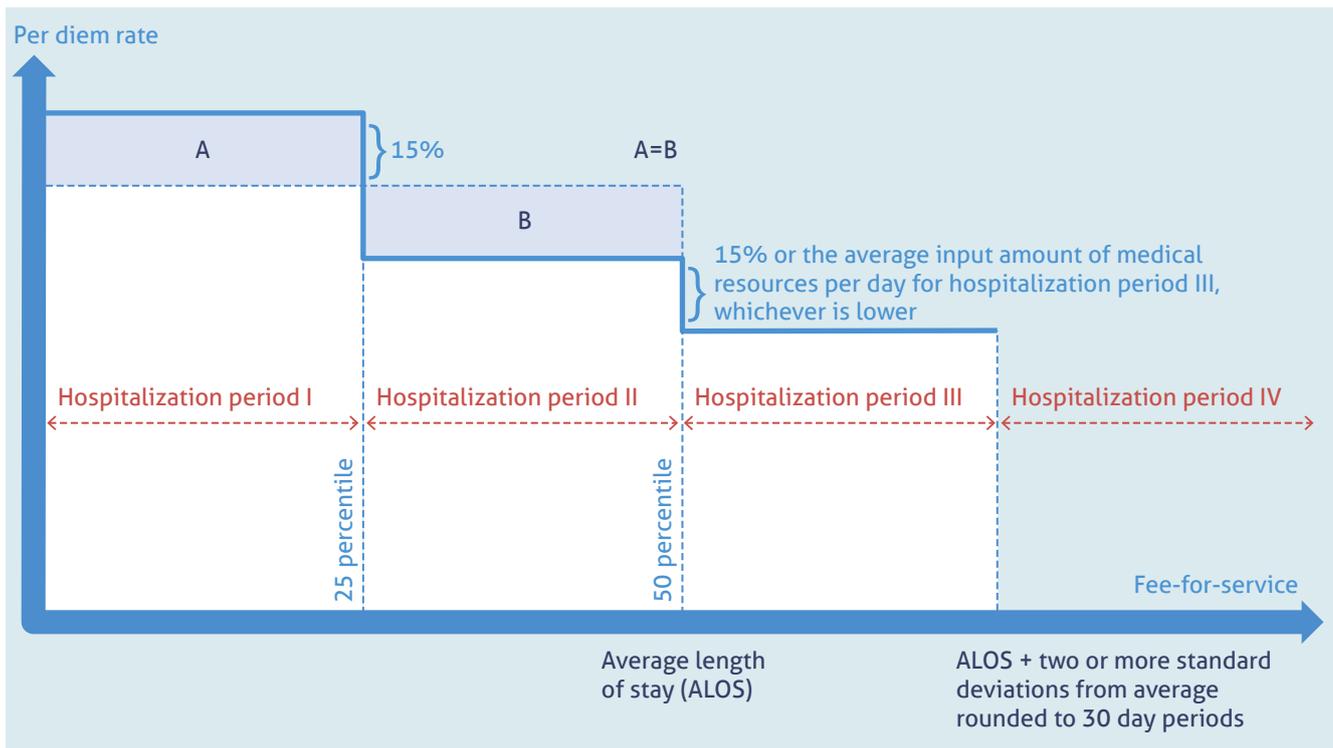
### Acute inpatient care

A DRG type of payment, the DPC-PDPS (Diagnosis Procedure Combination – Per Diem Payment System) for the main 80 university hospitals and 2 national centres, was introduced in 2003.<sup>12</sup> However, surgical procedures, endoscopic examinations, rehabilitation therapy, devices, and pharmaceuticals given on the day of surgery are paid as fee-for-service. The inclusive part of the payment has the following characteristics.

Payment is on a per-diem basis and not on a per case basis. The per diem rate differs according to the four hospitalization periods which are specifically set for each DPC group. The periods are revised to reflect the lengths of stay as reported for each DPC group (Fig. 4).

<sup>12</sup> Because service fees and pharmaceuticals are combined in DPC, the global revision rate is used for revising the DPC base rate.

**Figure 4**  
**Diagnosis procedure combination per diem rate for four periods of hospitalization in Japan**



Note: DPC: Diagnosis Procedural Combination.  
 ALOS: Average Length of Stay.  
 Source: author.

The amount paid by the DPC is weighted by Hospital Specific Coefficients. For example, the “efficiency coefficient” rewards hospitals that have shorter lengths of stay after adjusting for the hospital’s case-mix, and the “complexity coefficient” rewards hospitals that have more complex patients (higher volume weighted case-mix index).<sup>13</sup>

DPC fees were set to be budget neutral. If the hospital had continued to deliver the same services as it had under fee-for-service and the patient’s length of stay had remained the same, then the hospital would receive the same amount of payment.<sup>14</sup> However, after adopting DPC, hospitals transferred services such as MRI to the outpatient department, where they could be billed as fee-for-service, and discharged patients earlier so that they would receive higher per-diem payment. This would increase hospital revenue, which was why the number of hospitals paid by DPC-PDPS has increased from 82 to 1,730, composing 54% of all hospital general beds in 2017 (MHLW, 2018c).

However, because patients have come to be discharged earlier, bed occupancy rates decreased, which may have led to a net decrease in hospital revenue. On the other hand, quality may have improved, because services have become more

<sup>13</sup> Higher fees for hospitals with higher nurse staffing ratios are determined by another set of hospital functional coefficients.

<sup>14</sup> When DPC was first introduced, there was a hospital-specific conversion coefficient that compensated for the difference between the fee-for-service payment and the DPC payment. This coefficient was gradually decreased from the 2012 Fee Schedule revision and dropped in the 2018 revision.

standardized when payment was standardized. Clinical pathways have come to be extensively adopted. Physicians no longer order the drip infusion of antibiotics every day while the patient is hospitalized. DPC has also led to the development of an extensive database of the hospital's case-mix, which can be used for regional health planning and hospital marketing purposes.

### Chronic inpatient care

Hospitals began to provide chronic inpatient care when medical care for persons 70 years and older was made free (no copayment) in 1973. At that time, there was no other form of payment aside from fee-for-service, which led to over-medication and the excessive ordering of diagnostic tests in chronic care units. There were also not enough nurses because patients in chronic care hospitals faced long stays, that did not meet the conditions of billing that would allow chronic care hospitals to bill higher basic hospitalization fees. Care was delivered by private attendants who were hired by the patients to provide care 24/7. The presence of these attendants exacerbated crowding in the units: at that time, the floor space per patient was only 4.3 m<sup>2</sup> (this standard was set by the government in 1948, reflecting the housing conditions at that time).

In response, a new type of facility, the health facilities for elders (HFE), was established in 1986. Payment was a flat inclusive per diem amount. The HFE had to meet staffing levels, to have a floor space of more than 8 m<sup>2</sup> per bed and were forbidden to hire private attendants. Hospitals providing chronic care were encouraged to convert to HFE. However, because it was difficult to meet the minimum floor space standards, very few hospitals actually did so. For this reason, the government introduced a new form of payment for LTC hospitals in 1990, similar to the HFE, but with no floor space requirements. In the 1992 revision, a bonus payment was added if the hospital unit met the condition of "convalescent beds:" a floor space of more than 6.4 m<sup>2</sup> per bed, a dining room, and so forth. Because these standards were easier to comply than the standards for HFE, nearly all chronic care hospitals and units converted to convalescent beds so that by 2003, it became the de facto standard.

However, the flat per diem payment led to the perverse incentive of not admitting patients with high medical needs. To rectify this situation, case-mix-based payment was introduced in 2006 that was based on the patient's medical acuity and the activities in daily living (ADL) level (Ikegami, 2009). The fees for patients with the lowest medical acuity level were set below costs. The MHLW thought that hospitals would discharge these patients and close some of their chronic care units. However, a survey made one year after the introduction revealed that hospitals had not done so. They appear to have reclassified patients to higher medical acuity levels. Problems in the quality of care and data were also revealed: in one hospital, over 80%

of patients had been checked for urinary infection, which grouped the patients into a high medical acuity level. Some of these issues may have been rectified by on-site “guidance”, but quality has not been systematically pursued by the MHLW.

### Post-acute care and sub-acute care

Post-acute rehabilitation units were introduced in the 2000 Fee Schedule revision. The policy objective lay in shortening the length of stay in acute units by transferring the patients needing rehabilitation therapy to post-acute rehabilitation units, and in decreasing the need for chronic care beds by improving their functional status. Except for rehabilitation therapy, payment is bundled. The conditions of billing include the number of therapists per bed, the percentage of patients in the unit who have had a stroke or injury within the prescribed number of days, and for the patient to be admitted within 150 days of stroke or 60 days of accident. P4P was introduced in 2012. In the 2016 Fee Schedule revision, the performance indicator was revised. The unit’s daily average improvement rate as measured by the patients’ FIM (Functional Independence Measure) score became the indicator.

Sub-acute units were introduced in the 2004 Fee Schedule revision. The policy goal lay in creating a unit to which patients in the acute unit could be transferred and to which patients in the community not requiring the level of care delivered in the acute unit could be admitted. However, the latter function has not developed, because the bundled payment would put the hospital at risk of admitting patients who need more resources than would be paid by the Fee Schedule. Sub-acute units were renamed “comprehensive community care beds” in 2016, but with basically the same functions. In the 2018 Fee Schedule revision, to incentivize hospitals to admit patients directly from the community, higher fees were introduced if 10% or more of patients in these units had been admitted from the community and had not been transferred from acute units.<sup>15</sup>

### Long-term care insurance services

LTC insurance (LTCI) was implemented in 2000 to meet the needs of the ageing society (Ikegami, 2007). It is compulsory that all people 40 years and over are enrolled. LTCI unified LTC services that had been provided by SHI, such as HFE, some hospital chronic care units, and visiting nurse services, such as those provided by social services, such as nursing homes, day care and home-helpers. Benefits are restricted to services (no cash benefits). The maximum cash equivalent amount of services that beneficiaries are entitled to is determined by the seven eligibility levels. The levels are based on functional capacity and range from about US\$ 500 to US\$ 3500 per month. Beneficiaries must pay a coinsurance, ranging from 10% to 30% based on the household income level.

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<sup>15</sup> Only hospitals that have less than 200 beds may bill these higher fees. Small hospitals had insisted sub-acute and post-acute care should be reserved for them and not for units in big hospitals.

The LTCI Fee Schedule has basically the same structure as that of the health insurance. The fees and conditions of billing have been revised to pursue policy goals and to respond to demands from providers. For example, a bonus payment for the home care agency to employ more experienced care workers was introduced in 2009. The policy objective lay in retaining these workers into the LTC workforce and improving the quality of care. To incentivize nursing homes and HFE to deliver end-of-life care within the facility and not transfer residents to hospitals, bonus payments were introduced in 2006. These bonuses and the conditions of billing have made the LTCI Fee Schedule as complex as that of health insurance. When first published in 2000, the schedule had only 100 pages, but the 2018 edition has 1000 pages.

However, the LTCI Fee Schedule differs from the health insurance Fee Schedule in three aspects. First, the rules restricting extra billing and balance billing are more relaxed because equity is less of an issue in LTC. Second, it is revised every three years, not two. Third, the conversion rates differ according to the eight levels in which each municipality is grouped: the rate for metropolitan Tokyo is highest at 11.4% above the base rate. Unlike healthcare, the higher wages of nurses and aides in urban settings cannot be compensated by the lower wages of physicians.

As LTCI services have developed, the boundary between institutional care and community care has become blurred. For example, special housing for elders that has a day care facility and a community care agency in the same building are de facto institutions. However, the following differences remain. First, in "housing", rent and food must be paid by the resident, but in an "institution", it would be mostly covered by LTCI if the resident is of low income and/or has few assets. Second, in an "institution", the facility is responsible for providing care 24/7, but, in "housing", the resident or the family is responsible. Thus, for those with behavioural problems requiring supervision, an "institution" may be the only option. For these reasons, there are long waiting lists to be admitted to nursing homes that do not balance-bill.

## 6 Possible lessons for other countries

As noted in the introduction, Japan's health care system appears to be functioning relatively efficiently, given the fact that the older persons as a share of the total population is the highest in the world, and the LTC system is well developed. These results may seem to be even more remarkable because they have been achieved within a basically fee-for-service form of payment. The key lies in the government controlling payment to all providers through the Fee Schedule. The following aspects should be noted.

First, all services and pharmaceuticals that have been evaluated as being effective are covered and listed in the Fee Schedule. Direct payment by patients in the form of extra billing and balance billing is strictly regulated. Without these regulations, patients, as consumers, would assume that they will get better services if they paid more. However, patients are not in a position to bargain with physicians on the price and quality of services.<sup>16</sup> Therefore, it could be said that policy-makers have been successful in managing the expectations of both the physician and the patient so that both parties are basically satisfied with the level of services that is covered by the publicly financed system.<sup>17</sup>

Second, fees have not been focused on the "costs" incurred by providers, but on the providers' revenue and expenditures. If providers respond to the incentives set by the Fee Schedule and manage themselves efficiently, physicians should be able to earn comfortable incomes and hospitals could derive enough profits that would make it possible to invest in future needs. Revisions of the fees and the conditions of billing have been negotiated with the associations of physicians and hospitals based on this implicit understanding. The negotiations are structured, routinized, and in depth. Any unresolved issues could be postponed to the next revision after seeing how providers react.

While there is no perfect payment method, fee-for-service should not be dismissed as being intrinsically inflationary and reflecting only the providers' interests. Although fee-for-service would be difficult to introduce in countries that are dominated by big public hospitals, it should be noted that a DRG type of inclusive payment would also be difficult. Coding patients into clinically and economically homogenous groups requires the standardization of diagnosis, procedures, and recordings. There must be an appropriate monitoring system to minimize up-coding. There are also caveats in introducing capitation,

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16 The situation would be the same for the payment made in free-standing pharmacies. In low- and middle-income countries where hospitals are financed by line-item budgets, physicians may instruct their patients to purchase pharmaceuticals from outside pharmacies because the hospital's supply is insufficient. This could develop into kickbacks from the pharmacies to the physicians. The same practice could expand to laboratory tests performed in free-standing facilities.

17 One area where balance billing could be allowed in the future is for services provided by renowned physicians, because their main value lies in their scarcity as positional goods. Differences in outcome would be very difficult to validate.

because without measuring and rewarding performance, it would be another form of paying fixed wages.

Thus, payment reform should start by developing a classification system of the services that are currently being delivered. Professional associations must be organized and co-opted into this process. This classification system would be the basis for establishing a payment system regardless of the method chosen, for negotiating with providers, and for conducting surveys. It would also facilitate the integration of the payment systems that are being currently used in the public and private sectors in the future.

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## Case study

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# Malaysia

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## Price setting and price regulation in health care: Malaysia

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## Contents

## Abbreviations

Abbreviation	Term
B40	Bottom 40
BUPA	British United Provident Association
DRGs	Diagnosis-related Groups
FPP	Full Paying Patient
GDP	Gross Domestic Product
GLC	Government-linked Companies
GoM	Government of Malaysia
GPs	General Practitioners
HIC	Health Insurance Committee
MARA	Majlis Amanah Rakyat, or Peoples' Trust Council
MAS	Micro Accounting System
MCO	Manage Care Organisation
MHI	Medical and Health Insurance
MMA	Malaysian Medical Association
MNHA	Malaysia National Health Accounts
MoH	Ministry of Health
MPC	Malaysia Productivity Corporation
NHSF	National Health Security Fund
OOPP	Out-of-pocket payment
PHFSA	Private Healthcare Facilities and Services Act
RM	Ringgit Malaysia
RVS	Relative Value Scales
T&CM	Traditional and Complementary Medicine
THE	Total Health Expenditures
UHC	Universal Health Coverage
UM	University of Malaya
UMMC	University of Malaya Medical Centre
UMSC	University of Malaya Specialist Centre
WHO	World Health Organization

## Abstract

Malaysia is an upper-middle income country of 32 million inhabitants. The Malaysian health system is composed of parallel public and private sectors where the public can choose to purchase care from either sector. The Government of Malaysia (GoM) has thus far not used pricing as a tool to negotiate with public providers for improvement in the quality or efficiency of care. However, the GoM regulates user fees for public care, and fees have been set to balance the policy goal of affordability against that of cost recovery. The GoM also sets and regulates pricing in the private sector in response to public demands for affordable private care. High private sector prices are translated to high user fees in the Malaysian private system, which predominantly depends on patients paying out-of-pocket to receive care.

Health care in the public sector is subsidized by the GoM using funds from general taxation. The application of user fees in the public sector has enabled cost sharing to be progressively increased over time, although to date, such fees are still much lower than needed for cost recovery. This is in line with GoM's stated welfare objectives of affordable public health care and that the public health sector needs to be maintained as the safety net for the poor. The basis for the regulation of user fees in the private sector, which is predominantly funded through out-of-pocket payments, was to ensure affordability of care. However, legislated private medical fees cover only the professional fees charged by health care professionals. Thus, only a portion of total bills incurred by patients using private health care facilities is regulated. It has become apparent that regulation of private medical fees, as is practiced in Malaysia, has not been able to contain rising costs of private health care. Furthermore, high private medical bills are a barrier to private health care for many.

The practice of medical fee setting is still in its infancy in Malaysia since a) there is little incentive within its stated welfare goals for the public sector to set fees, and b) since the vibrant private health sector today is a relatively recent development. However, there is increasing public demand for access to private care through reasonable private fees, and the government has just recently announced an initiative to purchase private service to expand health screening services to the poor. In view of these developments, it is envisaged that the Ministry of Health would need to invest in building infrastructure for fee setting. This would include training dedicated personnel to capture and analyse costs as well as a system for better collaboration among policy stakeholders both within and without the ministry.

# 1 Introduction

Malaysia is an upper-middle income country of 32 million inhabitants. The Malaysian health system is composed of parallel public and private sectors, where the public can choose to purchase care from either sector. The Government of Malaysia (GoM) has thus far not used pricing as a tool to negotiate with public providers for improvement in quality or efficiency of care. However, the GoM regulates user fees for public care, and fees have been set to balance the policy goal of affordability against that of cost recovery. The GoM also sets and regulates pricing in the private sector in response to public demands for affordable private care. High private sector prices are translated to high user fees in the Malaysian private system, which predominantly depends on patients paying out-of-pocket to receive care.

By and large, fees are set by the Ministry of Health (MoH), and the fees are enforced through legislations. Health care in the public sector is subsidized by the GoM using general taxation (Ministry of Health, 2017b). Such public funding is substantial and over the past two decades has paid for more than half of the annual total health expenditures (THE) of the country. The application of user fees in the public sector has enabled cost sharing to be progressively increased over time, although to date, such fees are still much lower than needed for cost recovery.<sup>1</sup> This is in line with GoM's stated welfare objectives of affordable public care and the need to maintain the public sector as the safety net for the poor (Rohaizat, 2004). The basis for the regulation of user fees in the private sector, which is predominantly funded through out-of-pocket payments (OOPPs), was to ensure the affordability of care. However, legislated private medical fees cover only the professional fees<sup>2</sup> charged by health care professionals. Thus, only a portion of total bills incurred by patients using private health care facilities is regulated. It has become apparent that the regulation of private medical fees as practiced in Malaysia has not been able to contain rising costs of private health care and that high private medical bills are a barrier to private health care for many (The Edge Financial Daily, 2017).

This case study describes the rationales, processes, and effects of setting and regulating user fees in the Malaysian healthcare system. The work to develop this report took place between August and October 2018 and involved the identification and consolidation of information using the question guide provided by the World Health Organization (WHO) Kobe Centre,

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- 1 For example, the fee for a general outpatient clinic visit obtained from a public clinic was just RM (Ringgit Malaysia) 1, or approximately US\$ 0.23, in 2017. Payment of this fee would entitle the patient to a medical consultation, simple laboratory investigations and medication for two weeks.
  - 2 Fees paid to health care professionals, predominantly doctors and dentists for the conduct of medical consultations or procedures, including the interpretation of radiology and laboratory tests. Professional fees exclude that portion of hospital bills for hotel services such as for food and accommodation and fees for the use of equipment and facilities such as operating rooms and drugs.

supplemented by a wider literature review relating to medical fees in Malaysia, and interviews with key informants with knowledge of past and current medical fees setting practices in the country.

This report begins with a description of the Malaysian healthcare system to understand the context in which medical fees are applied, followed by descriptions of the processes of fee setting in the public and private health sector, respectively. The report concludes with a discussion on the overall effect of medical fees on the healthcare system in Malaysia.

## 2 Malaysian healthcare system

### Malaysian health care delivery system

Malaysia, a sovereign nation formed in 1963, is a federation made up of 13 states; 11 in the Malay Peninsula, and two, Sabah and Sarawak, in the northern part of the island of Borneo.<sup>3</sup> These two land masses are separated by the South China Sea. Malaysia practices a constitutional monarchy system in which the nine<sup>4</sup> hereditary state rulers elect among themselves a Yang di-Pertuan Agung, or King, who will rule the country for a five-year term. In 2017, the country was home to an estimated 31.6 million people, of which 3.3 million, or 10.2% were non-citizens (Department of Statistics Malaysia, 2017). Of the remaining 28.3 million people, 68.6% were Bumiputeras,<sup>5</sup> 23.4% Chinese, 7.0% Indians and 1.0% people from other ethnic groups.

Health is a federal government responsibility, and the main federal agency regulating the health sector is the MoH. However, health care in Malaysia is delivered through a parallel public-private delivery system. The MoH is the largest provider of public care, and in 2016 it owned 144 hospitals and special medical institutions, with nearly 42 000 beds, as well as over 3000 static or mobile clinics distributed throughout the land (Ministry of Health Malaysia, 2017a). There were an additional four teaching hospitals owned by the Ministry of Education, each of which is affiliated with the public medical schools of the University of Malaya (UM), National University of Malaysia, Science University of Malaysia and MARA<sup>6</sup> University of Technology, as well as five military hospitals owned by the Ministry of Defence to provide care to military personnel and their dependents. These nine non-MoH public hospitals

3 All 13 states were former British colonies. In 1957, the 11 states in the Malay Peninsula achieved independence from British rule and formed the Federation of Malaya. Malaysia was formed in 1963 when Sabah, Sarawak and Singapore joined the federation. In 1965, Singapore left the federation.

4 The other four states are ruled by Governors who are appointed by the Yang di-Pertuan Agung.

5 Bumiputera, a Malay term meaning 'prince of the earth', refers to the combined grouping of the orang asli and people from the Malay ethnic group. The term orang asli refers to diverse groupings of indigenous tribes residing in the Malay Peninsula as well as in the states of Sabah and Sarawak.

6 Majlis Amanah Rakyat (MARA), or People's Trust Council, is a government agency set up to aid, train and guide bumiputeras in the areas of business and industry.

contribute another 3700 hospital beds. Several local authorities and town councils, which are under the purview of the Ministry of Local Government and Housing, also provide some health care services, mainly in areas of sanitation, food quality control and vector control services in larger towns.

Although public sector health facilities are mainly restricted to hospitals and clinics, the range of private sector facilities is more diverse. In 2016, there were 187 private hospitals with a combined bed complement of nearly 14 000 beds, over 7000 private medical clinics and nearly 2000 private dental clinics as well as 423 private haemodialysis centres, 73 private ambulatory care centres, 17 private nursing homes, 10 private maternity homes, four private blood banks, two private hospices, one private community mental health centre and two private facilities combining haemodialysis as well as ambulatory care services (Ministry of Health Malaysia, 2017a).

In Malaysia, the classification of health care facilities to public or private sectors is based not on ownership but rather on the business model adopted by the management of the health facilities. Private health care facilities are those which operate on a commercial for-profit basis (Chan, 2014). This is especially relevant in the private hospital sector where many private hospitals are fully or partially owned by government-linked companies<sup>7</sup> (GLCs) but operate as commercial for-profit enterprises (Chan, 2014). Currently, the proportion of private hospital beds owned by GLCs exceeds 50% of total private hospital beds in the country<sup>8</sup> (figure 1).

**Figure 1**  
**Distribution of hospitals and doctors working in the public and private sectors in Malaysia, 2016**

	Public Sector		Private Sector	
	MoH	Non-MoH	GLC-linked <sup>1</sup>	Others
No. of hospitals	144	9	45	142
No. of hospital beds	41995	3683	7401 <sup>2</sup>	6,556
No. of doctors	36403	na	13684 <sup>3</sup>	

Source: Ministry of Health Malaysia, 2017a, and information obtained from the websites of GLC hospitals. Notes: GLCs are defined as companies that have a primary commercial objective and in which the GoM has a direct controlling stake and not just percentage ownership; 1: hospitals owned by Khazanah Nasional Berhad, Ramsay Sime Darby, the Terengganu and Malacca state governments; 2: Estimated from information obtained from the websites of GLC hospitals; 3: Published information refers to all doctors practicing in the private sector; na: Not available.

7 GLCs are defined as companies that have a primary commercial objective and in which the GoM has a direct controlling stake and not just percentage ownership.

8 These GLCs include IHH Healthcare Berhad, a subsidiary of the Khazanah Nasional Berhad, the federal government sovereign wealth fund and KPJ Healthcare Berhad, a public-listed company belonging to the Johor Corporation, the investment arm of the Johor state government. Other state governments, including the Terengganu and Malacca state governments, are also involved in providing private health care. Sime Darby, another GLC, owns hospitals through Ramsay Sime Darby, a joint venture with Ramsay Health Limited, an Australian company.

## Value system underlying delivery of health care in Malaysia

The GoM launched the Privatisation Policy in 1983 (Chee and Barraclough, 2007). The policy was intended to encourage the private sector to be the main engine of economic growth and to allow the government to reduce its presence in the economy, thus reducing its level and scope of public spending (Abu Bakar, n.d.). Incentives were provided to enhance development of the private health sector, which coupled with increasing public demand for private care, led to a rapid expansion of private hospitals - from 50 hospitals in 1980 to 219 hospitals in 2003 (Chee and Barraclough, 2007). Operating private hospitals came to be seen as a lucrative business venture, which in turn encouraged further participation of private companies and eventually GLCs (Rasiah et al., 2009; 2011). Despite these developments in the private sector, welfare sentiments are still prevalent in the provision of public care.

The then (and current) Prime Minister of Malaysia, Mahathir Mohamad,<sup>9</sup> delivered a speech at the inaugural meeting of the Malaysia Business Council on 28 February 1991, in which he outlined nine strategic challenges for the country to achieve developed nation status by 2020. His aspirations for the country, as contained in this landmark speech, are now widely known as Vision 2020.<sup>10</sup> In it, the Prime Minister stressed that the developed Malaysian society should be an “economically just society” and to obtain this, the country should, amongst others, “provide enough by way of essential shelter, access to health facilities and all the basic essentials”(Abu Bakar and Jegathesan, 2001: p. 12). However, this needs to be understood against the backdrop of what he had mentioned earlier in the same speech concerning the strategic challenges in the path towards national development. In the seventh of these challenges, Mahathir emphasized the need to establish a fully caring society, in which “the welfare of the people will revolve not around the state or the individual but around a strong and resilient family system” (Abu Bakar and Jegathesan, 2001: p. 12). Taken together, these statements provide a rationale for the policy directions with regards to the application of medical fees in Malaysia, especially in the public sector, which emphasizes the need to provide basic health care for all based on a shared responsibility between the state and the people. This sentiment is also reflected in the MoH’s Vision for Health.

Vision 2020 was intended to provide a direction for national economic growth. After its release, the MoH developed the Vision for Health to guide development of the health sector towards the attainment of Vision 2020. The guiding principle of shared responsibility towards health has been echoed in the Vision for Health, which states that “Malaysia is to be a nation of healthy individuals, families and communities, through a health system that is equitable, affordable, efficient,

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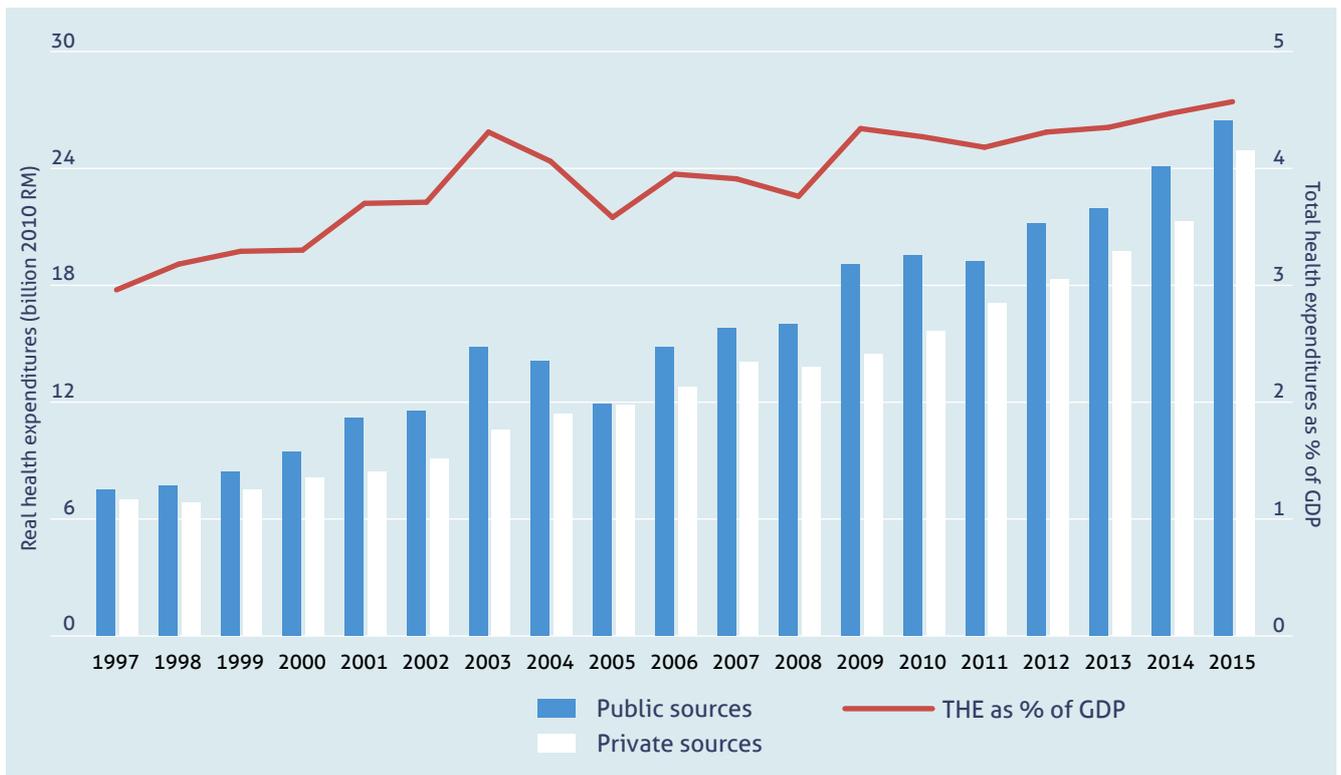
9 Mahathir Mohammad first served as the fourth Prime Minister of Malaysia from 1981 to 2003. In May 2018, he was again appointed to the same position as the seventh Prime Minister of the country.

10 The full speech can be downloaded from <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan003223.pdf>.

technologically appropriate, environmentally adaptable and consumer friendly, with emphasis on quality, innovation, health promotion and respect for human dignity and which promotes individual responsibility and community participation towards an enhanced quality of life” (Abu Bakar and Jegathesan, 2001: p. 12). The mention of an ‘affordable’ health system here could have easily been thought to refer to medical fees set at a level which patients can pay and thus afford. However, it has since been clarified that the ‘affordable’ health system in the Vision for Health is seen from the more macro perspective of what the country can afford to provide to the people (Abu Bakar and Jegathesan, 2001: p. 12).

The MoH had set up the Malaysia National Health Accounts (MNHA) Project in 2001 to capture details of the national health care expenditures in Malaysia. To date, MNHA has published expenditure estimates and trends for years 1997 to 2015 (Ministry of Health Malaysia, 2017b). Throughout this period, the country’s THE as a percentage of Gross Domestic Product (GDP) did not exceed five percent, and public sources of funding, which are predominantly made up of general taxation, contributed more than half of THE annually (figure 2). Though accurate estimates of private financing of health care in Malaysia were not routinely available prior to 1997 and thus THE were not known, the MoH was aware of the increasing cost of providing public care and the need to mobilize other sources of funding for health.

**Figure 2**  
Public and private health financing sources, Malaysia 1997 to 2015



Source: Ministry of Health Malaysia, 2017b.

General socio-economic policies in Malaysia are laid down in a series of five-year development plans known as Malaysia Plans. The first Malaysia Plan covered the years 1966 to 1970. This and the next three Malaysia Plans, covering the years 1971 to 1985, focused mainly on the expansion of health services, especially to enable better access to care for rural populations (Government of Malaysia, 1966; 1970; 1976; 1981). However, from the fifth Malaysia Plan (1986 to 1990) onwards, the Malaysian public were slowly being sensitized to the growing financial burden shouldered by the GoM to provide public health care and subsequently the need for cost sharing. In particular, there was a specific mention of improvements in hospital billing systems and efforts to revise user fees in order to “initiate nominal cost recovery in hospitals and clinics” (Government of Malaysia, 1990: p. 353). It was also noted that large numbers of migrants had used public health facilities and were paying the same fees paid by citizens. In 1994, medical fees for migrants were increased to encourage them to use private medical facilities (Government of Malaysia, 1996: p. 540).

The rapid expansion of private health care since the 1980s has generally been welcomed. The GoM intends for the private sector provision to complement the public sector provision of medical services especially for those who can afford private care. However, the GoM saw fit to add that legislations should be reviewed to ensure that the profit motive would not compromise quality and accessibility to private care. Subsequently, a new legislation governing the provision of private medical care, the Private Healthcare Facilities and Services Act (PHFSA), was enacted in 1998 to “improve access to health care, correct imbalances in standards and quality of care as well as to rationalize medical charges in the private health sector to more affordable levels” (Government of Malaysia, 1996: p. 549). The GoM also made known its intention to reform the country’s health care financing system to provide “consumers with a wider choice in the purchase of health services from both the public and private sectors” (Government of Malaysia, 2001: p. 495). However, to date, there has been no major reforms to the country’s financing system which has provided public funding to support the public provision of care and in turn, contributed to the achievement of universal health coverage (UHC).

### Achievement of Universal Health Coverage

Malaysia has claimed to have achieved UHC since the 1980s, when health services had been provided to over 90% of the population.<sup>11</sup> UHC has mainly been provided by the public health sector. At that point in time, the focus was on the expansion of primary care services for rural people who made up the majority of the population in the country (Jayesuria, 1967). Health clinics remain an important component of the

11 The then Minister of Health, S. Subramaniam, had made this claim in a speech delivered at the 27<sup>th</sup> Commonwealth Health Ministers Meeting held in Geneva, Switzerland on 17<sup>th</sup> May 2015. The speech can be obtained from [www.moh.gov.my/index.php/database\\_stores/attach\\_download/337/679](http://www.moh.gov.my/index.php/database_stores/attach_download/337/679).

MoH primary care delivery system to this day. Clinics vary in size and complexity, with the smaller ones staffed by a single community nurse providing basic nursing care and advice. These community clinics are connected to a network of progressively larger and more complex clinics. At the top of the chain are polyclinics, where the public can access the full range of primary care services from general outpatient consultations to ante and postnatal care, vaccinations against infectious diseases, growth monitoring for children, health screening and health education services as well as dental care. The larger clinics are also equipped with pharmacies, laboratories and x-ray machines.

The MoH also established hospitals to provide secondary and tertiary care. Similar to clinics, the network of MoH hospitals range from small secondary care hospitals in rural districts to tertiary referral hospitals in large towns such as Putrajaya, the administrative capital of the country. A national referral system has been established to link facilities providing different levels of care and to enable patients to be referred from the clinics to the level of care that they require. The public teaching hospitals are also part of this referral system.<sup>12</sup> Thus, the public health system in Malaysia has been structured to provide comprehensive health care, from primary to tertiary levels, to individuals in need.

User fees have long been a feature in the Malaysian healthcare system. However, such fees in the public sector have often been waived for the poor (Rohaizat, 2004). A national household health survey conducted by the MoH in 1988 found that, "almost all outpatient visits to government clinics were free, as were 60% of visits to government hospitals." (Public Health Institute, 1988: p. 9). An earlier study noted similar findings, "small personal charges are made to patients, but they are seldom collected for class III services, which apply to the majority of the beds" (Westinghouse Health Systems, 1985: p. 107). The same study reported that public hospitals were provided with government allocations on a quarterly basis and that a supplemental allocation was provided in the event of a shortfall of funds. Since these early studies, there has been several upward revision of fees, but as late as 2015, more than half of the public hospital admissions and public outpatient consultations had been free (Institute for Public Health, 2015: pp. 347-383).

In 2011, it was estimated that on average, each person in Malaysia had 4.3 outpatient consultations and that there were 111 inpatient discharges per 1000 population in the country (Health Policy Research Associates et al., 2013: p. 20). The outpatient consultations were equally distributed between public and private health care providers. However, inpatient admissions were predominantly public. Admissions to public hospitals made up 74% of all admissions. But what is more interesting to note is that there was no income gradient in the

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<sup>12</sup> However, the five military hospitals do not normally accept non-military personnel except in emergencies. These hospitals mainly provide care for military personnel and their families. Such services are free at the point of delivery.

utilisation of outpatient and inpatient care services in Malaysia. Whilst outpatient and inpatient utilisation were the same across income quintiles, there was a distinct pro-rich distribution to the use of private health care services and, conversely, a pro-poor distribution for public care (Health Policy Research Associates et al., 2013: pp. 55-56). It was argued that this equitable finding can be attributed to sustained government investments into the public health sector, not just in terms of development and expansion of health facilities but also in efforts to keep user fees low to maintain affordability for the poor.

### 3

## Setting medical fees in the private sector

### Estimating the cost of providing services in MoH facilities

Although the MoH has knowledge of the expenditures spent by its various programmes as well as the number of care episodes provided by its facilities, this information has not been fully mined to yield comprehensive information on the costs of services.

In 1992, the GoM had introduced the Micro Accounting System (MAS) into the public sector to determine the costs of outputs produced by public agencies. Such information was to be used to assist management in the planning, implementation, control and evaluation processes. The MAS was implemented by the MoH in phases from 1995 to cover hospitals, clinics and health management departments within the ministry.<sup>13</sup> This system was designed to produce inpatient and outpatient unit costs of inpatient and outpatient services provided by MoH facilities. However, the MAS system is currently no longer in use by the ministry.

In 1996, the MoH started exploring the use of case-mix systems for hospital budgeting purposes.<sup>14</sup> Initial efforts were hampered by the high cost of purchasing and maintaining the case-mix software sourced commercially. In 2010, the ministry commissioned the design of a system known as the Malaysia diagnosis-related groups (DRGs) utilising case-mix weights developed for hospital inpatient care. This system is currently in use in 59 out of the 144 MoH hospitals nationwide. Thus far, only costs by DRGs for inpatient care are known. The ministry is working towards extending the system to include outpatient and day care services as well as to improve the accuracy of clinical coding in MoH hospitals. These efforts would be required if case-mix information is to be used to support the development of hospital budgets.

13 Information on MAS within the MoH was obtained from a paper entitled, "Micro Accounting System for Costing of Services" presented by Mr Tan Eng Hock, Secretary of the Finance Division, MoH at the Conference of Directors, MoH held from 15<sup>th</sup> to 17<sup>th</sup> April 1998.

14 Information on the use of case-mix systems was obtained from the MoH.

Prior to 1997, total health expenditures in Malaysia covering both public and private sources of funding were not routinely and systematically captured. The MNHA Project established in 2001 was to capture the totality of health expenditure flows within the health system in Malaysia. As part of the data capture process, the MNHA conducted cost accounting projects in selected MoH hospitals to enable disaggregation of hospital expenditures to inpatient, outpatient and day care costs (Ministry of Health Malaysia, 2006: p. 5). Conceptually these exercises have the potential to produce estimates of unit costs for services in the selected hospitals, but to date such information, if estimated, has not been made public.

A legacy from the British Colonial administration, the MoH has a strong and long-standing culture of systematically collecting health statistics from MoH facilities (Health Informatics Centre, 2013: pp. 8-9). Since the 1960s, there has been a dedicated unit responsible for the collection and analysis of health information. This unit has evolved over time, and its role has expanded to include the development of standards, ensuring quality of the data collected, analysed and disseminated to support policy decision-making in the ministry. The current form of the unit is known as the Health Informatics Centre (HIC), which was established in 2007 to manage health statistics from the public as well as the private sector. One of the stated objectives of the HIC is to provide data support for the conduct of cost-effectiveness analyses (Health Informatics Centre, 2013: p. 13). However, the centre does not appear to collect data on costs of care.

In summary, though the MoH keeps track of the overall expenditures of the ministry, comprehensive cost information by services is currently not fully available.

### Legislating medical fees for MoH facilities

In the public sector, matters pertaining to fees for services provided or financial penalties imposed by all public offices and departments of the GoM are governed by the Fees Act 1951 (Government of Malaysia, 1951). In accordance with Article 97(1) of the Federal Constitution, all funds collected are paid into the Federal Consolidated Fund. These funds cannot be retained by the public agencies that collected them.<sup>15</sup>

Medical fees collected from MoH patients make up a very small portion of overall government revenues. In 2014, collected medical fees totalled RM 269.3 million, or US\$ 82.4 million, which was less than 0.5% of all non-tax government revenues and less than 0.1% of total government revenues for the year (Ministry of Health Malaysia, 2015a: p. 36; Ministry of Finance Malaysia, 2015: p. 4-6).

The fees for MoH medical services are gazetted as regulations under the Fees Act 1951 and are enforced by the MoH. The earliest regulation was gazetted in 1957 and later revised in

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<sup>15</sup> An exception was made for fees collected from the FPP scheme. The Ministry of Finance has clarified that the portion of fees meant to be paid to attending doctors could be maintained in a trust fund and eventually be disbursed to the doctors concerned.

1976 and 1982 (Government of Malaysia, 1982). The fees included in the 1982 regulation were listed in eight schedules covering inpatient and outpatient care services. Fees for all inpatient services, such as for treatment, investigations and operations, differed by class of accommodation. Higher fees were charged for patients admitted to first and second class wards compared to third class wards. The regulations also included fee exemptions for certain groups of people including members of the royal families, government pensioners and civil servants. Hospital directors were also permitted to waive fees for the destitute. In addition, fee exemptions were included for specified health care services such as ante and postnatal care for mothers, outpatient treatment for infants and inpatient care for persons suffering from one of the 24 listed infectious diseases (including malaria and cholera).

Since 1982, the regulations have been revisited several times.

1. The current version applicable for citizens using MoH facilities was gazetted in 2017 (Government of Malaysia, 2017) to include a revision of the 1982 fees and the inclusion of additional surgical procedures and services such as physiotherapy, occupational therapy, dietetics and traditional and complementary medicine (T&CM) services<sup>16</sup> not provided for in the 1982 regulations.
2. In 2003, a new regulation was gazetted to include medical fees for non-citizens<sup>17</sup> utilising MoH services (Government of Malaysia, 2003), and these fees were revised in 2014 (Government of Malaysia, 2014).
3. Fees for patients using the Full Paying Patients (FPP) services<sup>18</sup> were gazetted in 2007 (Government of Malaysia, 2007).

A comparison of current medical fees charged for selected services or procedures for patients obtaining care in MoH facilities is provided in figure 3.

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16 T&CM based on Malay, Chinese, Indian, Orang Asli and complementary medical practices co-exist with Western allopathic medical practices in Malaysia. T&CM care is mainly available in the private sector and is mostly paid for using OOPPs. The MoH has provided a limited range of T&CM services, such as Chinese acupuncture, Malay massage, Indian ayurvedic therapy, chiropractic and Chinese herbal oncology services in selected hospitals since 2007. It was only in 2017 that the fees for these services had been gazetted. Prior to that, the services had been provided for free.

17 All citizens above the age of 12 years are issued a Malaysian Identity Card, known as MyKad. These cards are used as proof of citizenship during patient registration processes. Birth certificates are used for the same purpose in the case of children.

18 Patients who choose to use the FPP services in MoH hospitals are provided with additional services such as being allowed to choose their doctors and staying in better appointed rooms.

**Figure 3**  
Comparison of selected medical fees for Malaysians, Non-citizens and FPP obtaining care in MoH facilities

	Malaysian	Non-Citizens	Fully paying patients (FPPs)
<b>Outpatient Care</b>			
Clinic <sup>a</sup>	RM 1	RM 40	na <sup>b</sup>
Specialist Outpatient Clinic <sup>c</sup>	Referred by public sector doctors – free for 1st visit and RM 5 for subsequent visits  Referred by private sector doctors – RM 30 for 1st visit and RM 5 for subsequent visits	RM 120 per visit	RM 110 for 1st visit and RM 60 for subsequent visits
<b>Daily Ward Charges<sup>d</sup></b>			
First Class			
- Single bed	RM 90	RM 320	RM 160
- Two beds	RM 60	RM 240	RM 130
- Three or more beds	RM 45	RM 200	RM 80
Second Class	RM 25	RM 180	na <sup>e</sup>
Third Class	RM 3	RM 160	na <sup>e</sup>

Source: Government of Malaysia, 2003; 2007; 2014.

Note: FPP: fully paying patients; <sup>a</sup> standalone MoH clinics; <sup>b</sup> not applicable, since FPP scheme available only in selected MoH hospitals; <sup>c</sup> specialist outpatient clinics in MoH hospitals; <sup>d</sup> fees for food and accommodation; <sup>e</sup> not applicable since second and third class wards are not available under the FPP scheme. RM: Malaysian ringgit 4.30 = US\$ 1 in 2017.

### Mechanism to set fees for MoH facilities

It was not possible to obtain information on how fees included in the three earliest regulations were set. What is known is that later fee revisions were based on the fees and fee structure of the 1982 regulations. The frequency of fee revisions is not stipulated in the law, and the timing of revisions appeared to be a top-down management decision that could have come from outside the ministry, perhaps in support of wider public policy directions of the government. Indeed, this may have been the case for setting separate fees for non-citizens, which is in line with government policies of restricting access to social services, such as subsidized education, for non-citizens.

The mechanism of fee revisions is illustrated using the work flow of the latest fee revision exercise in 2017. The MoH was instructed to revise the 1982 fees to incorporate greater

cost-sharing between the government and patients. However, there was no target set for the levels of cost-sharing. One of the first tasks was to update the list of medical investigations, procedures and services. Over the past few decades since the 1982 fee regulation was gazetted, the MoH had started new services for which fees were not available. Patients who use such services were not charged for care obtained. One such service was for T&CM care, which had been provided in selected hospitals since 2007. MoH officers conducted a small survey of private T&CM practitioners to obtain the range of fees for similar services to those provided in MoH hospitals. The recommended fees for inclusion into the 2017 fee regulations were generally less than the private fees for the same service. For other services, MoH officers consulted with the heads of various medical and surgical disciplines within the ministry who are senior specialist doctors appointed to take on advisory roles in matters pertaining to their specialty. They would in turn consult specialist colleagues within the ministry as well as specialists who work in the private sector to obtain information on fees in the private sector before making a recommendation to the ministry. In certain cases, fee recommendations may be based on available cost information. This may be more relevant for laboratory and radiological investigations.

For the 2017 fee revision, a policy decision was made to focus on revising the fees set for patients in first and second class wards. Since the precise cost of providing MoH services is not known, the general principle guiding the exercise had been that patients should not have to pay higher fees for care in MoH hospitals compared to private hospitals for the same medical condition. MoH officers had surveyed fees charged in private hospitals for a sample of common medical conditions. In 2017, the fees for services provided to patients opting for first class wards were eventually raised by 50% and fees for patients in second class wards were raised by 25% from the fees set in 1982 (figure 4).

**Figure 4**  
**Comparison of selected medical fees for Malaysians,**  
**1998 and 2017**

	1982	2017
<b>Outpatient Care</b>		
Clinic <sup>a</sup>	RM 1	RM 1
Specialist Outpatient Clinic <sup>b</sup>	Referred by public sector doctors – free for 1st visit and RM 5 for subsequent visits	Referred by public sector doctors – free for 1st visit and RM 5 for subsequent visits
	Referred by private sector doctors – RM 30 for 1st visit and RM 5 for subsequent visits	Referred by private sector doctors – RM 30 for 1st visit and RM 5 for subsequent visits
<b>Daily Ward Charges<sup>c</sup></b>		
First Class		
- Single bed	RM 60	RM 90
- Two beds	RM 40	RM 60
- Three or more beds	RM 30	RM 45
Second Class	RM 20	RM 25
Third Class	RM 3	RM 3

Source: Government of Malaysia, 1982; 2017.

Note: <sup>a</sup> standalone MoH clinics; <sup>b</sup> specialist outpatient clinics in MoH hospitals; <sup>c</sup> fees for food and accommodation; RM: Malaysian Ringgit 4.30 = US\$ 1 in 2017.

### Collection of user fees in MoH facilities

MoH patients who are not exempted from payment would be charged fees according to the relevant regulated fees. However, patients are not charged for services received if the fees for such services had not been gazetted. This was the case for T&CM services introduced in 2007 but for which fees were only gazetted in 2017.

The ministry has faced challenges in collecting due payments from patients. In 2014, the total medical fees billed to patients amounted to RM 296.6 million (US\$ 90.7 million) or 1.4% of the ministry's operating expenditures (Ministry of Health Malaysia, 2015a: pp. 32-36). Unpaid medical bills amounted to RM 27.3 million (US\$ 8.3 million) or approximately 9.2% of the total billed, more than half of which came from unpaid bills of non-citizens.

## Setting medical fees for public teaching hospitals

Unlike the case of MoH facilities, the medical fees charged by the four public teaching hospitals are not legislated, and the full details of these fees are not routinely made known to the public. One such hospital is the University of Malaya Medical Centre (UMMC), the teaching hospital of the University of Malaya (UM). UMMC is a statutory body established under the Ministry of Education, Malaysia.<sup>19</sup> As a public teaching hospital, the UMMC is funded by UM through the Ministry of Education. The UMMC Hospital Board of Management, made up of representatives from UM, the Ministries of Health, Education and Finance, as well as two representatives of the public nominated by the Chancellor of UM, oversee the policy directions of the hospital. The Board is also responsible for the financial management of the hospital including approving fees charged for hospital services. The UMMC conducts micro-cost accounting exercises, which are used to inform the revisions of fees. In general, UMMC fees are higher than that for MoH hospitals, reflecting the higher pressure for public teaching hospitals under the Ministry of Education to generate revenue compared to their MoH counterparts.

## Use of medical fees for the remuneration of public sector doctors

Health care professionals, including specialist and non-specialist doctors, working in public hospitals and clinics are salaried workers. Their salary scales are determined by their qualifications and training as well as seniority in service. However, there have been efforts by the public universities as well as the MoH to allow senior specialist doctors restricted private practice<sup>20</sup> to stem movement of these doctors to the private sector. Public specialist doctors who conduct private practice in this manner are allowed to retain a portion of the fees collected from patients. The premise behind the move is that the additional income from private practice will increase doctors' satisfaction and thus enhance the retention of these specialist doctors in public service.

One of the first universities to allow its specialist doctors restricted private practice was UM. The University of Malaya Specialist Centre (UMSC) was established in 1998 as a subsidiary of UM and currently has specialist clinics and a 65-bedded facility located within the grounds of the university.<sup>21</sup> Specialist doctors working in UMSC are salaried academic staff of UM and are also affiliated to UMMC. Unlike UMMC, which is a public hospital, UMSC was conceptualized as a private hospital. Whilst it is the norm for UMMC patients to be managed by teams of health care professionals, UMSC patients can choose their specialist doctors and these doctors are held

19 Information on UMMC can be obtained from <https://www.ummc.edu.my/introduction.asp>.

20 Restricted in the sense that these specialist doctors are not allowed full-time private practice since they have to fulfil responsibilities to care for public patients as well. Their places for private practice are also usually stipulated by their employers. In most instances, public specialist doctors are only allowed to conduct private practice in the public hospitals they are attached to.

21 Information on UMSC can be obtained from [https://umsc.my/?page\\_id=2843890](https://umsc.my/?page_id=2843890).

fully responsible for the private patients that they manage. In return for their services, these doctors are allowed to retain most of the professional fees paid by patients. The UMSC charges these doctors an administrative fee, which is calculated as a percentage of the professional fees that patients pay. The rest of the fees paid by patients, such as for accommodation and use of equipment are retained by the UMSC. The professional fees charged by UMSC specialist doctors are the same as that charged by doctors working in other private hospitals in Malaysia.

UMMC and its private counterpart, the UMSC, exist in close proximity, which could give rise to some ethical concerns for specialist doctors working in both institutions concurrently. For one, there is a concern that the specialist doctors would neglect their public practice obligations in order to spend more time in their private practice. For another, there may be a concern that specialist doctors would coerce public patients from UMMC to seek care in UMSC. In order to prevent such unethical behaviours, the management of UMSC has set up an ethics committee made up of senior specialist doctors to ensure that doctors adhere to an ethical code of conduct.

The MoH has a similar programme in which senior specialist doctors are allowed to provide clinical care to private patients admitted to MoH hospitals under the FPP scheme. FPPs are permitted to choose their attending doctors, a privilege not extended to other MoH patients, and they stay in better appointed rooms. The scheme was started in 2007 involving specialist doctors from two MoH hospitals, but since then the ministry has expanded the scheme to 35 main MoH hospitals throughout the country. FPPs are charged fees which purportedly<sup>22</sup> reflect the cost of care provided to them (Ministry of Health Malaysia, 2015b: p. 1). The categories and quantum of fees charged for FPP services were gazetted in 2007 (Government of Malaysia, 2007). A portion of the fees collected by the hospitals is shared with the attending doctors in which the doctors' shares are dependent on the category of fees. For instance, doctors receive all the consultation fees,<sup>23</sup> but only half of the treatment fees<sup>24</sup> paid by FPPs (Ministry of Health Malaysia, 2015b: p. 24). The MoH has developed a set of guidelines for specialist doctors to ensure that their service to other public patients is not adversely affected by their participation in the FPP scheme. Among others, the ministry has stated that the additional income from the FPP scheme must not exceed three times the doctors' gross monthly salary (Ministry of Health Malaysia, 2015b: p. 26).

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22 Since the actual cost of care in MoH hospitals is not fully known.

23 Consultation fees are fees for consultation by a specialist to any patient that may include examination or comprehensive treatment planning.

24 Treatment fees are fees for any therapeutic service provided to any patient.

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# Setting medical fees in the private sector

## Regulating private healthcare facilities

Prior to 1998, the MoH regulated private health facilities using provisions laid down in the Private Hospitals Act 1971 (Government of Malaysia, 1971). This law imposes basic physical standards for the licensing of private hospitals, private maternity homes and private nursing homes in the country (Nik Rosnah, 2007). The regulation of medical fees was not then within the ambit of the law. Partially due to the expansion in the numbers and nature of health care facilities in the country, a new legislation to regulate all categories of private health care facilities, the PHFSA, was enacted in 1998 (Government of Malaysia, 1998). This new law provides regulations for private hospitals, maternity homes and nursing homes as well as nine other distinct categories of health care facilities, namely psychiatric hospitals, ambulatory care centres, psychiatric nursing homes, blood banks, haemodialysis centres, hospices, community mental health centres, and medical and dental clinics.

The PHFSA was enacted primarily to safeguard the interests and safety of patients who receive private care. In addition to sections covering areas such as the physical standards for facilities, qualifications of personnel managing private facilities, medical practice governance and oversight structures, the law also made it mandatory for private facilities to make social and welfare contributions to society and to empower the MoH to set fees for private health care. Private facilities regulated under the PHFSA 1998 are also required to submit patient statistics to the HIC. However, the centre mainly collects patient use and not cost data. It is assumed that each private health facility, being commercial based entities, would have internal accounting mechanisms to track their own cost of services. There is no legal requirement to share this information with the MoH.

Fees for services provided by private clinics and hospitals under the PHFSA 1998 were gazetted in 2006 (Government of Malaysia, 2006a; 2006b). In 2013, the MoH revised the fees for private hospitals (Government of Malaysia, 2013). The long gestation period of eight years between the enactment of the PHFSA in 1998 and the gazettement of fees in 2006 hints of the difficulties encountered by the MoH to set fees for private care in the country. Though the intention of PHFSA 1998, Section 106, was to regulate fees to ensure affordability of private care (Malaysia, 1996: p. 549), the eventual regulated fees covered only professional medical fees for doctors practicing in private facilities. The fees gazetted under the law refer to the maximum allowable professional fees that can be charged by health care professionals. They are permitted to charge less than the legislated fees if they wish to do so. All

other fees paid by patients receiving care in these facilities, including fees for laboratory investigations, nursing care, use of equipment, operation room and drugs, are not regulated due to the "varying costs in operating and maintaining a private hospital in different areas of the country".<sup>25</sup> The professional fees included in the law were based on the fee schedules developed by the Malaysian Medical Association (MMA).

### Mechanism to set private medical fees

Prior to the enactment of the PHFSA in 1998, private medical fees were mainly determined by the market. The professional fees charged by private doctors were nominally guided by the schedules of fees released by the MMA, but doctors were not legally bound to do so. The MMA is a registered society whose membership consists of doctors practicing in Malaysia. Membership is on a voluntary basis, but sufficiently large enough for the association to claim representation of the medical fraternity in the country, including public and private sector doctors working in hospitals or clinics.

The MMA had set up a HIC in the 1980s to develop a fee schedule as a pre-emptive move in the event that a national health insurance scheme was to be introduced in the country (Malaysia Medical Association, 2014: pp. 121-124). During that time, the GoM had commissioned a study of the Malaysian health financing system to seek solutions to raising health care costs and rapid development of the private health sector (Westinghouse Health Systems, 1985). One of the recommendations of this report was to introduce a national health insurance scheme, referred to as the National Health Security Fund (NHSF). Members of the MMA had felt that the development of professional fees to be used in such a scheme should be led by the medical profession itself and thus set up the HIC to accomplish this.

The first edition of the MMA fee schedule was released in 1987 (Committee on Health Insurance, 1987) and listed professional fees in four categories outpatient primary care consultations, outpatient specialist consultations, procedural fees charged by doctors and miscellaneous services such as the preparation of medical reports. The second edition of the fee schedule was released in 1992, the third in 1997, the fourth in 2002<sup>26</sup> and the fifth in 2008 (Malaysian Medical Association, 2008).

In the development of the fee schedule, the HIC took into consideration factors such as complexity of the service/ procedure, time taken and likelihood of complications, which were factored into the Relative Value Scales (RVC) used. The first edition of the MMA fee schedule had used the Californian RVS. The second edition used the RVS developed by the British

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25 This explanation was contained in a press release by the then Minister of Health, Dr S. Subramaniam, in March 2014 to announce the revision of the 13th fees schedule for private hospitals. The press statement is available from [http://www.moh.gov.my/index.php/database\\_stores/attach\\_download/337/485](http://www.moh.gov.my/index.php/database_stores/attach_download/337/485).

26 Information obtained from the article entitled, "Evolution of the MMA Schedule of Fees", published online by the Malaysian Society of Anaesthesiologists and the College of Anaesthesiologists, and Academy of Medicine of Malaysia available from <http://www.msa.net.my/newsmaster.cfm?&menuid=21&action=view&retrieveid=21>.

United Provident Association (BUPA). In this 1992 fee schedule, the HIC decided to give a RVS point the value of RM 2.50 as opposed to £1.00 used by BUPA at the time, even though the currency conversion rate then was RM 4.20 to the pound. Subsequent revisions of the fee schedules used the BUPA RVS in use at the time of the revisions. Revisions also took into consideration the rate of inflation in the interim time from the last schedule. The fees included in the fourth edition was approximately 10% higher than fees in the third edition.

The fourth edition of the MMA fee schedule was eventually incorporated by the MoH into the PHFSA as the professional fees for care obtained from private clinics and hospitals. The MoH revised the fees for private hospitals in 2013. These revised fees were on average 14.4% higher to partially cater to the inflation rate of 23% during the period from 2006 to 2010 when the revision exercise started (The Star, 2014). The highest increases had been for General Practitioner (GP)<sup>27</sup> consultation fees for which the ministry had explained was due to the “rental costs in various locations” (The Star, 2014). The ministry announced that this revision had taken into consideration feedback from various stakeholders including the MMA. A comparison of professional fees charged for selected services in private clinics and hospitals is provided in figure 5.

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<sup>27</sup> GPs refer to non-specialist doctors who provide private primary care services usually on outpatient basis.

**Figure 5**  
**Comparison of legislated professional fees for selected services in private clinics and hospitals**

	Private Clinic -2006	Private Hospital (2006)	Private Hospital (2013)
<b>Outpatient Care</b>			
Non-specialist consultation	RM 10 – RM 35	RM 10 – RM 35	RM 30 – RM 125
Specialist consultation	RM 60 – RM 180	RM 60 – RM 180	RM 80 – RM 235
	(1st visit)	(1st visit)	(1st visit)
	RM 35 – RM 90 (follow-up visits)	RM 35 – RM 90 (follow-up visits)	RM 40 – RM 105 (follow-up visits)
<b>Procedures (including anesthetist's fees)</b>			
Appendicectomy		RM 1850	RM 2135
Simple mastectomy including axillary lymph node biopsy		RM 1970	RM 2250
Extracapsular extraction of lens with implant		RM 3065	RM 3510
Caesarean section		RM 2365	RM 2710

Source: Government of Malaysia, 2006a; 2006b; 2013.  
 Note: RM= Malaysian Ringgit 4.30 = US\$ 1 in 2017.

### Bundled payments in private facilities

Private hospitals may offer packages of health services for which a bundled payment is charged. These include obstetric packages (antenatal, normal vaginal deliveries and postnatal care) as well as executive health screening packages. However, bundled payments for these packages are based not just on legislated professional fees for doctors but also on other components of hospital fees. Thus, bundled payments may differ across hospitals even for the same package of care.

### Relationship between official fees and actual prices paid for private care

The fees for private care as detailed in the regulations of the PHFSA 1998 refer to the maximum professional fees that can be charged by health care professionals. Under the Act, these professionals are not permitted to exceed the limits set. However, since professional fees are but one component of patient bills, the actual payment made by patients will be higher than fees charged by doctors.

## Mechanisms to monitor provider behaviour in the private sector

PHFSA 1998, Section 36, requires all licensed private hospitals in the country to set up a patient grievance mechanism to handle complaints from patients including those who are not satisfied with their hospital bills. If the patients are dissatisfied with the explanations provided by the hospital management, they can dispute fees with the MoH. However, since total hospital charges are not regulated under the law, there is little that the MoH can do to hospitals that purportedly overcharge patients except to mediate between the patient and the hospital. The only area that the MoH can act upon is in the matter of medical professional fees.

## Use of medical fees in the remuneration of private sector doctors

Most specialist doctors working full-time in the private sector are not employed by the hospitals they practice in. They are considered independent contractors. These specialist doctors may admit patients to the private hospitals and use the hospital equipment and other available facilities such as laboratories and operation rooms. The doctors will then stipulate their professional fees for services rendered, and the hospital concerned will include these fees in the overall hospital bill given to the patient. In addition to the doctors' professional fees, these itemized bills will include fees for other service components received by patients such as ward fees, fees for investigations and drugs,<sup>28</sup> which will be retained by the hospital concerned. Specialist doctors can expect to receive the professional fees charged net of payments to the hospital for the admitting privileges enjoyed by them. The professional fees charged by doctors working in private hospitals are regulated via the PHFSA 1998 (Government of Malaysia, 1998). It is a common practice for private specialist doctors to have admitting privileges to several hospitals concurrently. Some doctors have also invested in the hospitals they practice in. As such, they may receive a portion of the profits due to them as company shareholders.

Contractual arrangements for private specialist outpatient services are varied. Some specialist doctors rent or may even have bought clinic premises within private hospitals or other locations such as commercial shop lots. They manage these clinics autonomously, including hiring their own clinic support staff. In such cases, the doctors may bill patients directly for all services provided including minor procedures, such as laser therapy for dermatological conditions, performed in the clinics. The professional fees charged by doctors working in standalone private clinics are regulated via the PHFSA 1998. Some specialist doctors rent sessions from the hospitals where they provide outpatient consultations in clinics managed by the hospitals. In such cases, they continue to use most of the

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<sup>28</sup> In general, profits from the sale of pharmaceuticals are retained by the private hospitals and not shared with health care professionals.

hospital support staff and facilities, including laboratories and pharmacies, and charge patients only professional consultation fees listed in the PHFSA 1998.

GPs are mainly located in residential areas for the convenience of patients. Whilst most GPs provide primary care services, some clinics also provide simple laboratory and radiological examinations. Doctors in Malaysia do not practice the separation of prescribing and dispensing drugs. Patients who obtain care from GPs or even specialist doctors practicing in standalone clinics<sup>29</sup> would expect to obtain their medications in the same premises directly after the consultation with the doctors unless the drugs are not in stock, in which case the patients are referred to private pharmacies. Unlike doctors practicing in private hospitals, GPs generally prescribe generic medicines, since their patients would also expect that these medications be included in the consultation fees paid to the GPs (Malaysian Competition Commission, 2017: p. 62).

## Discussion

The practice of medical fee setting is still in its infancy in Malaysia. Although such fees are a common feature in the public health sector, cost recovery for public care is not yet high on the priority list for the GoM. The welfare philosophy underlying the delivery of public care does not incentivize the MoH to fine-tune mechanisms or to train and maintain dedicated personnel to set public fees. However, the need to develop such resources may become more apparent as years pass in tandem with increasing public demand for reasonably priced private health care.

The vibrant private health sector found in Malaysia today is a relatively new phenomenon. Malaysia experienced rapid economic growth in the 1980s. Private health care services have been viewed by many in Malaysia as being of higher quality compared to care provided by public sector providers. Unlike the primary care gate-keeping mechanism in operation in the public sector, patients can access any level of private health care that they desire and have the means to pay for. The practice of private health care in the country allows patients to choose their doctor and to be assured clinical management by their chosen doctor unlike the less personal practice of clinical team management in most public health settings. Private health facilities are better equipped with expensive advanced technology than most public health facilities, especially those in rural areas. The ability to obtain higher income in the private sector has contributed to the movement of public health care professionals to the private sector, especially senior specialist doctors (Merican and bin Yon, 2002). Another important reason for choosing private care appears to be that of a shorter waiting time. In a 1996 national household survey, more than half of the respondents did not seek care from the nearest health facility to their homes, and 61.3% of this more than half by-passed public health facilities in favour of a private clinic or

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<sup>29</sup> Doctors who practice in a hospital setting may refer their patients to the hospital pharmacies to obtain their medications.

private hospital<sup>30</sup> (Institute for Public Health, 1997). The most common reason given for this was because of long waiting times at the public health facilities.

Armed with higher purchasing power, consumers have become appreciative of private care, especially the expanding cohort of middle-income families. Private facilities developed to meet this demand and are characterized not just in increasing numbers but also changes in delivery structure. During this time, private health care providers evolved from single doctor clinics and small secondary care hospitals to the large networks of clinics and hospitals in existence, especially in urban areas, today. The early hospitals were mainly charitable entities owned by philanthropists or missionary organisations. Later, many doctors also invested in private hospitals. It has been argued that profit making was not the *raison d'être* of the early hospitals. High hospital bills were not a pressing issue then as they are now. Over the past decade or so, many doctors have sold their stakes to private investors or even to GLCs. GLCs may have government ownership but are managed as commercial for-profit enterprises. There are anecdotal accounts that high private hospital bills have prevented access to private care and thus may have led to poorer health outcomes, but such statistics are not routinely collected (The Star, ; 2009; 2011; 2012).

Private hospital bills affect not just the patients who pay OOPP for care, but also health insurers. The most common form of medical and health insurance (MHI) is hospitalisation and surgical indemnity insurance policies, which provide for the reimbursement of medical, surgical and hospitalisation expenses incurred by those insured. In 2005, about 15% of the population had some form of health insurance cover (Central Bank of Malaysia, 2005: p. 58). By 2014, the coverage increased to 45% of the population, or about 14.7 million people (Malaysian Productivity Corporation, 2016: p.112). It is important to note that people in Malaysia buy health insurance mainly to gain access to private care (Chan, 2014). This is due to the general perception that private care is of higher quality compared to care received from public providers. Private insurers are wary of private hospitals charging insured patients higher fees for the same level of care compared to those who do not have insurance coverage (Chan, 2014; Lee et al., 2018). Thus far, the law has not provided protection from such practices since legislated professional fees cover only a portion of total hospital bills. The MoH is aware of the need to close this loophole in the law, not just to protect third party payers such as insurers but also the public at large. In 2018, the previous Minister of Health announced that the ministry is exploring the option of a 'bundling system' for private hospital fees (Sundaily, 18th January 2018). Such 'bundles' would include all fees, professional or otherwise, for a package of care. He acknowledged that the task was not easy and involved consultations with all stakeholders, including the Central

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30 The rest mainly by-passed one category of public facilities for another.

Bank,<sup>31</sup> private insurers and private hospitals. There has been no further announcement of developments to date.

Insurers may feel that they have valid reasons to call upon the MoH to help them control patient bills. On the flip side, some doctors have also raised concerns that certain insurance practices place them at a disadvantage resulting in an unfair reduction of income. This issue relates to their dealings with Managed Care Organisations (MCOs), which include insurers. MCOs in Malaysia work on behalf of companies or insurers to help them contain health care costs of their employees or those insured. It has been estimated that the market for MCO services grew from a coverage of 300 000 persons in 1997 to 16.36 million in 2014 (Malaysian Productivity Corporation, 2016: p. 99). The modus operandi of MCOs is to recruit and appoint private hospitals and clinics as their panel providers to service their enrollees. In return for the promise of high patient volume, these companies would negotiate for lower fees, which invariably affect the professional fees charged by doctors. This is permitted under the law, as legislated private fees are the maximum allowed for the service charged. Doctors under contract to work in private hospitals have no choice but to accept the lower fees negotiated by the hospital management. In order to gain a share of the patient pool, GPs have had to acquiesce to the MCOs' demand for lower fees as well. GPs working in standalone clinics are particularly hit hard. GP fees were legislated in 2006, and the fees for GP consultations were between RM 10 to RM 25 (Government of Malaysia, 2006b). Unlike legislated fees for private hospitals, which were revised in 2013, GP fees have remained unchanged since 2006. It was claimed that the allowable fees have not kept up with the increasing clinic maintenance costs (Malaysian Productivity Corporation, 2016: p.106). To make matters worse, there is now a discrepancy in GP fees between doctors who work in private hospitals (RM 35 to RM 125, as stated in the 2013 private hospital fee revision) and those working in standalone clinics (RM 10 to RM 35, as per the 2006 private GP regulations). The MoH has announced that it will look into revising these fees to assuage discontent among GPs (The Star, 5th October 2018). In January 2019, the MoH announced a scheme to buy care from GPs as a move to expand health screening services for the poor. However, progress has stalled because the GPs rejected the proposal by the MoH to use the 2006 fees as the basis for negotiations (The Malay Mail, 2nd February 2019).

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<sup>31</sup> Bank Negara Malaysia, or the Malaysian Central Bank, is the regulator of all banking and insurance activities in the country.

## 5 Conclusions

The Malaysian health care system is changing rapidly to cater to the more discerning tastes of middle- and high-income households, while at the same time trying to expand accessibility of care to the poor. The GoM is making efforts to set fees for public care, which is apparent in its efforts to recover the cost of care provided to non-citizens. However, in the absence of accurate information on costs, these efforts seem arbitrary in nature. The current focus appears to be on refining fees for private care. This is in response to public demand for reasonable fees and also in view of the government's expectation for the private sector to shoulder a greater share of care provision in the country. If the government is serious in its intentions to control medical fees and to develop fees acceptable to all stakeholders in the country, then it needs to invest in building the infrastructure needed for fee setting. This would include training dedicated personnel to capture and analyse costs as well as a system for better collaboration among policy stakeholders both within and without the ministry.

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## Case study

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# Republic of Korea

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## Price setting and price regulation in health care: Republic of Korea

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The Republic of Korea (henceforth referred to as Korea) uses price regulation for health care that is based mainly on fee-for-service (FFS). FFS in Korea has been applied to outpatient and inpatient care for all levels of providers, from physician clinics to tertiary care hospitals, since the introduction of mandatory health insurance system in the late 1970s (which later reached universal coverage for the population in 1989). The goal of price regulation was to ensure access to health care and contain health expenditure by tightly regulating the price of health care in the context that the majority of health care providers are private. Initially, private providers were opposed to the fee scheduling of the national health insurance (NHI) system, where balance billing is not allowed. However, the authoritarian government in the late 1970s was able to enforce a unilateral fee setting for all providers that denied an opt-out option so that the same fee schedule applied to both public and private providers.

## Abstract

Since 2000, the National Health Insurance Service (NHIS) and each provider association (physicians, hospitals, pharmacists, etc.) negotiate the fees. When negotiations fail, the tripartite Health Insurance Policy Deliberation Committee (HIPDC) decides the fee. Health Insurance Review and Assessment (HIRA) also plays an important role in costing and analyzing provider behaviour related to pricing. Pricing for health care is based predominantly on FFS, with the exception of Diagnosis Related Group (DRG)-based payment for six disease categories and per-diem case-based payment for long-term care (LTC) hospitals as well as the piloting of a mixed payment of DRG, FFS and per-diem payment. There is no bundled payment system to cover the services given by the different levels of providers.

## 1 Development of National Health Insurance and Purchasing Mechanism

NHI of Korea has adopted price regulation for health services since its inception. Although not explicitly stated, keeping prices low through fee scheduling has been regarded as essential for the cost containment and financial sustainability of NHI. Price regulation has long been one of the most important elements of purchasing in the Korean NHI system. In the early stage of health insurance development, the government used price regulation to keep premium contributions low and expand population coverage rapidly. Price regulation has been the main target of complaints by health care providers, which are predominantly private, who maintain that the low fees fail to compensate for the cost of service provision (Kwon, 2009a).

When national health insurance was introduced, the government set the fee schedule lower than customary charges, although there is no scientific evidence on the extent that NHI reimbursement covers the cost of provision. The government was worried that the majority of health care providers would not contract with NHI when the contract conditions, such as payment level, were not generous, resulting in potential access problems for the insured. Consequently, the government mandated all health care providers to join the NHI system. In other words, providers were not allowed to decline treatment to NHI patients. However, the mandatory participation of providers also means that NHIS does not selectively contract with providers nor exercise its purchasing power as a single payer.

More than 300 health insurance funds/societies, covering three different types, namely, public employees and school teachers, private sector employees, and the self-employed, were merged into a single fund in 2000 (Kwon, 2018). Since then, national (public mandatory) health insurance has two agencies. NHIS handles premium collection, fund pooling, and reimbursement to providers. HIRA deals with purchasing, such as claim review as well as the design of benefits package and provider payment system. Providers submit medical care claims to HIRA, which reviews and assesses the claims and sends the information to NHIS for reimbursement to providers. The launch of a single purchaser to some extent provided an opportunity for NHI to strengthen its purchasing capacity, including a more sophisticated method and process related to price setting.

NHIS sets and collects insurance contributions and manages the eligibility of the insured, health insurance benefits, including prevention programs, and reimbursement to providers. NHIS manages both health insurance and LTC insurance. HIRA reviews expenses associated with the health insurance benefits utilized, assesses the appropriateness of the

health care utilized by comparing with guidelines or clinical decisions of similar providers, and develops standards for benefits and reimbursements.

Although reimbursement to providers is paid by NHIS, HIRA plays an important role in the purchasing through claim review and quality monitoring; guidelines for quality; designing benefits standard for providers (criteria of reimbursement); payment system and costing; listing and classification of procedures, pharmaceuticals and materials for provider payment and claims; and resource management through the profiling of providers and high-cost technology/equipment. HIRA plays the major role in the technical work regarding collecting and analysing provider activity and cost data.

In terms of governance, the NHIS's board of directors consists of 16 members: one president, 14 directors, and one auditor. The president, auditor, and five directors work full-time. NHIS has one headquarter (eight bureaus), one research institute, six regional offices, 178 branch offices, one general hospital, and one LTC facility ([www.nhis.or.kr](http://www.nhis.or.kr)). NHIS has about 14 000 workers. HIRA has one headquarter (22 departments), one research institute, and seven regional offices. One of the key institutions of HIRA is the Healthcare Review and Assessment Committee, which consists of less than 1050 members and maximum of 50 full-time members, who play an important role in the benefits design, and the review and assessment of claims. HIRA also has various expert committees to support technical decisions. In total, HIRA has about 2500 workers.

The main responsibility for NHI policy formulation and planning is on the Ministry of Health and Welfare (MoHW). MoHW plays a key role in translating health policy goals and service planning priorities into NHI programs (Kwon, Lee and Kim, 2015). To implement NHI, NHIS and HIRA monitor and assess claims, health care utilization, health care cost, etc., and give reports and recommendations to the MoHW.

## 2 Governance of Price Regulation

In the single insurer system established after the merger, major decisions on health insurance, such as contributions and benefits coverage, became a national agenda and required a new policy framework (Kwon, 2003a). NHI introduced an annual price negotiation between the insurer and provider associations, replacing the unilateral price setting by the insurer and the MoHW. Initially, NHIS negotiated the annual increase in fee with the coalition of provider associations, i.e., both medical and hospital associations. Because it was difficult to get consensus among all provider associations, these negotiations rarely succeeded. This condition changed after negotiations were changed to occur between the NHIS and individual provider associations. The negotiation is on price only, without consideration of volume or a sectoral/overall spending cap.

After experiencing a big financial deficit in 2001 as a result of a fee hike for physicians after their strikes against pharmaceutical reform (Kwon, 2003b), the health insurance system introduced HIPDC, which approves major decisions on health insurance, such as the contribution rate, benefit packages, pricing, etc. When the annual negotiation on price increase fails between NHIS and each provider association, e.g., medical, hospital, dental, traditional medical, pharmaceutical, etc., HIPDC makes the final decision on fees.

As a tripartite committee, HIPDC consists of 25 members, including the Vice Minister of Health and Welfare as the Chair, and representatives of payers, providers, and expert/public interests. Eight members represent payers (two from labour unions, two from employer associations, and one from a civic group, consumer association, farmers association, and self-employed association, respectively), eight from health care providers (two from the Korean Medical Association, and one from the Korean Hospital Association, Korean Traditional Medical Association, Korean Dental Association, Korean Pharmaceutical Association, Korean Nurse Association, and Korean Pharmaceutical Manufacturers Association, respectively), and eight experts and public agency representatives (one from MoHW, Ministry of Strategy and Finance, NHIS, and HIRA, respectively, and four independent experts).

Voting in HIPDC follows a majority rule with a quorum of half of the members. The chair participates in the voting only when no majority is reached. Those representing payers and those representing providers are almost always divided, e.g., payers are against an increase in contribution and provider fee, while providers generally support the increase. In many cases, the eight members representing experts and government/insurer, especially the four independent experts, play a key role in the final vote outcome. The four experts vote independently as individuals.

The decision of HIPDC is final with no mechanism for dispute resolution. The government nominates the four expert members, and provider groups criticize that those four experts are not neutral or independent but often biased against providers. Provider groups maintain that two out of four experts should be nominated by providers and two by payers rather than by the government.

HIPDC is also involved in benefits decisions. A request for a service to be included in the benefits package can be submitted by provider associations, consumer groups, NHIS, etc. The request should be endorsed by HIPDC with crucial inputs provided by NHIS and HIRA. Pharmaceutical manufacturers submit a request for medicines to be covered by NHI, for which HIRA makes a decision on listing based on economic evaluation and other considerations (budget impact, severity of disease, etc.). Then, NHIS negotiates the price with the manufacturer. Pharmaceutical spending accounts for 22.5% of total health expenditure as of 2017 (OECD, 2018).

Under NHI, the copayment rate for inpatient care is 20%, except for cancer and cerebrovascular patients (5% copayment rate). A reduction in the copayment for cancer patients has improved equity in health care access and payment (Kwon, Lee, and Kim, 2015). Copayments for outpatient care are 30-60% depending on the level of providers, i.e., physician clinics, hospitals, general hospitals, and tertiary care hospitals. There is a ceiling on total copayment for NHI every six months, with a higher ceiling applied for higher income groups (total of seven groups). Patients pay the full price for uninsured services, i.e., those not included in the benefits package.

## 3 Provider Payment Systems and Pricing

### Fee for Service (FFS) Payment

FFS is applied to outpatient care and the majority of inpatient care in acute care hospitals. There is little distinction between primary and specialist care, e.g., the majority of physician practitioners working in clinics are board-certified specialists, and there is a very limited role of gatekeeping and referrals. As a result, there is a uniform fee schedule for all types of outpatient care. HIRA classifies services and procedures for fee scheduling under FFS payment. On the other hand, providers tend to prefer classification into as large a number of services as possible. As of 2014, there were 7489 services and procedures, 18 262 materials, and 15 734 medicines in the benefits package reimbursed by FFS payment.

The fee schedule is based on a Resource-Based Relative Value (RBRV) system. Relative value considers physician workload (time and effort) and overhead cost plus the risk associated with malpractice, although its amount is very small compared with the workload and overhead components. One of the key weaknesses of RBRV is that medical care is valued based on the input of providers and its value to patients (e.g., contribution to health outcomes) is not considered in the pricing. In other services, for example, two services with identical input costs lead to the same price even when the contribution/benefit of the two services to patient outcomes are different.

The measurement of physician workload is delegated to provider associations, and the measurement of the overhead cost is the responsibility of HIRA. The relative value scale covers all medical care, and the determination of relative value includes a lengthy bargaining process among specialties as it tends to redistribute income among them. For example, the relative values for surgery, radiology services, and laboratory tests are still regarded as over-valued compared with consultation services in Korea. As a result, the relative value scale of individual services is revised only periodically through technical committees with the participation of medical

societies. The conversion factor (unit price per relative value, which is used to convert the relative value into a fee) is negotiated between NHIS and each provider association every year, as mentioned above.

The value of physician workload is controversial. There is a big concern about using physician income to determine the value of workload in the RBRV because physicians seem to earn excessive income as a result of an imperfect market for medical care, i.e., monopoly power of the medical profession. Physician workload is the major component of the cost of clinics, but overhead cost accounts for a larger share of hospital costs. Consequently, overhead cost measurement and allocation is a very important element of RBRVs for hospitals. The allocation of overhead cost to various departments and further to individual services is highly controversial and can even be arbitrary. Because the majority of hospitals are private, HIRA's research on fee scheduling (usually in collaboration with universities and research institutes) is based on only a small number of sample hospitals, which causes controversy over the representativeness of the cost data. HIRA provides some financial incentives for providers that join the sample, so the sample changes each year, and its composition is not representative. To get accurate data for costing is always a challenge for price setting in Korea.

The FFS system has led not only to an increase in volume and intensity of services, but also to the provision of services with a greater margin and even a distortion in the supply of medical specialties in the long run. For insured services, physicians are not allowed to charge more than the fee schedule set by NHI (i.e., no balance billing). However, physicians can provide both insured and uninsured services in the same episode of care/visit and charge high fees for uninsured services (so called, extra billing) to compensate for the low pay by the tight fee schedule for insured services.

### Case-based Payment

DRG-based payments has been applied for seven minor surgeries since July 2012, including lens procedures, appendectomies, caesarean sections, tonsil and adenoid procedures, inguinal and femoral hernia procedures, anal procedures, and uterine and adnexa procedures for non-malignancies. The DRG payment system accounts for only about 5% of inpatient care expenditure. HIRA has a department responsible for the classification, pricing, and evaluation associated with DRG-based payments.

To transition from FFS to DRG payment for inpatient care, the government launched a DRG pilot program in February 1997 for voluntarily-participating providers. The pilot program confirmed the positive impacts of the DRG payment on the behaviour of health care providers, such as a reduction in the length of stay, medical expense, average number of tests, and the use of antibiotics without a negative effect on quality of

care (Kwon, 2003c), but strong opposition by providers has been a stumbling block to extending the DRG system beyond the seven minor surgeries listed above.

A combination of per-diem, FFS, and DRG payment, which is known as a new case-based payment in Korea, but is very similar to the DPC (Diagnosis Procedure Combination) payment in Japan, is applied for all cases in NHIS Ilsan Hospital and all local government hospitals (Annear et al., 2018). In this payment, hospitals are still paid for more hospital days exceeding the pre-specified level, albeit at a reduced rate (80%), and reimbursed through FFS for those services whose fee is over about US\$ 100. Because it is not a pure prospective payment, the government expects that providers are more willing to accept this new type of case-based payment compared with the DRG-based payment. However, this new payment has a limited impact on the efficiency of provider behaviour. It has not reduced the length of stay or health expenditure, but rather increased the provision of services that are more expensive than the threshold level of US\$ 100 in participating hospitals (Kwon et al., 2013). Due to provider opposition to the DRG-payment system, the government seems committed to a mixed payment system similar to DPC and has encouraged (private) hospitals to join its pilot program by offering the carrot of high fees.

### Pay for Performance

HIRA has implemented pay for performance (P4P), or the Value Incentive Program, for selected areas, but mainly for tertiary care and general hospitals. It began with AMI (acute myocardial infarction) and caesarean sections. Performance measures used volume, process (use of timely interventions and medications), and outcomes (mortality within 30 days) for AMI, and the difference between actual and risk-adjusted rates in caesarean sections. The performance of 43 large general hospitals was first evaluated at the end of 2008, resulting in hospitals being divided into five groups (relative ranking). A financial incentive, which was 1% of total health insurance reimbursement, was paid to group 1 at the end of 2009. A financial disincentive, which was -1% of insurance reimbursement, was introduced in 2010 when scores lower than the (absolute) threshold (highest score of hospitals in group 5 in 2008) were recorded. It is reported that P4P resulted in 1.55% improvement in the quality measure for AMI between 2007 and 2008, a 0.56% point drop in the caesarean section rate, and an overall reduced variance in quality among providers, and significant improvement in the lowest performers (Cashin et al., 2014; OECD, 2010).

The target area and hospitals of the program have been extended, taking into account severity, feasibility, possible improvement, and social impact (HIRA, 2017). As of 2016, P4P covers acute stroke for tertiary care hospitals, surgical antibiotic prophylaxis for general hospitals, hemodialysis for hospitals, and drug prescription for clinics. The financial incentive

structure has also changed. Hospitals are evaluated and divided into five groups as before, but the incentive varies for different target areas. For example, for antibiotic use, the top 3% of hospitals get incentives and bottom 40% are subject to disincentives. For dialysis, top 10% get incentives and hospitals with a performance score under 65 receive disincentives.

The current P4P model focuses too much on clinical quality and should be extended to other important performance measures such as the length of stay, intensity of care, etc. How to use the P4P framework to improve the quality of primary care is a concern too. P4P in Korea currently targets areas where it is easier to measure performance, rather than areas that have the most serious quality issues. Furthermore, participants are mainly big hospitals, not because they have the most serious quality problem, but because their performance is easier to assess or they have less problems of reporting compared to small-scale providers. In the future, P4P based on hospitals should take into account the performance of individual physicians.

### **Per-diem Payment for Long-Term Care Hospitals**

NHI pays LTC hospitals based on per-diem payment, differentiated by seven categories: highest medical need, high medical need, medium medical need, behaviour problems, cognitive impairment, low medical need, and physical function problems. Those seven categories are further classified into subcategories based on ADL (activities of daily living), resulting in 15 different per-diem payment levels.

Per-diem payments are adjusted upward depending on the number of physicians, nurses, and other health personnel above minimum requirements (compared with acute care hospitals, LTC hospitals have lower minimum requirements in terms of medical personnel per patient). Per-diem payment accounts for about 10% of inpatient care expenditure. Per-diem payment does not include all costs, and FFS is applied to CT, MRI, special rehabilitation treatment, dialysis, prescription medicines for dementia, and costs paid for referred services.

### **Pay for Long-Term Care (by Long-Term Care Insurance)**

Korea introduced public insurance for LTC in 2008 (Kwon, 2009b). NHIS manages LTC insurance to collect the contribution, assess the eligibility of applicants, and reimburse providers. All insured with NHI are insured for LTC insurance, but in the case of those under 65 years, LTC insurance provides coverage only for age-related LTC needs. The LTC insurance contribution is collected from all enrollees of NHI. The contribution was set to 6.55% of NHI contributions until 2017, 7.38% in 2018, and 8.51% in 2019.

Benefit packages consist mainly of in-kind benefits, i.e., home care and institutional care; home-visit care/nursing, bathing,

and assistive devices such as wheelchairs, walkers, and bath chairs, etc., for home care services; and aged care facilities and congregate housing for institutional services (Jeon and Kwon, 2017). A ceiling of benefits per month for residential care exists depending on the five different functional levels based on the need assessment. The functional levels are determined when NHIS assesses the eligibility of the applicant for the benefits of LTC insurance.

In NHI, there is a division of labour between NHIS and HIRA, but NHIS performs all necessary functions, including claim review and assessment, in the case of LTC insurance (NHI pays LTC hospitals, while LTC insurance pays LTC facilities, which are not required to employ physicians.). The payment for residential care (at LTC facilities) is per-diem, the level of which depends on the five functional levels of the beneficiary.

The fee is determined by NHIS, with no negotiation of fee between NHIS and providers. NHIS plays the major role in the technical work on collecting and analysing provider activity and cost data. The absence of fee negotiations in LTC insurance, in contrast to NHI, shows the weaker professional/bargaining power of LTC providers compared with health care providers. Separate public insurance for health care and LTC, although managed by NHIS, still causes problems in the coordination of health care (e.g., those provided by LTC hospitals) and LTC (e.g., those provided by LTC facilities) (Kim, Jung and Kwon, 2015).

## 4 Institutions for Cost Estimation and Price Setting

Price reimbursement to providers by NHIS is supposed to cover both capital and operating costs, although providers argue that the price is below the cost of production such that they incur a loss. Physicians argue that they have incentives to provide uninsured services, for which they can charge market/customary prices, to compensate for losses from insured services. However, there is little scientific evidence to support the providers' argument regarding the fairness of NHIS payments. To the contrary, admission to medical schools has become more and more competitive, and the entry into the hospital market has increased with a comparatively very small number of exits, all of which indicate that the physician and hospital services markets are very lucrative.

Cost finding mainly uses bottom-up approaches with micro-costing. As mentioned earlier, the availability and reliability of cost data is a key challenge, because the majority of providers are private and reluctant to provide detailed information on their financial condition. Providers should submit to HIRA data on the provision of insured services in order to get reimbursement, but neither the government nor insurers have regulatory power to force providers to submit data on

uninsured services because those services are not subject to reimbursement by NHI.

Prices are different for different levels of providers. NHI has a uniform fee schedule, above which it adds 15% more for physician clinics, 20% for hospitals, 25% for general hospitals, and 30% for tertiary care hospitals. The price differential among different levels of providers is based on the idea of a higher fee for higher input cost, but there is no guarantee that a higher cost and price for a higher level of providers leads to higher value/quality for patients. There is little rationale on the amounts of top-up for providers, e.g., why tertiary care hospitals should be reimbursed 10% more than hospitals and 5% more than general hospitals. Further, the higher fee can provide perverse incentives for hospitals to increase their physical capacity to a higher level, resulting in the increasing dominance of big hospitals.

NHI pays a uniform fee to public and private hospitals. Because more than 90% of hospitals are private, the (uniform) fee is regarded as a fee for private providers. Almost all public hospitals have fiscal autonomy, and budget funding for them accounts for a much smaller share of reimbursement from NHI.

For LTC hospitals, NHI pays a 5% lower price for long-term stays over six months and 10% lower price for stays over one year to encourage hospitals not to keep patients longer. It seems that the discount for long-term stays in LTC hospitals is not very effective, because patients of long-term stay usually benefit from the ceiling on out-of-pocket payment under NHI (no out-of-pocket payment once payment exceeds a threshold). For physician clinics, there was a price discount of 10% when the number of patients exceeded 75 per day, but this discount was abolished in 2015.

## 5 Review and Monitoring of Provider Behaviour

Currently, Korea has a sufficient supply of providers who cannot survive without participating in NHI (in the system of universal population coverage). However, NHI needs to re-consider the mandatory participation of providers. The policy of mandatory participation and no selective contracting limits the single payer NHI to exercise its bargaining power in the selection of providers and maintaining quality of care. The compulsory participation of providers in NHI has been a politically sensitive and controversial issue. Progressive civic groups are worried that the abolition of the mandate on providers will lead high-quality hospitals to not join NHI. Under universal coverage of the whole population, even leading tertiary care hospitals do not have financial incentives to opt out of NHI.

In the absence of selective contracting, review and assessment by the purchaser are important for assuring the quality and

performance of providers. NHIS and HIRA have a strong information and communications technology (ICT) base for their purchasing function. HIRA, in particular, fully utilizes claims data covering all providers and the entire population. For reimbursement, health care providers should submit claims to HIRA; 99.9% of health care providers submit claims through an EDI (Electronic Data Exchange) system introduced in 1996 or Medical Claims Portal Service introduced in 2011. About 1.4 billion claims are filed every year, approximately 65% of which are reimbursed after the electronic review. Thanks to ICT, it takes a maximum 15 days from claim to payment to providers.

HIRA applies an electronic checkup for errors, omissions or miscalculations, and the electronic review is based on indicators such as disease type and medication. Some claims such as outliers are reviewed closely by (full-time) review personnel, with additional input by (part-time) experts or committee members. HIRA reviews claims based on detailed review guidelines. Under FFS payment, the review and assessment are complicated with ever increasing numbers of rules, standards, guidelines, etc. When the review is done, HIRA sends the results to NHIS, which then pays the providers. If providers do not agree with the review results, they can appeal to HIRA. If they cannot accept the results of the appeal, they can appeal to the MoHW. In 2017, HIRA performed on-site investigations of about 950 health care providers, which is about 1.3% of all providers (HIRA, 2018).

Thanks to universal population coverage, HIRA manages nationwide data, covering all providers and the whole population of Korea. Performance information is disclosed to the public through the HIRA website to help them make rational choices regarding providers. In the inpatient sector, quality is measured in terms of structure, process and outcome for selected areas, such as AMI, acute stroke, caesarean sections, and CABG (coronary artery bypass graft), colorectal cancer, breast cancer, lung cancer, surgical volume for five surgeries, use of prophylactic antibiotics for 11 surgeries, etc. For chronic conditions, hypertension, diabetes, hemodialysis, and asthma are assessed. Regarding outpatient medications, information is gathered for the prescription rates of antibiotics and injections, number of medicines per prescription, and expense of medicines prescribed.

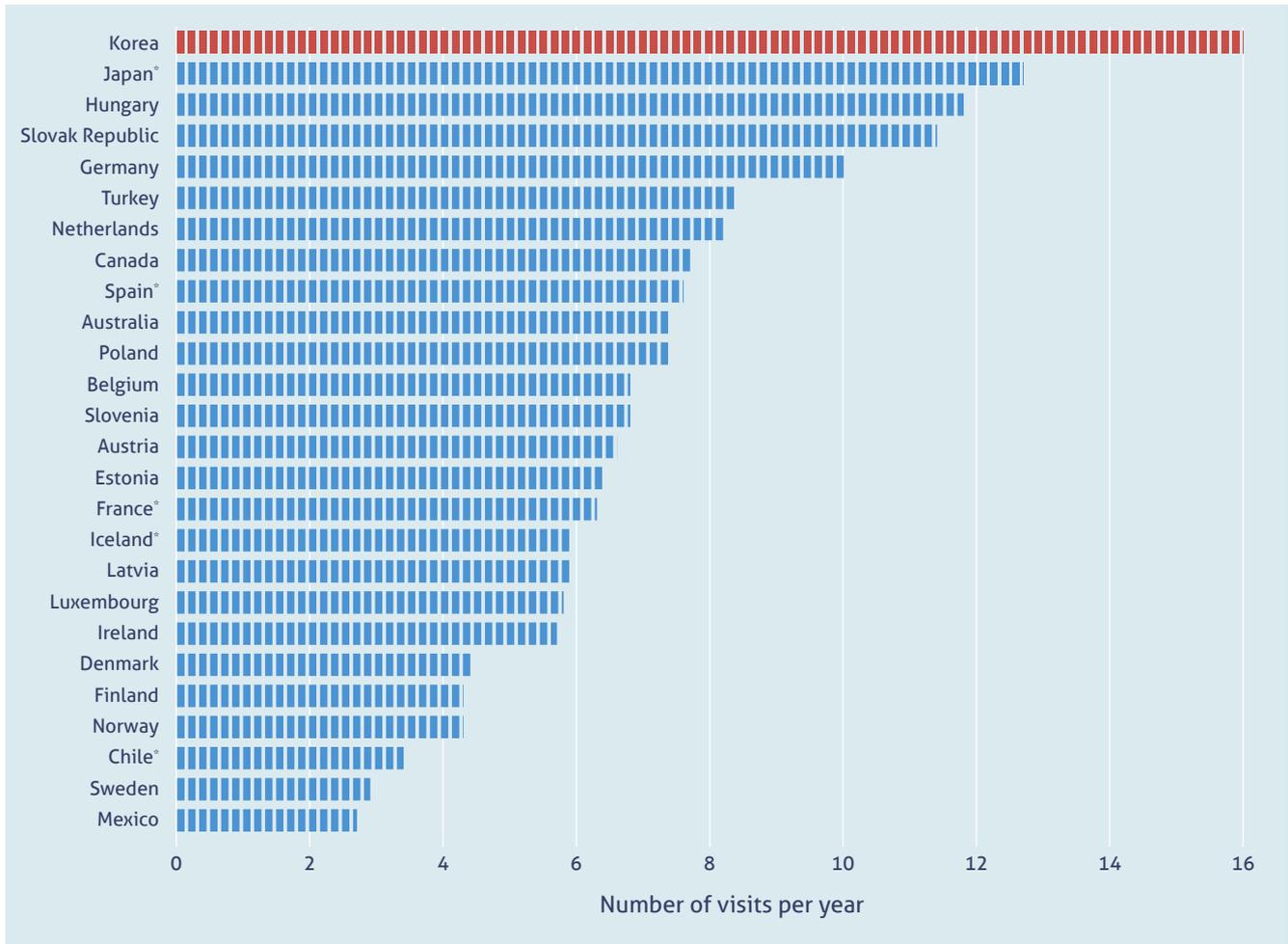
## 6

### Performance and Effects of Price Setting

The effect of price setting seems limited, as providers can increase volume under FFS. In health systems where FFS is the major type of provider payment system without a macro-level spending cap and where the majority of providers are private, cost containment is a huge challenge. The number of outpatient visits in Korea is the highest and the length of stay for inpatient care is the second highest (after Japan) among OECD countries

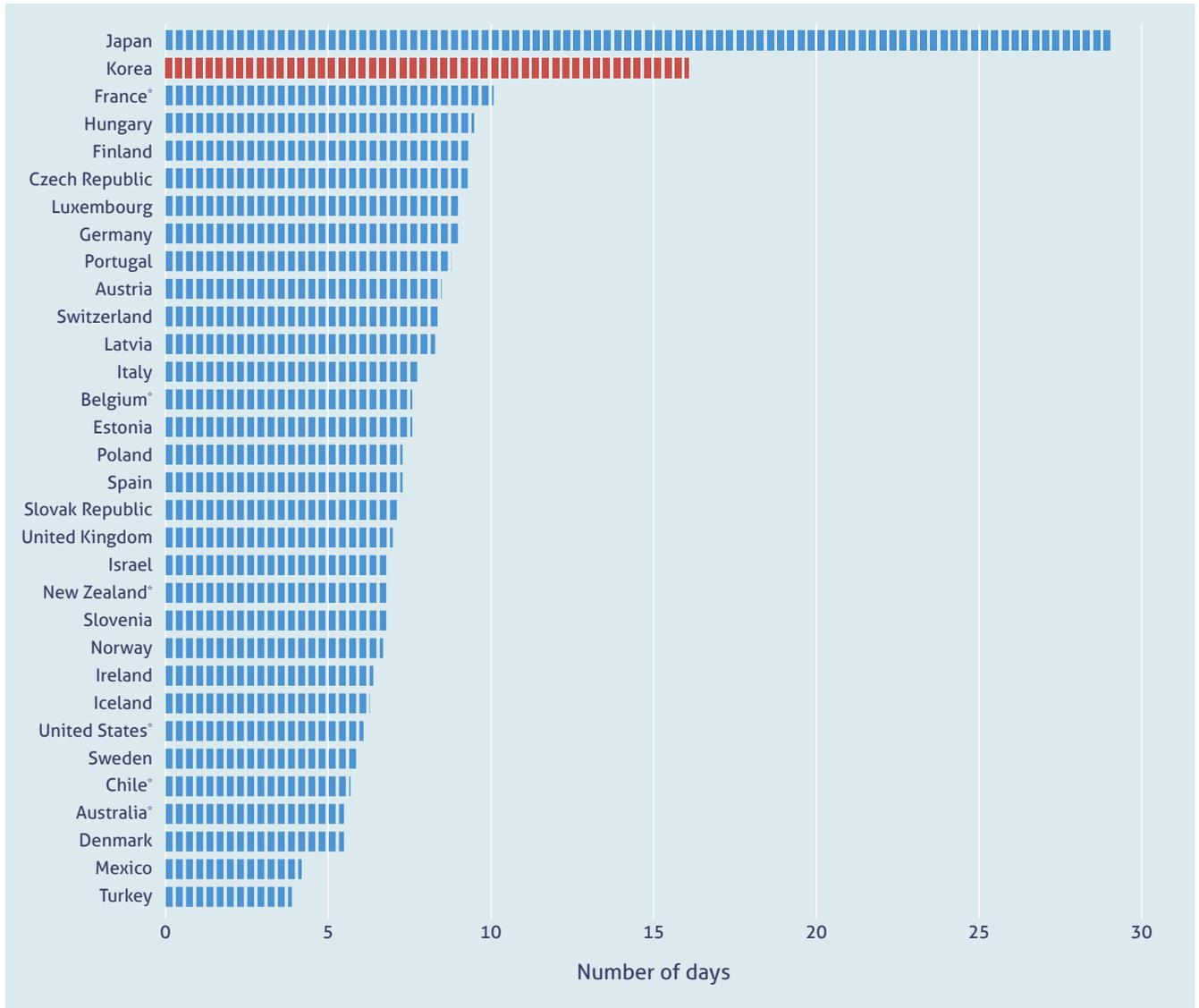
(Figure 1 and Figure 2). Korea spends almost 8% of GDP on health care, which is lower than other OECD countries (Figure 3). However, Korea has experienced the second highest (after Chile) growth rate of health expenditure in OECD countries (figure 4). The health insurance contribution has also increased rapidly.

**Figure 1**  
Average number of outpatient visits per patient per year (2015)



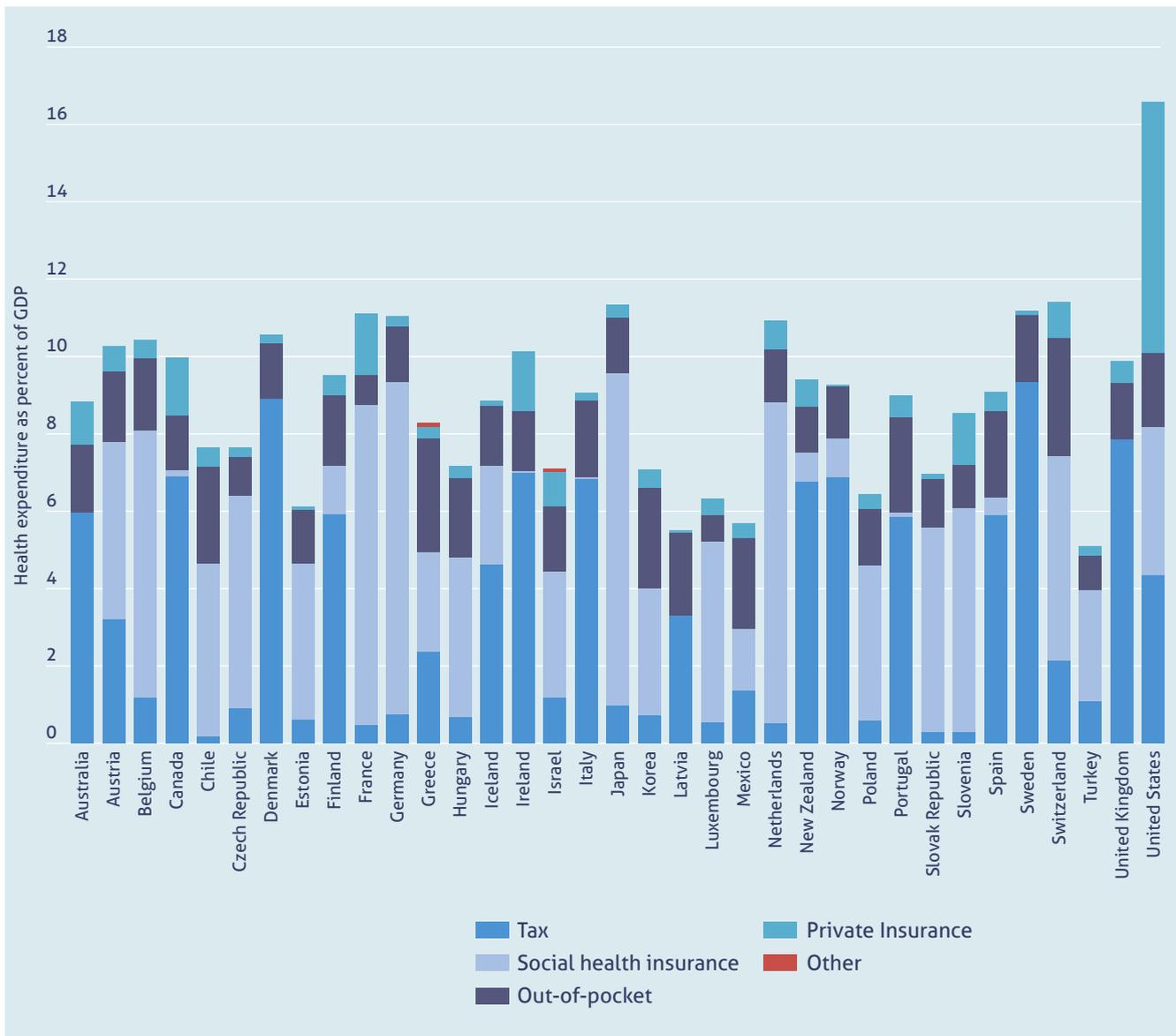
Source: OECD Health Statistics, 2016. Note: \*2014.

Figure 2  
Average length of stay per inpatient case (2015)



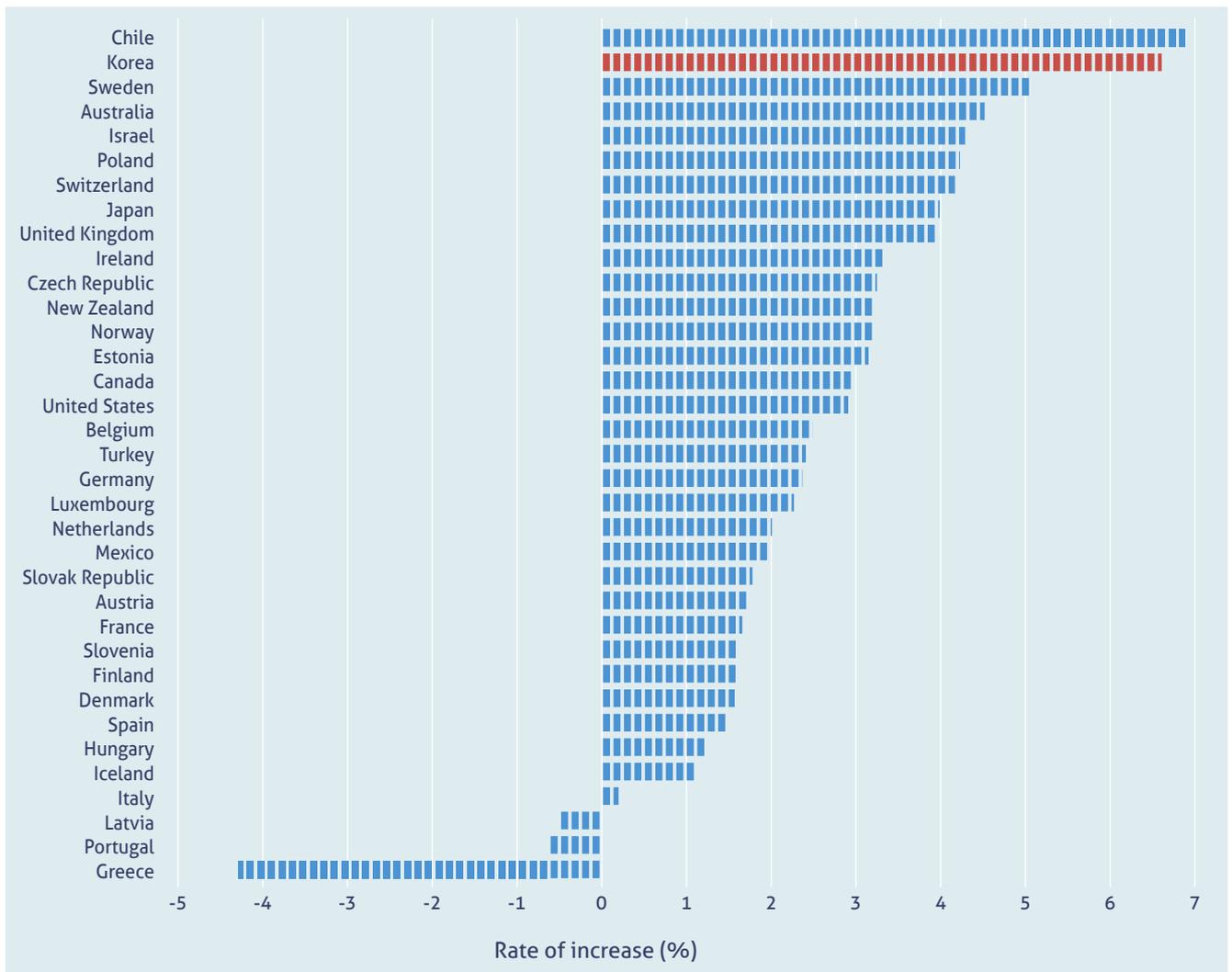
Source: OECD Health Statistics, 2016. Note: \*2014.

**Figure 3**  
Health expenditure as % of GDP



Source: OECD Health Statistics, 2016.

Figure 4  
Average annual rate of increase in health expenditure (2007-2016)



Source: OECD Health Statistics, 2016.

More than 70% of the Korean population is enrolled in (supplementary) private health insurance, which covers copayment for public health insurance (i.e., NHI) and payment for uninsured services. In other words, private health insurance does not set its own prices for medical care, but rather reimburses the OOP (out-of-pocket) payment to enrollees. (Some private insurance also provides cash benefits based on the number of inpatient days.) Jeon and Kwon (2013) show that private insurance has a negative spillover effect on public insurance, as those with private coverage increase the utilization and expenditure of (public) health insurance. The government currently has a regulation that private health insurance can cover up to 80% of health expenditures, which may have to be reduced to mitigate the moral hazard effect of private health insurance. Other than that regulation, there is little coordination between NHI and private health insurance. Providers prefer private health insurance, because the enrollees use more health care and the review is not as demanding as that by NHI.

The public share (health insurance and government-funded health programs) of total health expenditure in Korea, about 57%, is still lower than other OECD countries (OECD, 2018). OOP payments and private health insurance account for 36% (19% for NHI copayment and 17% for uninsured services) and 7% of total health expenditure, respectively (NHI, 2017). About one-third of payments for uninsured services is extra pay for private wards and specialists with extra years of experience. Therefore, about two-thirds of the 17%, in other words, about 10% of total health expenditures, are related to extra billing for uninsured medical services (e.g., high-tech services such as MRI, da Vinci robot surgery, etc.). Even though the government has expanded the benefit coverage of health insurance, providers paid by FFS have rapidly increased the use of new services and technologies, which are not yet included in the benefit package. As a result, financial protection and the public share of health expenditure have been stagnant.

In theory, fee schedules can have some effect on the mix of primary versus hospital-based care, but they are not very effective at reducing the rapid increase in hospital-based care. Even a very high coinsurance rate for outpatient care in hospitals, along with higher fees, has not curbed the rapid increase in the utilization of hospital care. Strengthening the role of primary care physicians as a gatekeeper with capitation has been discussed for a long time. There is little consensus on a primary physician and gatekeeping system even in the Korean Medical Association, however, because different specialties have different interests. Specialists other than internal medicine, pediatrics, etc., are against any reform of service delivery based on primary care physicians and gatekeeping. The lack of a continuum of care among different levels of providers results in cost increase and low quality of care and poses a serious challenge, especially in an era of rapid population aging.

## 7 Key Lessons

Many middle-income countries (MICs) are experiencing an increase in private providers. Because the majority of health providers are private in Korea, the Korean experience of pricing of health services can provide important policy lessons for MICs. From the very beginning of NHI, Korea implemented a strict price regulation with no balance billing, and providers were not allowed to opt out of NHI. Since the merger of all insurance funds to a single insurer system in 2000, a specialized agency was introduced, which has sophisticated systems of claim review and assessment based on state-of-the-art ICT. However, a private sector-oriented health system, where providers are paid by fee-for-service and price regulation does not take volume into consideration, seems vulnerable to cost inflation.

Although fees are tightly regulated, providers have strong incentives to increase the volume and intensity of care, since there is no macro-level spending cap in Korea. FFS has been a major factor contributing to the rapid increase in health expenditures in Korea, even when it has a sophisticated review and assessment system. Monitoring and evaluating the appropriateness of the quantity and type of services provided under FFS is very costly. It is very expensive to run a claim review and assessment system for thousands of services under FFS payment. The guideline book for claim review is already excessive, and there is never-ending controversy and tension between providers and NHIS over the adequacy of the fee level and review guidelines in Korea. The financial sustainability and efficiency of Korea's NHI will hinge on the capacity of NHI to effectively use its purchasing power over providers and implement payment systems such as capitation, DRG-based payment, and a spending cap.

The dominance of the private sector in health care delivery is a barrier to payment system reform. Health care providers are willing to (and they did in the case of pharmaceutical reform in 2000) go on a strike against government policy that potentially threatens their financial interests and clinical autonomy. About 90% of Korean hospitals are private, and many of them were grown from physician clinics by entrepreneurial physicians. As a result, the Korean Hospital Association and Korean Medical Association are very strong allies against the government and the insurer. For example, they strongly criticize and are against payment system reforms, tight reviews and assessments, etc. Private hospitals also use various incentive mechanisms for their physicians, e.g., based on the profits or revenue they generate, which can further aggravate the perverse incentives for over-provision under FFS. In addition to technical capacity in terms of costing, monitoring, and evaluation, the government needs both the political will and a sophisticated strategy to implement an efficient provider payment system and pricing of services in the health sector.

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## Case study

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# Thailand Universal Coverage Scheme

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## Abbreviations

Abbreviation	Term
A&E	Accidents and Emergencies
ART	Anti-retroviral therapy
CGD	Comptroller General's Department
CPI	Consumer Price Index
CSMBS	Civil Servant Medical Benefit Scheme
DHS	District Health System
DRG	Diagnosis-related group
EPI	Expanded Programme on Immunization
GDP	Gross Domestic Product
GNI	Gross National Income
HWS	Health Welfare Survey
HPV	Human Papillomavirus Vaccines
IHPP	International Health Policy Program
ILO	International Labour Organization
MOPH	Ministry of Public Health
NCDs	Non-communicable Diseases
NHSA	National Health Security Act
NHSO	National Health Security Office
NHSB	National Health Security Board
RW	Relative Weight
SHI	Social Health Insurance
SSO	Social Security Office
UCS	Universal Coverage Scheme
UHC	Universal Health Coverage

## Glossary of terms

**Age-adjusted capitation:** The capitation payment for outpatient services has been adjusted for age composition of the registered population in the catchment areas since 2005. The adjustment is in favour of the young and old members due to the higher use rate by these two groups. The age-specific expenditure (product of utilization rate and unit cost per visit) is the main parameter for adjustments.

**Blend model:** The blend model is the way public and private providers are paid by NHSO and uses multiple methods that have policy goals for improved access and cost containment in mind. The main modes of the blend model are age-adjusted capitation for outpatients, DRG and global budget for inpatient care, fee schedule for specific high cost interventions outside capitation and DRG systems, and disbursement of high cost medicines and certain medical devices by NHSO. These fee schedules also apply to the global budget.

**Catastrophic health expenditure:** Catastrophic health expenditure is defined as households spending on health more than 10% or 25% of total household consumption.

**Composite cost inflation:** Cost inflation rate based on cost structure and medical inflation.

**Comprehensive set of benefits package:** The benefits package, which covers outpatient, inpatient, high cost care, prevention and health promotion); all inclusive of medicines and medical products in the National List of Essential Medicines

**Consumer protection:** The mechanism in the National Health Security Office (NHSO) which provides various channels for the consumer – the beneficiaries and all stakeholders including service providers – to communicate their inquiries, needs, problems, and obstacles in universal coverage scheme (UCS) and service provisions. Its goal, regarding the National Health Security Act 2002, is to promote awareness and understanding about consumer rights, service entitlements and duties, ensure that beneficiaries can access quality health services as needed, protect beneficiary's rights, and monitor quality service and reduce conflicts between beneficiaries and providers. The consumer voices are heard through hotline 1330, a twenty-four-hour service, official letters, consumer services centre within hospitals, consumer coordinating centres in communities managed by civil society organizations, annual public hearings, and other social media channels.

**Contract model:** The agreement between NHSO, as the UCS management body, and public and private providers, who agree to provide health services for UCS beneficiaries based on contractual agreements, bind NHSO to provide funding support and providers to offer quality services as mutually agreed. This model is a part of the concept "purchaser – provider split" to prevent conflicts of interest and selection bias.

**Contractor primary health care networks:** The provider networks, which agree to provide health services for UCS beneficiaries have to comply with the contract signed. For public providers, all public facilities are required to be providers under the UCS for primary healthcare and outpatient services. A District Health System (DHS), which consists of a district hospital and primary healthcare provider network within the district, is the main contractor. For private providers, only accredited private facilities can be enrolled into the scheme. Both public and private providers act as a contracting unit for primary healthcare (CUP) and will be paid in advance with an age-adjusted capitation payment for outpatients and prevention and health promotion services according to the population in the catchment area.

**Costing method:** There are many methods for calculating the unit cost of outpatient and inpatient services. This study refers to two methods. One is a conventional costing method, which applies a cost centre approach, where a simultaneous equation is applied to allocate indirect costs from transient cost centres to absorbing cost centres in order to estimate the unit cost for outpatient and inpatient services. Another is the quick method, which can be conducted much easier than conventional costing methods, however, its results are less accurate.

**Civil Servant Medical Benefit Scheme (CSMBS):** Government employees, parents, spouses and dependents below 20 years old (6% of the total Thai population) are automatically covered under CSMBS by a tax-financed non-contributory CSMBS as a fringe benefit. This scheme is managed by the Comptroller General Department of the Ministry of Finance.

**Diagnosis related groups (DRG) under global budget:** One kind of payment method used for inpatient budgets. The total of the relative weights is used to calculate the annual global budget. The payment per DRG weight varies and depends on the total number of adjusted relative weights in a year. The financial risk is transferred from NHSO to healthcare providers providing inpatient services.

**Equalization of health workforce density:** Measured by the personnel per population ratio across provinces to stabilize health personnel numbers in high density provinces and deploy more health personnel to lower density provinces.

**Diagnosis related group creep:** Unjustified changes in hospital inpatient data records with an intention to increase case-mix indices or relative weight in order to get a higher amount of reimbursement.

**Full cost subsidy:** The money paid to health care providers for the full cost of production including salary, material and capital depreciation. Balance billing is not allowed.

**Means testing survey:** The mechanism to review the economic status of the poor in order to issue a healthcare entitlement of free health services to low-income households.

**Per capita budget:** Health expenditure calculated on a per capita basis. It is estimated based on the average utilization rate of outpatients (visit per person per year) and inpatients (admission per person per year) multiplied with the unit cost per outpatient visit and unit cost per admission, respectively.

**Point systems with global budget:** This method is one type of fee schedule under a global budget.

**Project-based payment:** One kind of payment method used in the promotion and prevention budget. Examples include payments for prevention and condom distribution. Usually, this payment is managed centrally by NHSO.

**Service utilization rate:** The use rate from the household survey in the Health and Welfare Survey conducted by the National Statistical Office or a projection of the use rate to that budget year if no such survey in that year was conducted.

**Three public health insurance schemes:** In Thailand, the three public health insurance schemes are CSMBS, SHI, and UCS.

**Typical provider network:** In rural areas, a district health system with a catchment population of 50 thousand people in a district served by a district hospital (30-120 beds) and 10-15 health centres. In urban areas with no district hospital in the municipality, the Ministry of Public Health provincial or regional hospitals and health centres constitute the provider network for UCS outpatient care. Some private hospitals and their affiliated clinics also make up a provider network.

**Universal Coverage Scheme (UCS):** Those who are not covered by CSMBS or SHI, which is around 75% of the total population, are covered by a tax-financed UCS, which provides citizens with an entitlement to health as a health safety net. UCS is managed by NHSO.

Thailand achieved universal health coverage in 2002, when the whole population was covered by one of the three public health insurance schemes: the Civil Servant Medical Benefit Scheme (CSMBS), the Social Health Insurance (SHI) and the Universal Coverage Scheme (UCS). While CSMBS and SHI are employment-related coverage, UCS is an entitlement to health care for Thai citizens. This means that unemployed SHI members or dependents of CSMBS older than 20 years that had lost their coverage are automatically covered by UCS. Evidence has shown favourable outcomes in term of improved access and financial risk protection with minimum prevalence of catastrophic health spending and impoverishment. This study reviews and assesses the budgeting and purchasing of services by the National Health Security Office (NHSO), which manages the publicly financed, non-contributory UCS.

## Abstract

The per capita UCS budget is estimated based on the unit cost of a comprehensive benefits package (outpatient, inpatient, high cost care, prevention and health promotion) and the respective utilization rates. The annual UCS budget is a full cost subsidy, as the unit cost covers labour, material and capital depreciation cost, and no copayment. Balance billing is not allowed and strictly monitored and sanctioned. The full cost subsidy has justified the termination of supply-side financing since the inception of UCS. Annual budget allocations to government health facilities are curtailed except for major capital outlays. NHSO and partner institutes have developed skills in conducting conventional costing exercises and quick methods for annual adjustments of unit costs and strengthening data on utilization rates.

Because the UCS budget is finite for health services and is expected to be fully consumed by its 48.787 million members, NHSO is not allowed to overspend or keep reserves. Given this situation, NHSO has to apply closed-end provider payment. Age-adjusted capitation for outpatients is contracted to a primary healthcare provider network that consists mostly of Ministry of Public Health district health systems. Diagnosis related groups (DRG) under global budget are applied to purchase inpatient care, with a single rate of reimbursement per adjusted relative weight. For high cost services such as renal replacement therapy or antiretroviral treatment, NHSO pays both cash and non-cash through the distribution of dialysis and medicines. NHSO also exerts monopsonistic purchasing power to negotiate the best possible price given the assured quality of high-cost medicines and medical devices even from a monopoly or oligopoly product. Cost savings from these negotiations are additional resources to enable higher coverage to UCS members.

The incoherence of policy and practice on price setting, purchasing and regulation across the three public health insurance schemes is the major challenge. This requires political leadership to resolve inefficiencies in CSMBS, as it applies fee-for-service for outpatient services and 27 bands of cost weights for DRG payment without a global budget. The cost weights are in favour of super-tertiary hospitals. The expenditure per capita for CSMBS is four times higher than that of UCS.

## Background

Thailand achieved Universal Health Coverage (UHC) in 2002, when the entire 65 million population was covered by one of the three public health insurance schemes. Government employees and dependents (6% of the total population) are covered by a tax-financed non-contributory Civil Servant Medical Benefit Scheme (CSMBS) as a fringe benefit managed by the Comptroller General, Department of the Ministry of Finance. Private sector employees (excluding dependents) (19% of the total population) are covered by a payroll-tax tripartite contributory Social Health Insurance (SHI) managed by the Social Security Office. The remaining 75% of the population are covered by a tax-financed Universal Coverage Scheme (UCS) managed by the National Health Security Office (NHSO) (IMF, 2000).

While insurance coverage by SHI links with employment status, UCS provides citizens with the entitlement to health. This means that, when SHI members retire or become unemployed and are no longer covered by SHI, these populations will be automatically transferred to UCS. Conversely, when UCS members are employed, they will be covered by SHI. For CSMBS, when the child dependents of government officials turn 20 years old, they are automatically transferred to UCS. This seamless transition across insurance schemes ensures health insurance entitlement to the whole Thai population.

## Objective and scope

This study identifies the policy objectives of setting the payment rate for different benefits packages. It describes and comments on the procedural and technical dimensions of rate setting and purchasing services from healthcare providers, and whether these purchasing systems have achieved their stated policy objectives.

The scope of this study is within UCS managed by the NHSO and covers the process of setting the payment rate and regulating purchasing of a) outpatient services, b) hospital admissions, c) certain high cost interventions, which are paid outside of outpatient and inpatient services, and d) prevention and health promotion services.

# 1 Budget proposal for USC

## Source of financing for UCS

UCS was a political manifesto during the general election in January 2001. To deliver the political promise of achieving UCS within a year after the election, it was not possible to collect premiums from UCS members, who were mostly engaged in the informal sector, due to their erratic and seasonal variations of income. Thus, a contributory insurance scheme would not have achieved UHC in a short timeframe to ensure continued coverage. A political decision was made to finance UCS with general tax revenues through annual budget negotiations and allocation through the Budget Bill, given the fiscal capacities during 2001-2002 (Mills et al., 2000); the economy had not yet fully recovered from the 1997 Asian Economic Crisis, which severely affected Thailand, and the country was still on an International Monetary Fund (IMF) package providing US\$17.2 billion bilateral and multilateral assistance to Thailand (Tangcharoensathien, 2012). Overall, there was a need to provide a health safety net for the population.

## Policy objectives: use of public finance and copayment policy

Historically, CSMBS applied fee-for-service payments for a) outpatient services by reimbursing outpatients' bills directly to patients, and b) inpatient services by reimbursing to hospitals. Evidence shows that fee-for-service is the main cause of the high level of expenditures per visit shouldered by CSMBS due to an excessive use of branded medicines, which were reimbursed at full cost plus 20-25% mark up (World Bank Group, 2019). CSMBS, a non-contributory scheme with no copayment, does not send any signal to patients to use health resources efficiently. Hospitals have incentives to make higher margins from using branded medicines. Although CSMBS has applied Diagnosis Related Groups (DRG) without a global budget ceiling to pay inpatient services since 2008, it continues to pay outpatients based on fee-for-service. This resulted in a per capita expenditure for CSMBS that was four times higher than that of UCS. This higher expenditure is driven by the excessive use of branded medicines by both outpatients and inpatients, higher intensity of diagnosis, and higher payment for inpatient services under the DRG systems, which use 27 different cost weights in favour of teaching and super-tertiary hospitals. Further investigations on these variations are required.

In contrast, SHI since its inception in 1991 has adopted a capitation contract model with public and private competitive contractor hospitals (those having >100 beds and other infrastructure and staff requirements). SHI members are mandated to choose and register with their preferred contractor hospitals annually. SHI members can re-register with

a new contractor hospital once a year (by March of each year) to suit the changes of their workplace or residence. The capitation, inclusive of outpatients and inpatients for a year, has proven more effective in cost containment than the CSMBS fee-for-service model, with a decent quality of care (World Bank Group, 2019). Capitation sends a positive signal to contractor hospitals to use more generic medicines.

A simple model of SHI capitation since 1991 was developed based on a price and quantity approach. As there was no utilization rate data, we assumed a high estimate of three outpatient visits per capita per year and 0.1 admission per capita per year, while the unit costs of B 150 per outpatient visit and B 3000 per admission came from a conventional costing method in a number of hospitals. A conventional costing method applying a cost centre approach is time and resource consuming. In this case, there was no study in private hospitals, so that the average unit costs of government provincial hospitals were used. We used provincial hospitals of more than 100 beds as SHI contracts hospitals.

The SHI capitation was estimated by the following simple formula: (3 outpatient visits per SHI member per year x B 150) + (0.1 admissions per SHI member per year x B 3000) = B 750 per SHI member per year. A policy decision by the Social Security Board approved to pay a per capita rate of B 700 to its contractor hospitals for each SHI member registered with them (World Bank Group, 2019). The capitation is adjusted annually based on the utilization rate and unit cost of service from changes in medical technologies or the medical price index. However, there has been no capitation adjustment in SHI since the use rate was lower than the formula in the few initial years. Members of SHI are healthy workers in the private sector under 60 years old (retirement age), and there are no disabled persons in the SHI member pool. The Social Security Office monitors the use rate both for outpatients and inpatients for a potential under-provision of services, although they are not as competent as the NHSO in terms of auditing and quality assurance. This capitation payment covers outpatient and inpatient services. The exceptions are maternity care and child delivery, which are paid as a lump sum per delivery, and dental care, which is paid as a lump sum per visit and not more than two visits per year. International Labour Organization (ILO) experts advised the separation of payment for delivery and dental care from capitation of SHI. Thai reformists when introducing UCS did not follow this advice due to the administrative complexities of keeping individual records. The International Health Policy Program (IHPP) was not successful at addressing SHI separation for the payment of dental care and maternity.

Given the negative lessons from CSMBS on cost escalation and, vice versa, positive lessons from SHI on cost containment and greater efficiency, reformists in the Ministry of Public Health (MOPH) who designed the UCS strategic purchasing had proposed a contract model for UCS since its 2001 inception,

with a more advanced step beyond the SHI inclusive of capitation. This means that UCS applies capitation for outpatients and later adjusts for age composition through DRG under a national global budget for the payment of inpatient care. The two largest budget ceilings are for outpatients (based on unit cost and utilization rate) and for inpatients (based on unit cost and utilization rate), with a few small pots such as high cost care for anti-retroviral treatment (ART) and renal replacement therapy. Also, the economic context in 2001 (not fully recovered from the 1997 Asian financial crisis) was not favourable to the application of fee-for-service. The Gross National Income (GNI) per capita was US\$ 1990 (International Labour Organization, 2002), and government revenue was 16.2% of GDP (Tangcharoensathien, 2001).

The explicit policy objectives of UCS are to a) gain efficiency and cost containment through closed end payment and primary care fund holder contractual arrangements and exertion of the NHSO's monopsonistic purchasing power, and b) improve financial risk protection through expansion of the benefits package and ensuring access. To achieve these policy objectives, the NHSO applies different strategic purchasing such as benefits package development, which deepens the financial protection, and devises a blend of provider payment methods to boost service provisions and improve access.

When the budget estimate for UCS is a full cost subsidy to all providers for the agreed benefits packages, there is no need for copayment by users. Hence, balance billing is forbidden and made known to both providers and patients. In the case of balance billing, the hospitals are legally enforced to return the amount to patients. Although a copayment of B 30 (approximately US\$ 1) per outpatient visit or per admission with an exemption to the poor was introduced in 2002, it was terminated in 2006 due to political reasons and also to protect the borderline poor from copayment and facilitate improved access. The revenue from copayment was small, around 1-2% of the total UCS annual budget, while the administrative cost of copayment collection and the exemption mechanism of the poor (which must be reviewed every three years through means testing surveys) was much larger. Unlike fee-for-service, the closed end provider payment does not send any signal towards supplier-induced demand; therefore, copayments to discourage unnecessary service utilization by patients are not required, since abuse by the providers is not expected. The monitoring of balanced billing was managed through a consumer voice hotline, 1330, which is a twenty-four-hour service provided by the NHSO and effective sanction for demanding copayment. The NHSO manages successfully so that the amount of balance billing or copayment is returned to the patients. Full payment by offering services outside the benefits package was uncommon, as UCS benefits packages had covered almost all cost-effective high cost interventions through regular updating of the benefits package.

Since the full cost (including salary, material and capital depreciation) of service is compensated by the NHSO to government health facilities, the previous annual budget allocation to pay for labour and operating costs was terminated since the UCS inception in 2002. Depreciation costs are small for the purpose of replacing small equipment, while budgets for new capital such as infrastructure and purchases of major medical devices are allocated by the MOPH through annual budgeting processes. This ensures no duplication of parallel payments to these government facilities and supports a clear accountability framework between health care providers and the three insurance funds. A full cost subsidy is also provided to private health facilities on an equal footing with government facilities. This supports a smooth UCS operation, as private facilities are equally treated. The quality and standards of these private facilities are assessed by the NHSO before the contractual agreement.

Since the salary of government officials are protected by the Salary Act, which is managed by their respective Departments and Ministries, the NHSO has to defer the salary portion to MOPH to manage salary payment. In other words, the NHSO only manages the non-salary component of the UCS budget. Thus, an inequity in the total budget allocation across provinces emerges in favour of historically high-density locations of health personnel (which consumes higher staff cost but an equal portion of the non-staff budget compared with other provinces). The NHSO cannot hire, fire, or re-allocate health personnel. IHPP proposed an equalization of the health workforce density (measured by personnel per population ratio) across provinces through stabilizing high-density regions and deploying more health personnel in lower density provinces. This has been done with stable but slow progress the last 15 years.

### **Closed end annual budget: cost containment strategies**

When closed-end provider payment is applied, the closed-end annual budget request is followed accordingly using the budget per capita of UCS members. The per capita budget was estimated based on the average per capita utilization outpatient rate (visits per capita per year) and inpatient rate (admissions per capita per year) multiplied by the unit cost per visit and the unit cost per admission. The multiplication of the per capita budget for outpatient and inpatient services by the total number of UCS beneficiaries (48.787 million) is the total resource required. The total has to be spent completely by providers, as the total represents the real costs of services. Therefore, no unspent funds for the NHSO carry over to the next fiscal year. Changes in the burden of disease are reflected by the utilization rate. Changes in medical technology and treatment profiles are reflected in the unit cost. Both parameters, either actual figures or projected figures when actual data are not available, are used in the formulae for the annual budget estimate.

In 2001, the reformists recognized that CSMBS and SHI deliberately did not provide health promotion or prevention in their benefits packages. The NHSO was then mandated to offer and purchase these services for the whole Thai population. Additional benefits beyond outpatient and inpatient services, such as health promotion and disease prevention, and high cost services outside outpatient and inpatient payment, also applied a closed-end budgeting system.

Closed-end budgeting is powerful in cost containment. The downside of under-service provisions is closely monitored by the NHSO through audits and a 24-hour call line for consumer protection and conflict resolution between providers and patients. The context, in which the majority of provider networks for UCS is non-profit, has facilitated the smooth implementation of UCS.

### **Closed end annual budget: cost elimination methodologies**

#### **Service utilization rate**

In the initial years (2001 to 2005), preferred service utilization rates were obtained from household level surveys conducted by the Health and Welfare Survey (HWS), National Statistical Office, or projections for the budget year when no survey data were available. The 2001 capitation budget was B 1202 (US\$ 37.6 at an exchange rate of B 32) and calculated by using the use rate from the 1996 HWS, which was the only available data in 2001, and the unit cost in 1999. The subsequent HWS data was obtained in 2001, 2003-2007 and thereafter a biennial survey in 2009, 2011, 2013, 2015 and 2017.

Subsequently, outpatient and inpatient use rates referred to the routine administrative dataset developed by the NHSO when the dataset becomes mature and reliable. See Annex 1 for technical details and Annex 2 for a graphical explanation on how the first per capita budget (B 1202) was estimated.

The methods of estimating the capitation budget were successfully peer reviewed by actuaries from the International Labour Organization (Tangcharoensathien 2003) and published in an international peer-reviewed journal (Simborg, 1981) and Thai journal (NHSO Archives, 2018; St-Hilaire and Crépeau, 2000; Sriratanaban and Ngamkiatphaisan, 2003).

#### **Unit cost**

The unit cost for outpatient and inpatient services is a full cost estimation based on a conventional costing method (cost centre approach and simultaneous equation of indirect cost allocation), which includes staff costs, all operating costs such as medicines and diagnostics, and capital depreciation cost (Ngamkiatphaisan, 2005). The unit cost for the estimate of B 1202 per capita budget was based on the cost weight generated from conventional costs in less than 20 public hospitals to allow for a quick costing method.

Because establishing and maintaining conventional costing is not an easy undertaking, data from these 20 public hospitals are the only available dataset. The hospitals are not representative; three-quarters are district hospitals and the remaining are provincial hospitals. None are private hospitals. There is also some costing information from 50 health centres for the estimate of per capita budget.

The cost weight, a ratio between unit cost per admission and unit cost per visit from conventional costing, is applied to estimate the unit cost using the "Quick Costing Method" principle, as expressed in the following formula:

$$\text{unit cost per outpatient visit} = \frac{\text{total annual expenditure}}{\text{total outpatient visits} + (\text{cost weight} \times \text{total admissions})}$$

$$\text{unit cost per admission} = \text{cost weight} \times \text{unit cost per outpatient visit}$$

The cost weight is 16 for district hospitals and 19 for provincial and regional hospitals. There are no cost data from private hospitals; thus, the cost weight of district hospitals is applied, because a majority of private hospitals are smaller than 100 beds and have similar service profiles as district hospitals. This assumption was approved by the sub-committee, where a private hospital association representative is one of the committee members. MOPH maintains an annual report on total annual expenditure by items and throughputs by all 900 MOPH hospitals. This forms a basis for regular updates of the unit cost of outpatients and inpatients for the annual budget request. These hospital financial reports are reliable, as they are submitted to the Auditor General for review. The cost weights (16 for district hospitals and 19 for provincial hospital) are subject to adjustments from time to time when there are updated unit costs from conventional costing studies. The cost weights at district and provincial/regional hospitals are driven by real data. MOPH maintains annual financial and throughput reports by all hospitals (district, provincial, regional); these reports are inputs for calculating cost weights jointly by the NHSO and MOPH. The current figures of 16 and 19 are national averages from around 800 districts and around 100 provincial/regional hospitals countrywide. Later, the NHSO estimated the unit cost of inpatients by cost per adjusted relative weight, which involved dividing the annual operating expenditure for inpatients from the financial reports of MOPH hospitals by the sum of the adjusted relative weight.

When an average is used, providers having unit costs above the average will face financial difficulty, and those who have their unit costs below average will have financial gain. Special additional adjustments are made for districts having higher unit costs due to sparse population, such as mountainous or island districts. This ensures adequate funding for operation. Contractor provider networks keep the surplus from outpatient capitation payments for use according to their respective rules and regulations. All MOPH facilities transfer the NHSO budget

to a “hospital revenue” account, and the receipt and use of “hospital revenue” are governed by MOPH financial regulations.

### **Cost of prevention and health promotion**

In 2001, there was no evidence for the calculation of the health promotion and prevention components in the initial per capita budget of B 1202. Researchers assumed that 20% of the cost of outpatient and inpatient care was used for health promotion and prevention.

A few years later, there were studies on the cost of health promotion and prevention benefits packages using activity-based costing (Simborg, 1981; Seiber, 2007). Estimating the cost of health promotion and prevention services is complicated, with different interventions for different populations with different use rates, such as immunization for children under five years old for 11 antigens according to the national Expanded Programme on Immunization (EPI) guidelines [BCG, Hepatitis B, DTP, OPV, MMR, JE and HPV], family planning for women and men in reproductive age groups, and cervical cancer screening.

Similarly, the cost of interventions outside capitation such as ART (introduced to the benefits package in 2006), renal replacement therapy (introduced in 2009), secondary prevention for diabetes mellitus and hypertension (pilot in 2009 and nation-wide in 2010), and medicines for psychotic patients (pilot in 2010, nationwide in 2011-2012, and transformed to community psychiatry in 2016) were estimated based on the incidence and prevalence of specific conditions, service provisions and unit costs of these services according to protocol.

### **Institutional capacities**

The capitation rate in 2002 was estimated by a small technical team using use rates in 1996 and unit costs in 1999, with several assumptions where data were not available. Subsequently the capitation budgets for 2003-2005 were estimated by a technical team under the sub-committee on UCS financing chaired by a professor in economics. There were more up-to-date use rates when the Health and Welfare Survey conducted by National Statistical Office on an annual basis between 2003 and 2007. A projection of unit costs using composite cost inflation (based on cost structure and medical inflation) was also applied when there was no primary data for unit costs from either the conventional costing method or a quick costing method (Figure 1). The capitation budgets of 2006 onward have been conducted by an NHSO technical team, who initiated more complex formulae using more details.

NHSO has developed its internal capacities to estimate capitation rate. In addition, the NHSO also worked with partners such as IHPP and MOPH to update unit costs of outpatient and inpatient services on an annual basis using a quick costing method and to update the cost weights from a conventional costing method conducted in certain hospitals.

**Figure 1**  
Composite cost inflation per annum

	Assumption	Cost structure % total cost	% growth of unit cost for outpatient and inpatient
Salary & wages	Public personal salary growth	30.10%	6.00%
Temporary wages for contract workers	Public personal salary growth	6.10%	6.00%
Other staff compensation	No growth	13.90%	0.00%
Drug & medical supply	Average 5 years of medical Consumer Prices Index (CPI) growth rate	31.40%	0.50%
Public utility	Average 5 years of electricity & water supply CPI	2.30%	0.00%
Other material cost	Average 5 years of CPI (exclude medical & elec. CPI)	16.20%	6.40%
Composite growth rate per annum			3.36%

Source: NHSO fund management manual, 2016.

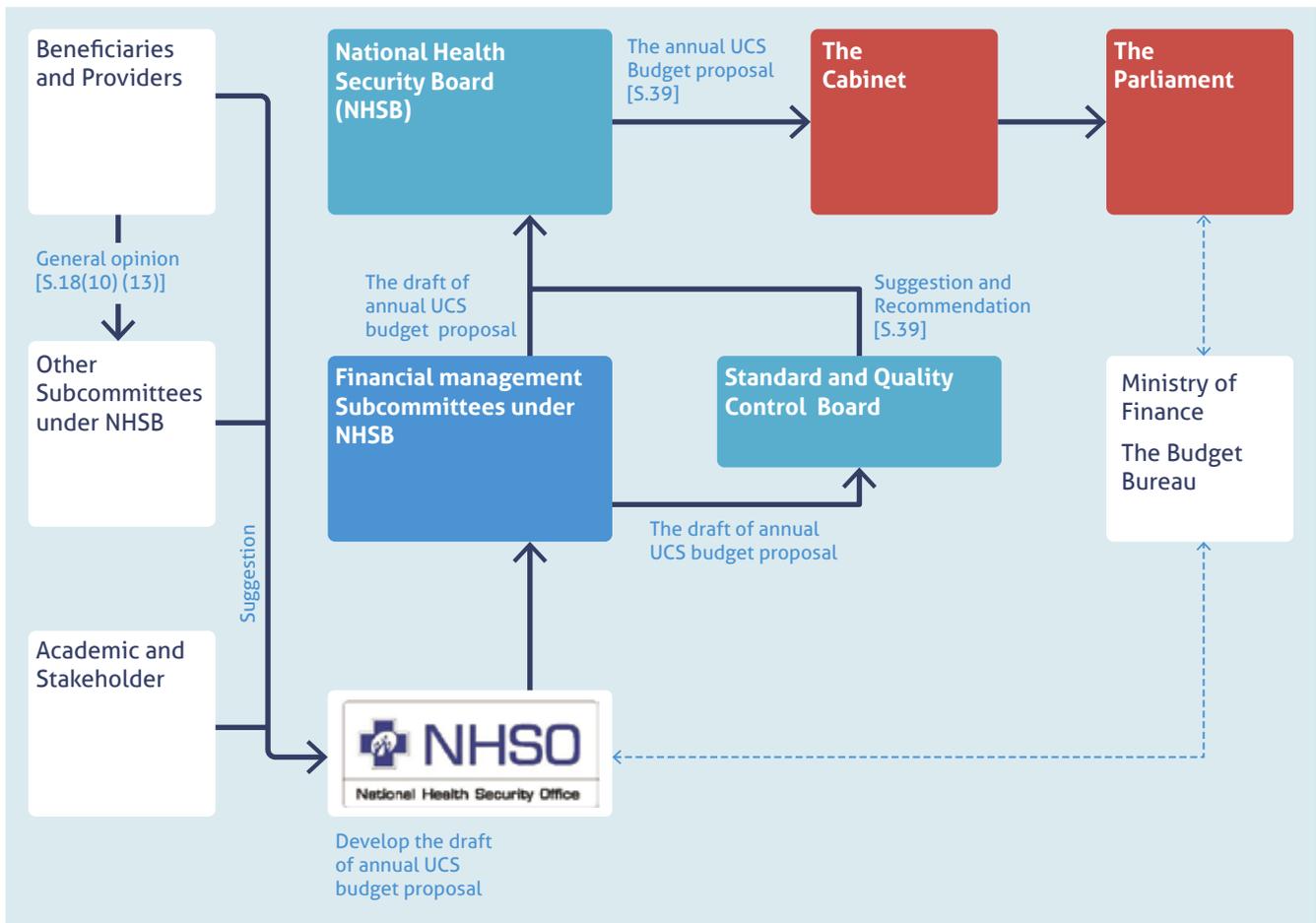
### Stakeholder Involvements

The annual budgetary process of UCS involves extensive participation by stakeholders. The technical working group of the sub-committee on the Financing of National Health Security Board (NHSB) analyzes the unit cost, utilization rate, high cost interventions and all other benefits packages as approved by the NHSB, and also proposes a capitation budget. The budget is scrutinized and reviewed by all relevant actors including the Ministry of Finance, Bureau of Budget, technical experts, and representatives from health care providers. This process is transparent and involves evidence-based negotiation processes. The final proposal is then approved by the NHSB, as mandated by National Health Security Act (NHSA), Article 18(3), before submission to the Cabinet for approval of budget size and followed by the annual budget bill processes. Although the Cabinet has the power to comment and adjust the budget size in consultation with the Ministry of Finance, Bureau of Budget, and National Economic and Social Development Board, representatives from these agencies are members of the technical working group and review the budget size with the NHSO.

Because UCS is one of the national priorities set by the government and UCS members are the main stakeholders, with reference to NHTA, Article 29, "The Board shall submit a request for the budget of annual expenditure to the Cabinet". The NHTB submits the per capita budget for Cabinet approval, after which the Cabinet takes into account the proposed figures and the annual fiscal policies, economic growth and expected government revenue and tax.

The work of the NHTSO including budgeting requires comments through an annual public hearing from beneficiaries and health care providers as mandated by NHTA, Articles 46 and 18(13) (Figure 2).

**Figure 2**  
Stakeholder participation in the UCS budget



Source: Authors' synthesis from National Health Security Act B.E. 2545 (A.D. 2002)

## 2

# Provider payment and purchasing of services

### Overview of purchasing services

In 2016, the per capita budget approved by the Budget Bill was B 3,344.17. This consisted of the core benefits package of B 3,028.94 per capita (Item A in Figure 3) and specific interventions of B 315.23 per capita (Item B in Figure 3).

The product of the per capita budget (B 3,344.17) and UCS members (48.787 million) was approved as the total budget (B 163,152 million). The budget was earmarked to different sub-items A and B with specific provider payment methods as described in the last column of Figure 3; all sub-items adhered to the principle of a closed-end budget, which is fixed in a given year. The blended payment methods are designed to improve access and support financial risk protection, as providers will not offer high cost services such as dialysis or ART under capitation payment. Unlike outpatient and inpatient services, special interventions are not homogeneously required by the whole population. Therefore, there is a need for specific payment outside capitation.

In Figure 3, the cost of outpatient services (item A1) are paid to contractor networks based on age-adjusted capitation; inpatient services (item A2) apply DRG under a global budget; and prevention and health promotion services (Item A4, 11.9% of total budget allocation) apply a blend of capitation, project base and also a provision of vaccines due to their diverse nature of benefits packages for different target populations. Certain high cost interventions (such as stroke fast track, diabetic retinopathy, heart surgery, and heart transplantation), which are part of either outpatient capitation or inpatient DRG payment and have poor access due to underservice by a hospital, are managed centrally by the NHSO (Item A3, 9.1%) using a point systems with a global budget (called a fee schedule under a global budget). Rehabilitation (A5) and Thai Traditional Medicines (A6) also apply point systems under a global budget. Capital depreciation is allocated based on the population size in the registration and guided by a provincial plan to replenish medical equipment in order not to spread small resources too thinly. The no fault compensation to patients (A8) having adverse events (death and disability) from clinical services is paid on a fee schedule approved by the Standards and Quality Control Board.

**Figure 3**  
Budget allocation to core benefits packages and specific interventions and related sub-items for UCS, Fiscal Year 2016

	Budget	Distribution, %	Provider payment methods
<b>Item A: Core benefits package</b>	<b>B 3,028.94/capita</b>		
A1. Out-patient services		33	Capitation
A2. In-patient services		31.7	DRG with Global Budget
A3. Central reimbursed*		9.1	Point system with Global Budget
A4. Promotion & prevention		11.9	Capitation, project based, vaccines, quality
A5. Rehabilitation		0.5	Point system with Global Budget
A6. Thai Traditional Medicines		0.3	Point system with Global Budget
A7. Capital depreciation		3.8	Capitation + provincial plan
A8. No fault compensation to patients		0.2	Fee schedule
<b>Subtotal Item A</b>		<b>90.60%</b>	
<b>Item B: Specific interventions</b>	<b>B 315.23/capita</b>		
B1. HIV/AIDS		1.8	Medicines fee schedule, project based
B2. Chronic Kidney Diseases		3.9	Peritoneal dialysis solution, fee schedule, project based
B3. Non-communicable diseases (NCDs) control and prevention		0.6	Fixed fee per patient
B4. Hardship areas adjustments		0.9	Criteria set by the committee
B5. Compensation to MOPH personnel		1.8	Criteria set by the committee
B6. Long-term care, home-based services		0.4	Fixed fee per patient
<b>Subtotal Item B</b>		<b>9.40%</b>	
<b>Total Package A and B</b>	<b>B 3,344.17/capita</b>		
<b>Total budget</b>		100.00%	
<b>Total budget approval</b>	<b>B 163,152 million</b>		<b>For 48.787 million UCS members</b>

Source: NHSO fund management manual, 2016. Note: \*Specific services such as stroke fast track, diabetic retinopathy, heart surgery, and heart transplant are managed by the NHSO centrally.

Specific interventions that boost financial protection have a share of 9.4% (Item B, Figure 3) of total budget allocation. These include HIV/AIDS, which is paid by a blend model of distribution of antiretroviral medicines to providers with certain fee schedules and project-based payment such as prevention and condom distribution. Services for chronic kidney disease patients are managed centrally by the NHSO through

negotiation of peritoneal dialysis solutions and distributions to patients' home using the national post office. Certain fees for health care providers for home visits to prevent the most common complication of peritonitis and in-kind provisions of erythropoietin for healthcare facilities are also managed. Non-communicable diseases (NCDs) control and prevention are paid on a fixed fee per patient, which covers needs for annually laboratory tests and additional incentives for achieving diabetic control, as measured by an HbA1C level <7%. The cost of medical products distributed to providers (such as vaccines in the EPI program, erythropoietin for end stage renal diseases on dialysis and antiretroviral medicines for people living with HIV/AIDS) or patients (such as peritoneal dialysis solutions) are part of the budget.

Whenever the specific interventions in Item B are approved by the NHSB, it goes to the Cabinet for program and budget approval. In the subsequent year, it will enter the regular budgeting system through budget bill processes. This means there are no "unfunded mandates" for the NHSO or health care providers. All interventions and benefits packages are fully funded with an adequate budget. Providers are liable to report their services or patients provided for reimbursement, which is managed centrally by the NHSO. This gives opportunities for establishing several patient registries such as end stage renal patients who are on hemo and peritoneal dialysis and waiting for kidney transplant, and persons living with HIV/AIDS who are on ART. These disease registries provide invaluable information on treatment outcome and five-year survival rates compared with CD4 activity at the entry to hemo and peritoneal dialysis. Data on reimbursement are important for the subsequent year budget proposal.

Items B4 and B5, which are hardship allowances for health professional areas, are managed by a committee, while B6, "home-based long-term care", is paid on a fixed fee per patient. All specific interventions under item B require a provider's intensive report with various variables to the NHSO for disbursement, performance assessment and audit.

When the annual budget is approved, the NHSO produces annual budget executive guidelines and holds a national meeting with all provider networks to ensure the smooth execution of the annual budget. Benefits packages in sub-items A and B are "ring fenced" and cannot be used across items, as they are the costs of demands for health services by all UCS members. Any changes on budget size across items in Figure 3 will take place in the subsequent year based on reviews of the utilization and cost of service provision of these benefits packages.

It should be noted that when the NHSO transfers the UCS budget for whatever purpose, e.g., outpatients, inpatients, etc., the budget becomes the revenue of public health facilities or private hospitals if they are contractors. The management of personnel, hiring and firing, monthly payroll and additional

incentives such as overtime services are managed by hospitals in line with the relevant rules and regulations. The purchasing of medicines, medical supplies and medical devices are also managed by hospitals, except in cases of high cost medicines, which are purchased nationally by the NHSO and then delivered to hospitals or households, e.g., peritoneal solutions through the post office. In some cases, prices of high cost medicines are negotiated nationally by the NHSO and then hospitals procure them based on the negotiated price.

### Paying for outpatient services

After the UCS beneficiary database was fully developed and reliable, the capitation payment for outpatient services was adjusted for the age composition of the registered population in the catchment areas in 2005. The adjustment is in favour of young and old members due to the higher use rate by these two groups. The age-specific expenditure (multiplications of utilization rate and unit cost per visits) is the main parameter for adjustments. Age-adjusted capitation in each province is  $\pm 10\%$  of national average, while different contractor provider networks within a province will receive the same age-adjusted capitation rate. Age adjustment is conducted every three to four years (Figure 4).

**Figure 4**  
Age-adjusted cost index for outpatient care

Age group (years)								
< 3	3 – 10	11-20	21 - 40	41 - 50	51 - 60	61 – 70	>70	All age groups
0.464	0.364	0.306	0.407	0.789	1.348	1.972	2.351	1

Source: NHSO fund management manual, 2016.

All UCS members have to register with a provider network capable of providing a comprehensive set of outpatient and prevention and health promotion services. A typical provider network in rural areas is a district health system with a catchment population of 50,000 people in a district served by a district hospital (30-120 beds) and 10-15 health centres (Tangcharoensathien et al., 2018). Urban areas have no district hospital. Therefore, MOPH provincial or regional hospitals and health centres are the provider network for UCS outpatient care. Some private hospitals and their affiliated clinics are also provider networks. Note that Thailand has developed a full geographical coverage of district hospitals in all 800 districts and health centers in all sub-districts (Tangcharoensathien et al., 2018).

The total budget for outpatients is based on the capitation budget for outpatients multiplied by the total registered population and adjusted by age. Advanced payment of capitation on a six-month basis supports a smooth provision of services for health facilities under MOPH, but monthly for

non-MOPH health facilities. The same capitation rate is equally paid to either public or private networks. Fair treatment between public and private networks facilitates smooth start-up of implementation. Private hospitals are familiar with the SHI inclusive capitation system.

When a patient needs to be referred to a higher level of care, contractor networks, as primary care fund holders, are liable to pay not more than B 700 for an outpatient visit when referred to MOPH hospitals, or the actual amounts as requested by non-MOPH hospitals. A patient bypassing their registered provider network is not covered by UCS and must fully pay the user charge out-of-pocket. Services from traditional healers and self-prescribed medicines are not covered by UCS. Contractor provider networks of primary care are liable to submit individual records of outpatient service statistics to the NHSO for monitoring and audits.

To facilitate mobile UCS members who seek jobs outside their domicile districts, the NHSO allows these members to re-register to a new provider network convenient for their use through electronic registration. In these cases, the NHSO deducts the remaining capitation from the old to the new registered provider network through real time electronic management.

### **Paying for inpatient services**

DRG with global budget is used for paying inpatient admission of UCS members. It uses the following ratio: the budget approval for inpatients for the whole year (as part of the total capitation budget) to the total relative weight adjusted for length of stay of DRG of all UCS patients admitted to hospitals in a year. Relative weights are adjusted for length of stay for patients less than 24 hours or one-third the average or beyond the outlier trim points. When the global inpatient budget is divided by the total relative weights in a year, the amount is the compensation per relative weight to hospitals providing respective admission services. The global budget for inpatient care is fixed for the whole year.

The global budget safeguards against overspending such as DRG creep due to the budget's finite size. DRG creep is defined as changes in hospital record-keeping practices that increase case-mix indices and reimbursement (Limwattananon et al., 2015; Limwattananon, Tangcharoensathien and Prakongsai, 2007). The reimbursement per relative weight depends on the number in the denominator. While the numerator is fixed from the beginning of the year, the denominator changes (because of real changes in case mix or use rate such as flu epidemic or DRG creep), such that its increase lowers the reimbursement rate. The NHSO will introduce a stringent audit of inpatient claims and on-site audits of medical records guided by outliers or an incompatibility analysis. Monitoring by the NHSO neither shows rapid increases in case-mix severity nor increases in admission rates. Changes in the admission rate or unit cost are

adjusted for the following year to estimate the per capita budget for inpatients. The NHSO deducts the future inpatient reimbursement against the amount of over-claims by hospitals from the audit report or transfers the amount of under-claims by hospitals due to under- or mis-coding.

All public (district, provincial, teaching) and private hospitals providing admission services are treated under the same conditions of the global budget and DRG systems without prejudice. The same relative weight and pay rate to all levels of hospitals are applied, as the NHSO adheres with the principle that DRG are iso-resource consumption. Appendectomies provided by a teaching or a district hospital without complications or co-morbidity are offered the same payment.

When inpatients are discharged, hospital managers are required to submit electronically to the NHSO the discharge summary, which contains essential parameters, in particular the clinical diagnosis based on ICD10, co-morbidity and complications, procedure coding using ICD 9CM, patient's length of stay, use of the intensive care unit and surgery and discharge status. Upon correct verification by the NHSO of these data, a DRG code with relative weight will be generated and informed to the hospitals. At the end of the month, money will be wire transferred to the hospital based on its total monthly relative weight and the global budget that the NHSO holds. The total inpatient budget has to be spent and disbursed in full. The NHSO is not allowed to keep the balance as reserves, because the origin of the budget estimate is a full cost subsidy.

The NHSO has no deficit, because it disburses its entire budget to relevant providers. Financial risks are transferred to the providers, who are "commanders of health resources", as they know how to be efficient. The global budget and DRG systems for inpatient services can result in a lower baht per total relative weight adjusted for length of stay, equally shouldered by all providers in a year if there are large increases in the total national sum of total relative weight adjusted for length of stay (such as through DRG creep or epidemics). A higher baht per total relative weight adjusted for length of stay occurs if there are large decreases. DRG-creep and false coding are rigorously audited by the NHSO. The capitation budget for outpatient services is allocated to provider networks. It can be lower than the networks' total spending in a year given a high utilization rate (which can be uncontrollable, i.e., in the case of an epidemic, and controllable, i.e., unnecessary repeated appointments and visits) and high unit cost (which is controllable through the use of generic medicines and the National List of Essential Medicines). This strategic purchasing empowers healthcare providers to be financially responsive and cost conscious through an efficient use of resources. All providers under UCS use generic drugs in the National List of Essential Medicines. Unlike CSMBS, where providers have incentives to use brand versions outside the National List of Essential Medicines.

Despite universal coverage, there are backlogs of cataract surgery, which results in long waiting lists. To improve access, the NHSO, as a learning organization, has unbundled cataract surgery from the DRG system and pays on a fee schedule in order to boost surgery and reduce preventable blindness. Almost all cataract surgeries are 100% day surgeries unless there are (rarely) complications, which require admission.

### **Paying for accident and emergency services**

To ensure that life saving interventions are promptly provided, accident and emergency (A&E) cases (medical, surgical, or accidents) can access any nearby hospital. For A&E cases treated as outpatients by providers in the same province, hospitals will be paid by the fund holder contractor network where the patients are registered based on fee-for-service or a negotiated rate. For A&E outpatient services provided by facilities outside the domicile province, the NHSO manages the payment based on what hospitals charge under a global budget held by the NHSO. The charges will be converted into a point system where one baht equals one point.

The NHSO pays the cost of ambulance services for the referral of patients requiring emergency attention (not only A&E) between hospitals. The cost of pre-hospital care and ambulance services from the spot events to hospitals are paid by the National Institute of Emergency Medicines through its network of telecommunications and systematic commanding systems. Certain local governments also subsidize ambulance services (first responders only).

For A&E cases treated as inpatients, hospitals in the same public health region will be paid under the DRG system within the regional global budget ceiling. For A&E cases which are treated as inpatients by hospitals outside the public health region, the hospitals will also be paid by the DRG system, but the NHSO guarantees a higher rate of B 9600 per adjusted relative weight to ensure that emergency services are promptly provided. Note that there are thirteen public health regions in Thailand, consisting of 5-6 provinces and 5-8 million people per region.

### **NHSO: an active monopsonistic purchaser**

The NHSO, as a large purchaser for the whole Thai population, exerts its monopsonistic purchasing power when negotiating prices of certain medical products, in particular monopoly or oligopoly markets with assured quality from both domestic and international suppliers. These products are, for example, cataract lenses, medical devices such as stents for coronary arteries and certain medicines such as erythropoietin. Such monopsonistic purchasing power has yielded significant cost savings, which is the difference between market and negotiated prices and actual volumes procured (Tangcharoensathien et. al, 2018) (Box 1).

### 3 Implications for other countries

The payment methods adopted by the NHSO for UCS are good examples for other countries, especially in terms of budget containment and health systems efficiency. Since Thailand is not a rich country and UCS is solely financed by general taxes, affordability and financial sustainability are key policy concerns. Empirical evidence of impact from setting and regulating payments for services in the Thailand UCS are fiscal sustainability, covering the full cost of all health care providers, improved efficiency, a high level of financial risk protection and universal access to health services, which include medicines and no copayment at the point of service. These can be experiences to share in how setting payment methods in Thailand reflects good outcomes.

#### Fiscal sustainability

Thailand UCS applies a closed-end budget – it cannot spend beyond its annual budget ceiling. We strongly recommend using a closed-end budget, as it ensures efficiency and fiscal sustainability. The UCS budget has significantly increased in 17 years (Figure 5). This is a result of additional benefits packages, especially high cost interventions, an increased utilization rate and cost inflation. However, if compared to total government budget, it has been quite stable, at 5.9% (Figure 6). In terms of growth, although the annual UCS per capita budget has a higher growth rate in percentage than GDP per capita, the two have similarly increased (Figures 7 and 8).

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#### Box 1. Improved access to cataract lens replacement

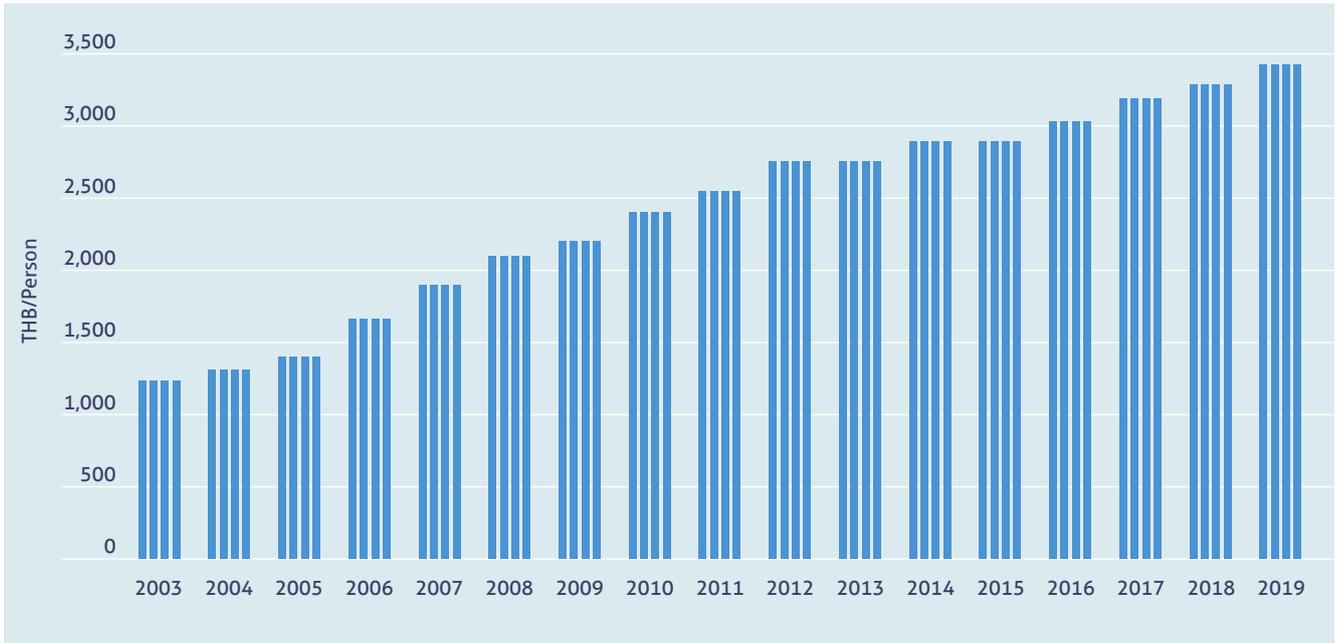
Between 1996 and 2010, cataract lens replacement was paid based on DRG weights, with hospitals being compensated for the lens cost of B 4000. To solve the problem of the long waiting list, the private sector was encouraged to provide lens replacement for a lump sum payment of B 7000 inclusive of lens cost during 1997-2000.

Since 2011, cataract lens replacement has been unbundled from DRG systems and paid on a fee schedule of B 7000 and 9000 per case (without and with complication, respectively) and a lens cost of B 700 and 2800 for hard and foldable lens, respectively. This innovation boosted access to lens replacement, using an interrupted time series, from 0.8 lens per 100 000 population in 2005-2006 to 64.9 per 100 000 population ( $p < 0.01$ ) in 2009-2013.

Source: Limwattanananon, 2017.

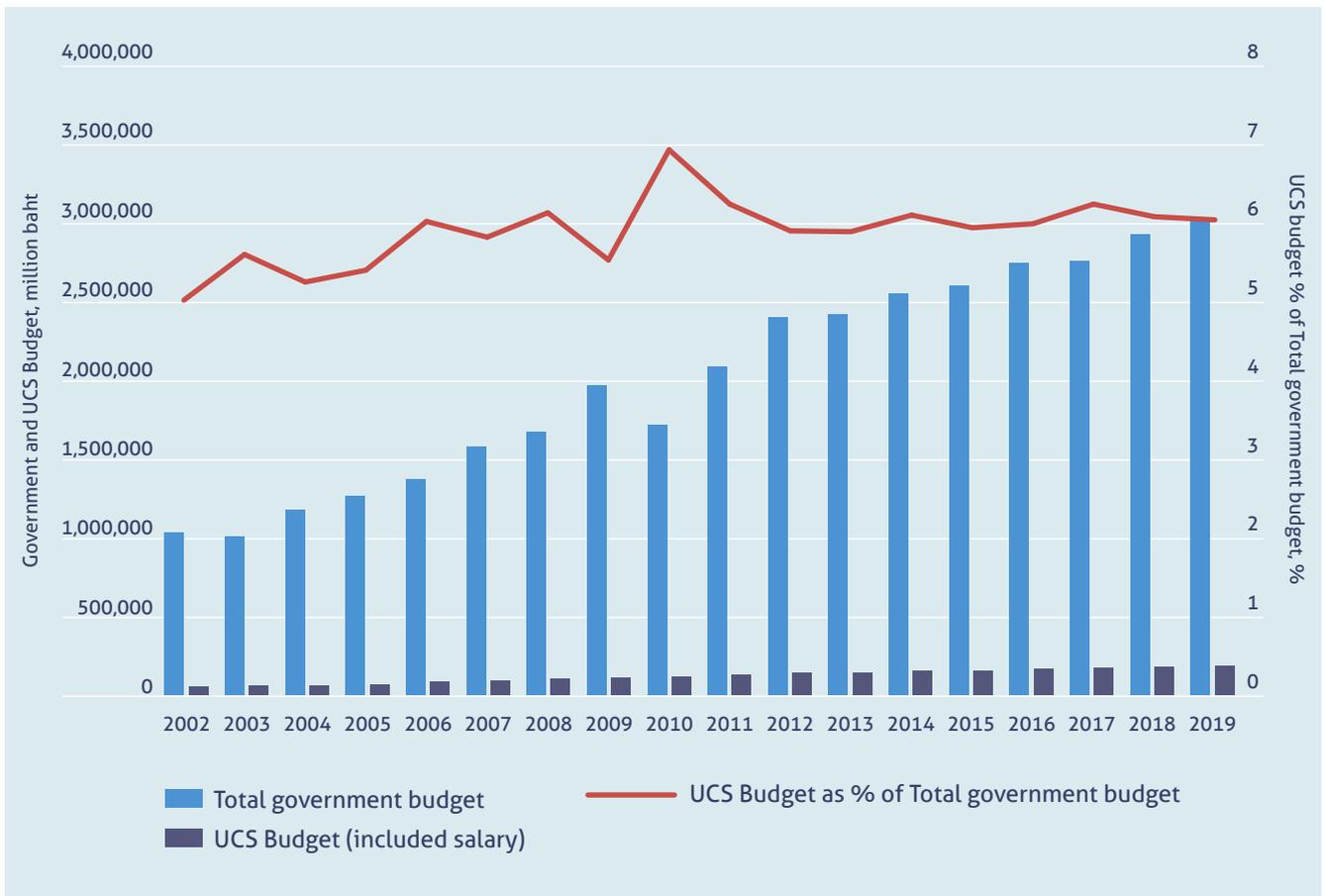
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**Figure 5**  
Per capita UCS budget, current price, 2003-2019, baht/capita



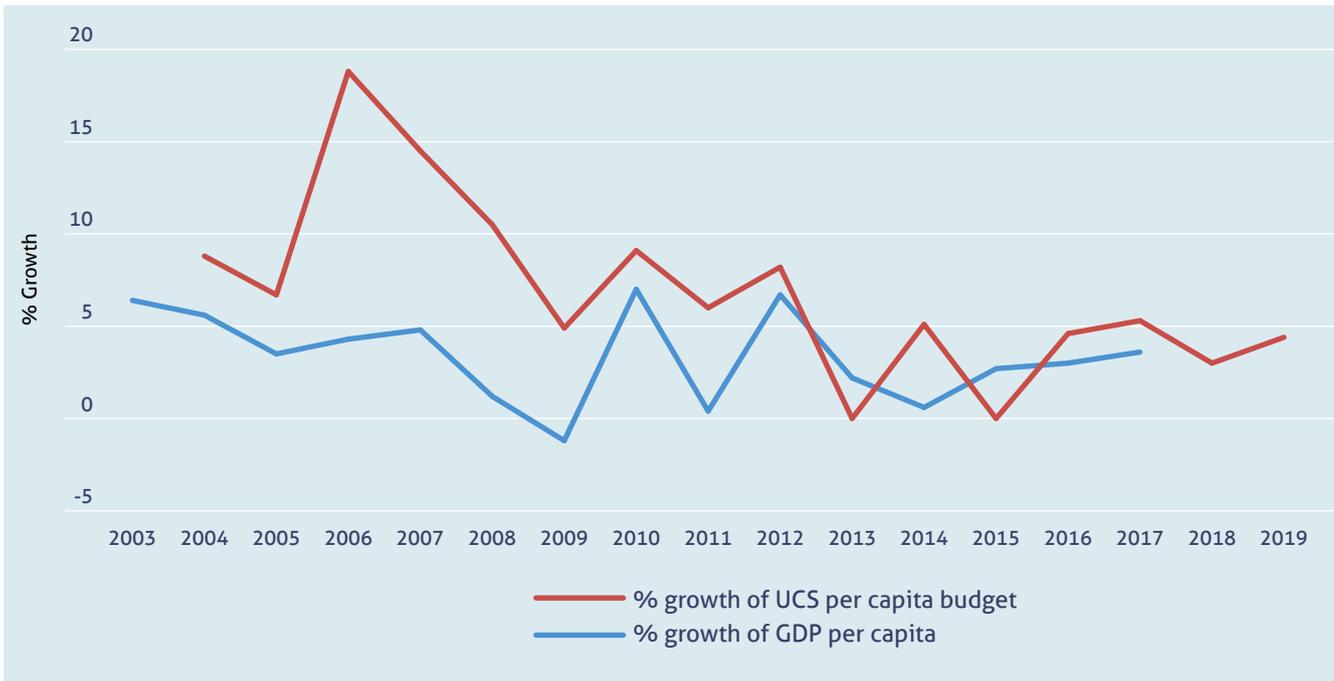
Source: NHSO, 2018.

**Figure 6**  
Percent of UCS budget compared with total government budget



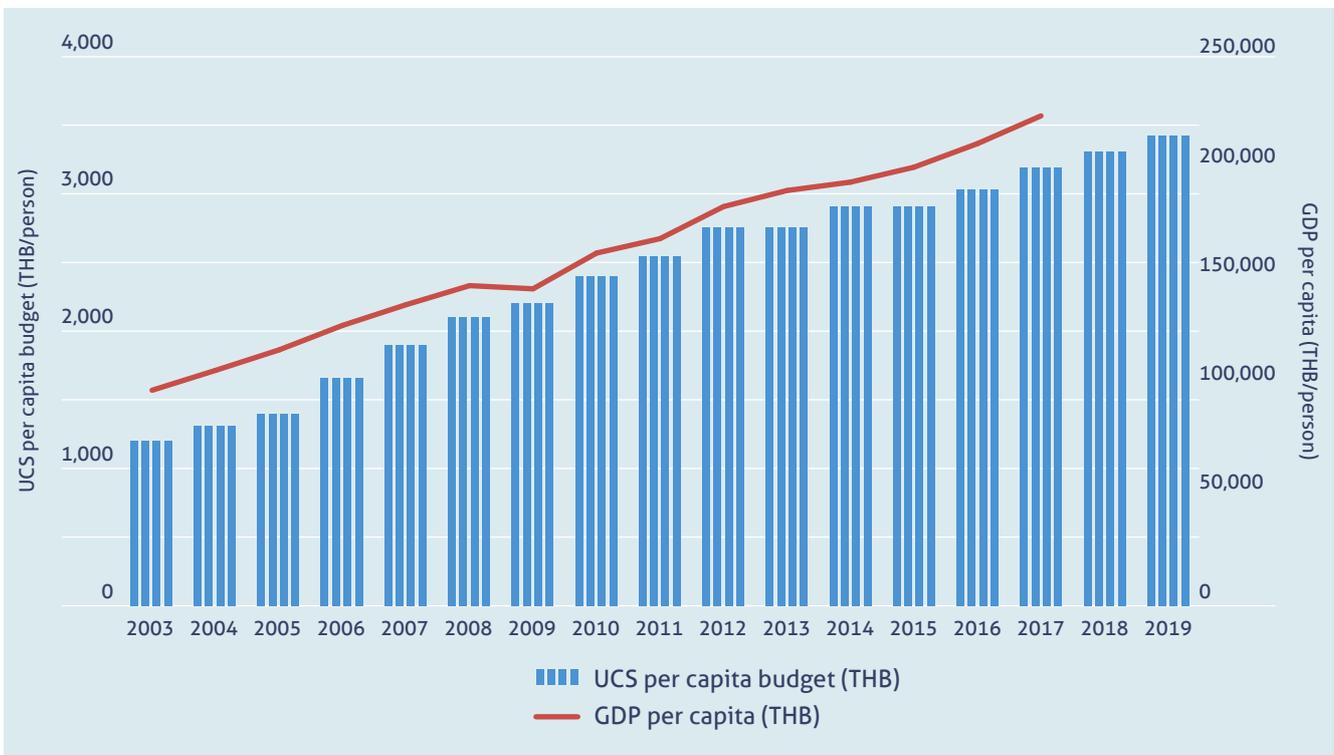
Source: NHSO, 2018.

**Figure 7**  
Percentage growth in GDP per capita compared with the percentage growth in UCS per capita budget



Source: NHSO, 2018.

**Figure 8**  
Growth of Annual GDP per capita and Annual UCS per capita budget



Source: NHSO, 2018.

## Providers' revenue guarantee

Even though the Thai UCS has applied a strictly closed-end budget and capitation budget basis, the payment method has been flexibly designed to guarantee revenue to providers. For outpatient services and health promotion and prevention, the capitation budget is paid in advance based on the population in the catchment area. For inpatient services and high cost care, postpaid or retrospective payment has been adopted. These payments are guaranteed based on the full cost of services provided inclusive of salary, material and capital depreciation costs. DRG with global budget has been applied for inpatient services. Providers have to submit all discharge summary parameters to compute the DRG weight and receive reimbursement from the NHSO. At the beginning of the fiscal year, the minimum guarantee of the payment base rate per adjustment relative weight is announced, and it has been more than 95% of actual payment. Moreover, and importantly from the provider's side, revenue from all insurance funds have more flexible management than budget line items. These earnings from insurance funds become hospital revenue when spending is governed by MOPH rules and regulations. This was more flexible than budget line items in the years prior to UCS and are subject to external audits.

## Efficiency

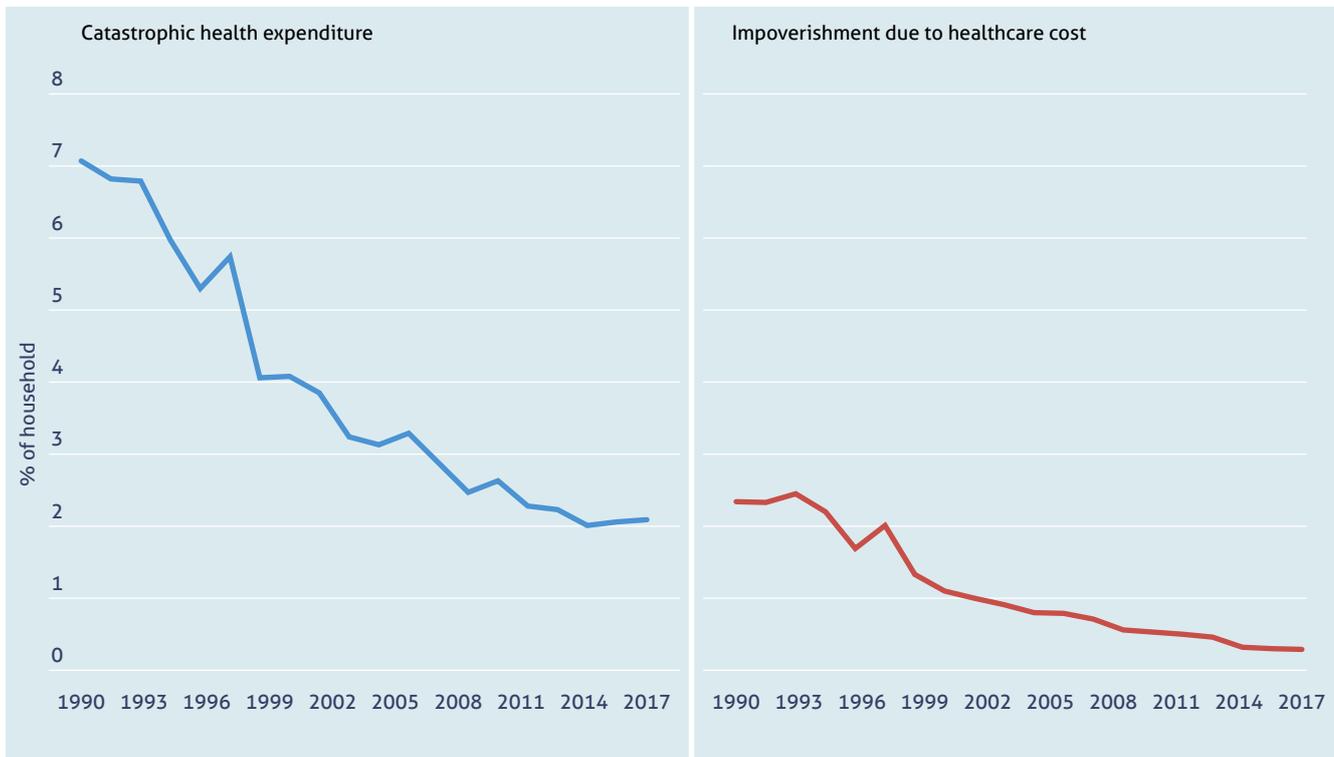
Health systems efficiency can be achieved through the use of gate keeping for primary health care and outpatient care. This applies an efficient allocation of resources according to need. Primary care promotes better access, with less transport cost and better continuity of care in particular the management of chronic non-communicable diseases. In addition, within the healthcare providers' lens, the capitation payment method may induce an under-provision of healthcare; but for the purchaser's side this can induce efficiency in budget management along with a measurement to prevent side effects of per capita payment such as monitoring, auditing and full cost subsidies of outpatient services. Lastly, as a manager of UCS, the NHSO exercises monopsonistic purchasing power to negotiate the lowest possible price with assured quality, hence gaining efficiency and significant cost savings for more service coverage.

## Financial risk protection

Free from payment at the point of service can protect households from financial hardship due to health care cost and reduce barriers to health care utilization. Moreover, strict prohibition of balance billing is another measure to protect individual access to health care with no price barriers. Monitoring, auditing and complaint management systems are in place to monitor these events and introduce corrective measures. This results in a high level of financial risk protection in Thailand, as measured by the low prevalence of catastrophic health expenditure and impoverishment due to health care

costs. Both indicators have significantly decreased over the years (Figures 9 and 10).

**Figure 9**  
**Financial risk protection from healthcare costs: catastrophic health expenditure using a threshold of more than 10% of household consumption expenditure on health (left) and household impoverishment (right)**



Source: NHSO, 2018.

### Universality for health

In Thailand, public health insurance coverage by SHI is linked to employment status, while UCS provides citizens with an entitlement to health. This means that when SHI members retire or become unemployed and are no longer covered by SHI, they will be automatically transferred to UCS. Conversely, when UCS members are employed, they will be covered by SHI. For CSMBS, when the child dependents of government officials turn 20 years old, they are automatically transferred to UCS. This seamless transition across insurance schemes ensures the universality of health insurance entitlement for the whole Thai population. Entitlement to health is guaranteed from birth, as all 0.7 million newborns are registered with either UCS, or CSMBS if their parents are government employees.

## 4

### Discussion, conclusions and challenges

Compared with the Comptroller General's Department (CGD), who manages CSMBS, and Social Security Office (SSO), who manages SHI, the NHSO is the most advanced purchasing agency. It has the expertise and capacity to implement and focuses all its efforts on purchasing health services. It has no mandate to collect premiums from members, as UCS is fully funded by general taxes through annual budget negotiations. SHI is part of the comprehensive social security systems for 14.6 million private sector employees in 444 868 establishments (pension, unemployment, sickness, disability, health and deaths compensations). SSO, with its workforce of 7223 staffs nation-wide, is also mandated to collect monthly premiums as a percentage of payroll from its employees and employers. It manages other benefits beyond health including the Workmen Compensation Fund (for work related injuries, sickness, disability and death compensations). CGD with its limited capacities of less than 30 staff, manages CSMBS as part of a comprehensive government employee's benefit systems, but cannot do strategic purchasing well.

There is no overall regulatory framework for price regulation in healthcare by purchasing organizations. SSO calculates its capitation rate and sets rules and regulations for provider payment, but it has limited capacity to conduct rigorous audits and discipline providers (in particular, for profit private hospitals) for the interests of SHI members. All three public health insurance schemes apply the National List of Essential Medicines as a drug benefits package and DRG (current version 6.2) as a reference for payment with variations. CSMBS does not apply a global budget, but has 27 bands of baht per relative weight, while SSO pays B 15 000 per relative weight for patients having relative weights higher than two. The NHSO applies a strict global budget and adjusted relative weight.

These price settings and regulations by the NHSO have achieved the stated objectives of cost containment, although the capitation budget increased from B 1202 in 2002 to B 3344.17 in 2016. This is mostly due to a) an expansion of high cost benefits packages such as ART and renal replacement therapy, b) an increased utilization rate of outpatient and inpatient care, and c) cost inflation and use of more diagnostic technologies such as CT scan for simple appendicitis. Compared with CSMBS, which continues to pay outpatient care by fee-for-service and inpatient care by DRG without a global budget and different bands in favour of teaching and tertiary care hospitals, UCS has four times lower expenditure per capita. It has also achieved financial risk protection to UCS members. UCS has reduced the probability of catastrophic health expenditure, defined as households spending on health more than 10% of their total household spending. There has been a greater reduction of household out of pocket spending among

high-income households, providing a real safety net for all—rich or poor (Limwattananon, Tangcharoensathien and Prakongsai, 2011). Thus, UHC (including all three public health insurance schemes) provides financial risk protection for the whole population (Limwattananon, Tangcharoensathien and Prakongsai, 2007; 2011). In contrast, the CGD and SSO neither have the capacities nor policies to exert their monopsonistic purchasing power.

Challenges lie with the fact that, despite the three insurance schemes applying similar benefits packages, each pays providers differently. For example, SHI pays inclusive capitation, though it recently has gradually adopted DRG for high cost inpatient services of relative weights more than two while still paying capitation if inpatient relative weights are less than two.

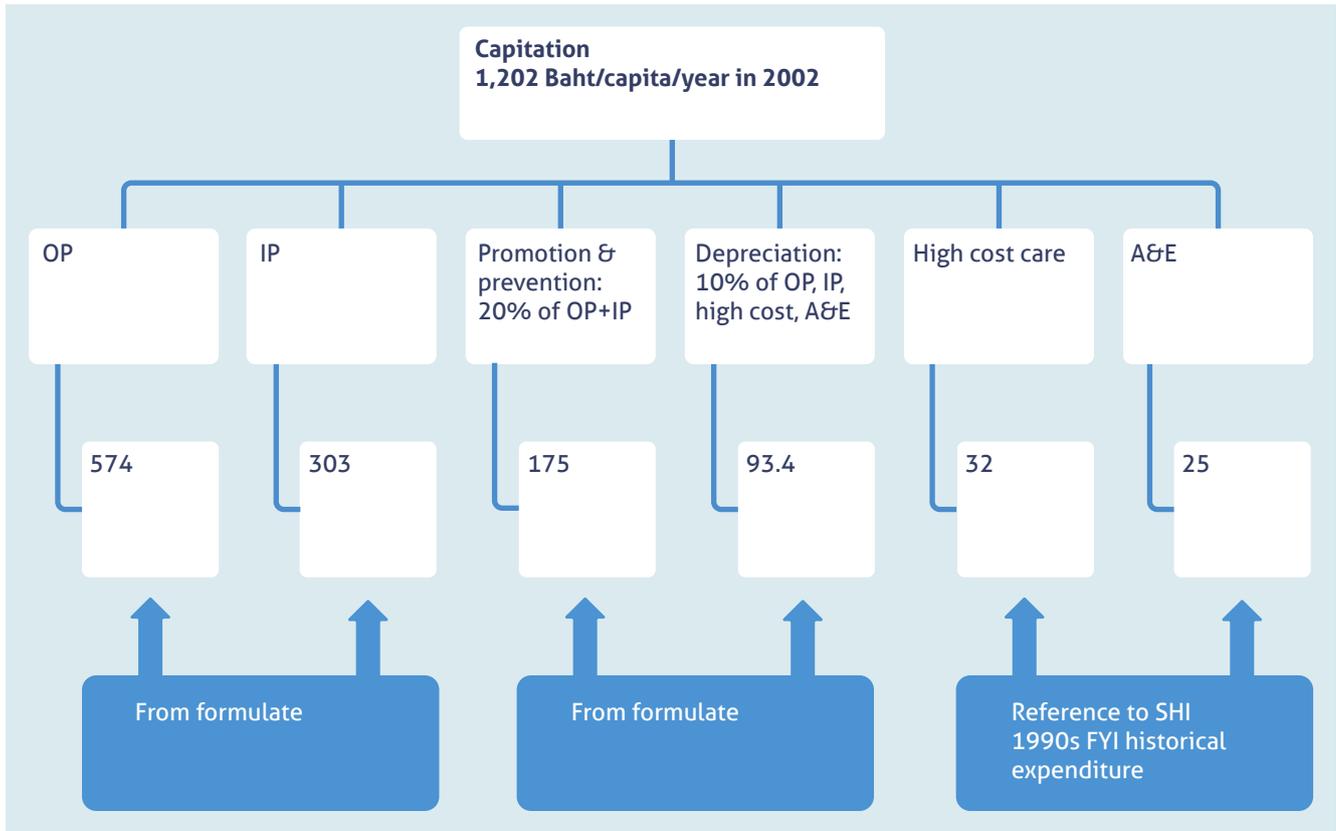
CSMBS, a tax funded scheme, does not have cost containment in its policy goals despite using public resources. It continues to use fee-for-service for outpatient care. For inpatient care, CSMBS replaced fee-for-service with DRGs in 2009. The design increased inequity across levels and types of hospitals. For example, the DRG payment is based on fee-for-service claims by hospitals, but combined these claims into 27 bands, which range between B 4131 and B 28 343 per adjusted relative weight. The average reimbursement in baht per adjusted relative weight is B 10 629 to B 13 630 for teaching hospitals, B 10 271 for regional hospitals, B 9346 and B 10 056 for provincial hospitals, and B 5731 and B 6113 for small district hospitals. This variation occurs despite the fact that these hospitals provide similar outcomes for the same DRG group. These rates are adjusted every one to two years. CSMBS has overspent its allocated budget every year for the last two decades, but it was compensated by the Government Central Fund, which was earmarked for contingencies and national emergencies and disasters.

An incoherence of policy and practice on price setting, purchasing and regulation is the major challenge and requires political leadership to resolve inefficiencies in CSMBS. There are several rounds of failed reforms due to a lack of reform capacity in the CGD and resistance from medical communities who are in favour of fee-for-services.

## Annex 1 Estimates of per capita budget: B 1,202 for Fiscal Year 2002.

Row	Parameters	Unit	National average	Technical notes
1	Reported illness last two weeks	per capita per two weeks	0.1669	Data from HWS1996
2	Reported illness in a year	per capita per year	4.34	row 1 * 26 (to blow up to 52 weeks/year)
3	Use at institutional care	Ratio	0.661	sum row 5 to 9
4	Number of institutional visit	visits per capita per year	2.876	row 2 * row 3
5	Use at health centres	Ratio	0.151	
6	Use at district hospitals	Ratio	0.129	
7	Use at provincial and other public hospitals	Ratio	0.155	
8	Use at private clinics	Ratio	0.195	
9	Use at private hospitals	Ratio	0.031	
10	Cost incurred at health centres	baht per capita per year	39.4	row 2 * row 5 * B 60/visit
11	Cost incurred at district hospitals	baht per capita per year	123.8	row 2 * row 6 * B 221/visit
12	Cost incurred at provincial hospitals	baht per capita per year	186.9	row 2 * row 7 * B 278/visit
13	Cost incurred at private clinics	baht per capita per year	187.2	row 2 * row 8 * B 221/visit
14	Cost incurred at private hospitals	baht per capita per year	37	row 2 * row 9 * B 278/visit
15	Total OP cost incurred	baht per capita per year	574	sum row 10 to 14
16	Admission	Admission per capita per year	0.066	data from HWS1996
17	Use at district hospitals	Ratio	0.332	data from HWS1996
18	Use at provincial and other public hospitals	Ratio	0.488	data from HWS1996
19	Use at private hospitals	Ratio	0.18	data from HWS1996
20	Cost incurred at District hospitals	baht per capita per year	62.7	row 16 * row 17 * B 2857/admission
21	Cost incurred at provincial hospitals	baht per capita per year	175.2	row 16 * row 18 * B 5424/admission
22	Cost incurred at private hospital	baht per capita per year	64.7	row 16 * row 19 * B 5424/admission
23	Total inpatient service cost incurred	baht per capita per year	303	sum row 20 to 22
24	Total cost for curative care per capita per year	baht per capita per year	877	sum row 15 and 23
25	Preventive and promotive packages	baht per capita per year	175	row 24 * 20%
26	Capital cost, 10% of curative package	baht per capita per year	93	(Row 24+28+29) * 10%
27	Total package including capital	baht per capita per year	1,145	sum row 24 to 26
28	High cost care, adjusted from Social Health Insurance	baht per capita per year	32	reference social security scheme
29	Accident and emergency outside contract primary care	baht per capita per year	25	reference social security scheme
30	Total capitation (operating expenditure only, exclude capital investment)	baht per capita per year	1,202	sum row 27 to 29

## Annex 2 How budget per capita, B 1,202, in 2002 was estimated



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Case study

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# The United States of America

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and Development

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In the United States of America, private health insurance plans' prices are largely unregulated and agreed upon through negotiations between plans and the providers with whom they contract. Negotiated transaction prices are often unknown to final consumers and the public as they are treated as commercially sensitive. These prices can vary substantially for similar services across providers and insurers and bear little relation to the cost of production.

In contrast, Medicare and Medicaid – the two largest government health insurance programs - regulate the rates that providers receive. Under these rate-setting systems, the federal or state government establishes how much providers are paid for health care services. The rates reflect the costs that the typical efficient provider is expected to incur. The annual process for updating these prices is public and transparent.

A high fragmentation of the health insurance and financing systems results in a large amount of resources devoted to health insurance marketing and administration, and to billing activities.

On January 2014, the state of Maryland implemented its All-Payer Model for hospitals, which shifted the state's hospital payment structure from an all-payer hospital rate setting system to an all-payer global hospital budget that encompasses inpatient and outpatient hospital services.

## Abstract

## Overview

The United States of America (US) health care system has developed largely through the private sector and combines high levels of funding with a uniquely low level of government involvement. It can be thought of as multiple systems that operate independently with little coordinated system-level planning in comparison to other high-income countries (figure 1). This fragmented system results — among other things — in high administrative costs attributable to billing and insurance-related activities (Fuchs, 2018; Tseng et al., 2018). Hospital administrative overheads are far higher in the US than in other high-spending countries (Himmelstein et al., 2014).

Private sector stakeholders play a stronger role in the US health care system than in other high-income countries. The private sector also led the development of the health insurance system in the early 1930s, as the major federal government health insurance programs, Medicare and Medicaid, were not established until the mid-1960s.

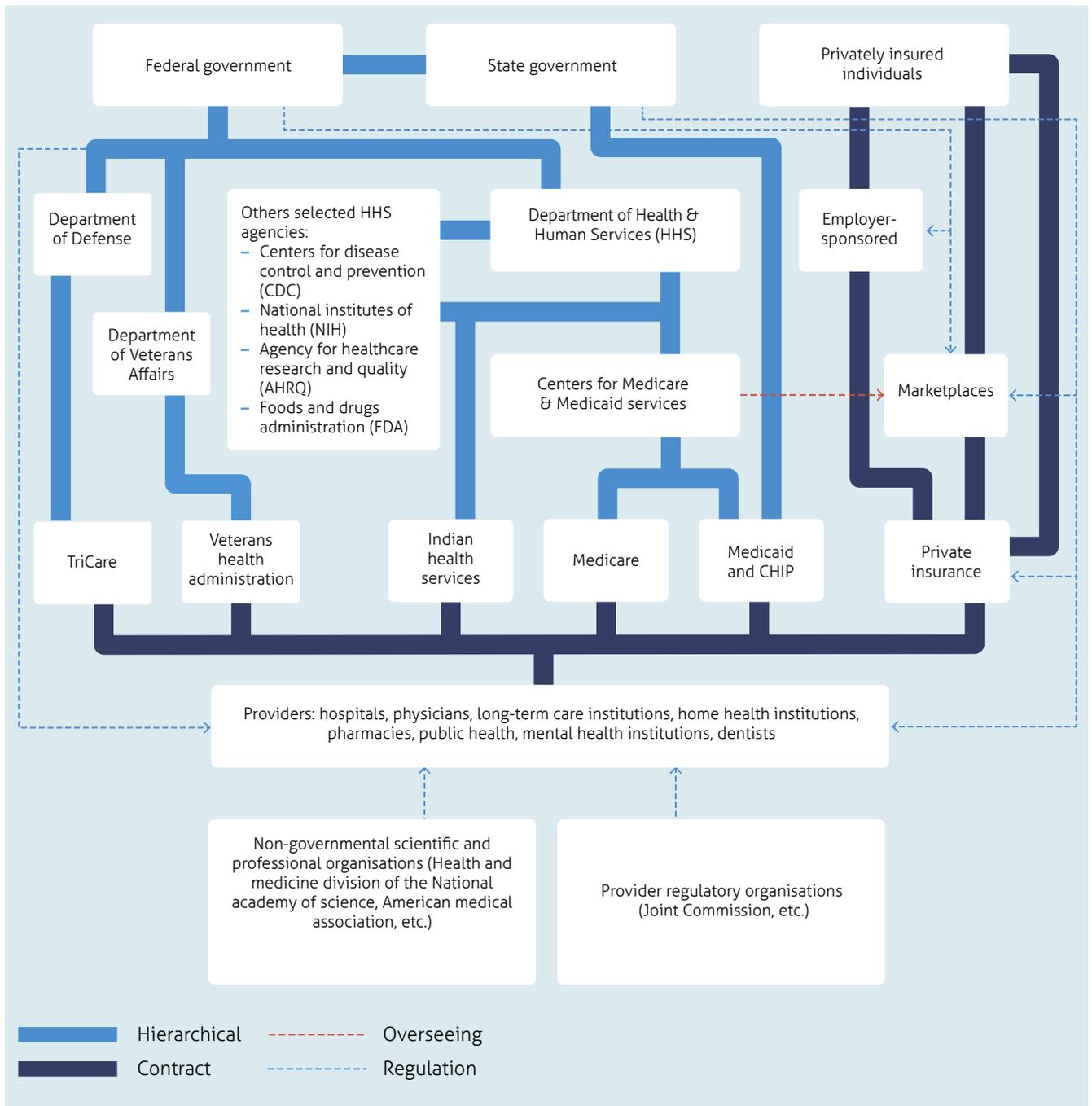
After a lengthy national debate, Congress passed legislation in 1965 establishing the Medicare and Medicaid programs as Title XVIII and Title XIX, respectively, of the Social Security Act. While Medicare was established in response to the specific medical care needs of the elderly, coverage was extended for disabled persons and persons with kidney disease in 1973. On the other hand, Medicaid was established in response to the widely-perceived inadequacy of welfare medical care under public assistance. Administrative responsibility for the Medicare and Medicaid programs was assigned to the Department of Health, Education, and Welfare — the forerunner of the current Department of Health and Human Services. Until 1977, the Social Security Administration (SSA) managed the Medicare program, and the Social and Rehabilitation Service (SRS) managed the Medicaid program. The responsibilities were then transferred from SSA and SRS to the newly formed Health Care Financing Administration (HCFA), renamed in 2001 as the Centers for Medicare & Medicaid Services (CMS)<sup>1</sup>. CMS also oversees the Children's Health Insurance Program (CHIP) and the Exchanges<sup>2</sup>.

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1 CMS is an operating division within the Department of Health and Human Services (HHS). HHS is the United States government's principal agency for protecting the health of all Americans and providing essential human services.

2 The Patient Protection and Affordable Care Act, signed into law in March 2010, made broad changes to the way health insurance is provided and paid for in the United States. In 2014, state and federally administered health insurance marketplaces (or Exchanges) were established to provide additional access to private insurance coverage, with income-based premium subsidies for low- and middle-income people. In addition, states were given the option of participating in a federally subsidized expansion of Medicaid eligibility.

**Figure 1**  
**Organization of the health care system in the United States**



Source: Adapted from Rice et al., 2013.

In 2016, Medicare and Medicaid covered approximately 56 and 71 million people, respectively. Private health insurance covered 196 million people, and 29 million people were uninsured (Hartman et al., 2017). Total health care spending reached US\$ 3.3 trillion in 2016, and its share in the gross domestic product was 17.9%. Hospital care accounted for 38% of spending (US\$ 1082 billion), and physician and clinical services accounted for 23% (US\$ 665 billion). Smaller shares went to expenditures on retail prescription drugs (12%, or US\$ 329 billion), nursing care and continuing care retirement facilities (6%, or US\$ 163 billion), and home health care services (3%, or US\$ 92 billion).

Private health insurance accounted for 35.3% of health spending, and Medicare and Medicaid accounted for 21.1% and 17.8%, respectively. Smaller shares of spending were from household out-of-pocket (11.1%); other third-party payers and government public health activities (10.7%); and CHIP, Indian health services<sup>3</sup>, Department of Defence<sup>4</sup> and Department of Veterans Affairs<sup>5</sup> (4%).

Both private and public payers purchase health care services from providers that are subject to regulations imposed by federal, state and local governments, as well as by private regulatory organizations. However, private and public payments for health care services are determined through very different mechanisms:

- Private plan prices are largely unregulated (except in the state of Maryland, see below) and agreed upon through negotiations between insurance plans and providers with whom they contract. Transaction prices are the result of many discrete negotiations often unknown to final consumers and to the public as they have been treated as commercially sensitive. These prices can vary substantially for similar services across providers and insurers<sup>6</sup>, may bear little relation to the cost of providing services, and rise in response to changing market conditions.
- In contrast, Medicare and Medicaid – the two largest government health insurance programs — regulate the rates that providers receive. Under these rate-setting systems, the federal or state government establishes how much providers are paid for health care services. The rates reflect the costs that a typical efficient provider is expected to incur. The annual process for updating these prices is public and transparent with prices being constrained by policy to increase relatively slowly.

A description of the base for payment, the level of payment and the process by which the price level is determined by the three major insurers – Medicare, Medicaid and private plans – is reported below. As to the base upon which prices are defined and services paid for, large differences can be observed across provider types and insurers (figure 2).

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3 The Indian Health Service, an agency within the Department of Health and Human Services, is responsible for providing federal health services to Native Americans and Alaska Natives.

4 The Military Health System - the global health system of the Department of Defense - operates a worldwide health care delivery system that includes care delivered in over 50 military hospitals and over 600 clinics, as well as a supporting network of private sector providers offered under its health insurance system known as Tricare. This system provides health services to approximately 9.6 million beneficiaries — active duty service members, military retirees, their eligible family members and survivors.

5 The Veterans Health Administration (VHA) is the largest integrated health care system, providing care at 1243 health care facilities, including 172 medical centres and 1062 outpatient sites of care of varying complexity (VHA outpatient clinics), serving 9 million enrolled Veterans each year.

6 This approach is called "price discrimination" in economist jargon. It means that an identical service is sold to different buyers at different prices.

**Figure 2**  
**Base upon which prices are defined and services paid**

Provider type	Medicare	Medicaid	Private plans
Office-based physicians	Fee-for-service	Fee-for-service	Fee-for-service
Outpatient hospital services	Ambulatory payment classifications	Fee-for-service; ambulatory patient classification	Fee-for-service
Inpatient hospital services	Medicare severity diagnosis related groups	Diagnosis related groups, per diem	Diagnosis related groups, fee-for-service, per diem
Skilled nursing facilities	Per diem (adjusted using resource utilization groups)	Per diem	
Ambulatory surgical centres	Ambulatory payment classifications		

Source: author's compilation.

Starting in the late 1960s and early 1970s, at least 30 states implemented programs to either review or directly regulate hospital rates and budgets (Anderson, 1991). Evidence is mixed (Eibner et al., 2009); but some studies indicate that, if properly structured, rate setting systems show better ability to meet the goals of reduced cost growth and improved access than most market-based systems (McDonough, 1997; Murray, 2009; Murray and Berenson, 2015). Maryland was the first, most stable and only remaining all-payer hospital rate setting program. The main features of the Maryland price setting system are described below.

# 1 Medicare

Medicare is a health insurance program for people age 65 or older, people under age 65 with certain disabilities and people of all ages with end-stage renal disease (permanent kidney failure requiring dialysis or a kidney transplant).

Medicare has different parts that help cover specific services<sup>7</sup>:

- Part A (Hospital Insurance): it helps cover inpatient care in hospitals, including critical access hospitals, and skilled nursing facilities (not custodial or long-term care). It also helps cover hospice care and some home health care. Beneficiaries must meet certain conditions to get these benefits. Most people do not pay a premium for Part A because they or their spouse have already paid for it through their payroll taxes while working.
- Part B (Medical Insurance): it helps cover doctor services and outpatient care. It also covers some other medical services that Part A does not cover, such as physical and occupational therapist services, and some home health care. Part B helps pay for these covered services and supplies when they are medically necessary. Most people pay a monthly premium for Part B.
- Part D (Prescription Drug Coverage): it is available to everyone with Medicare. To get Medicare prescription drug coverage, people must join a plan approved by Medicare and pay a monthly premium.

The goal of the Medicare payment policy is to obtain adequate value for program expenditures, which means maintaining beneficiary access to high-quality services while encouraging efficient use of resources: “Anything less does not serve the interests of the taxpayers and beneficiaries who finance Medicare through their taxes and premiums” (Medicare Payment Advisory Commission, 2018a).

In 2016, managed care<sup>8</sup> was the largest Medicare spending category (28%), followed by inpatient hospital services (21%), prescription drugs provided under Part D<sup>9</sup> (14%), services reimbursed under the physician fee schedule (11%), outpatient hospital services (7%) and skilled nursing facilities (4%). Spending for inpatient hospital services was a smaller share of total Medicare spending in 2016 than it was in 2007, falling from 29% percent to 21%, whereas spending on beneficiaries enrolled in managed care plans grew from 19% to 28% over the same period (Medicare Payment Advisory Commission, 2018b).

7 <https://www.cms.gov/Medicare/Medicare-General-Information/MedicareGenInfo/index.html>.

8 The Medicare Advantage program allows Medicare beneficiaries to receive their Medicare benefits from private plans (managed care) rather than from the individual fee-for-service programs.

9 In 2006, Medicare began a voluntary outpatient drug benefit known as Part D. Prescription drug plans compete for enrollees on the basis of annual premiums, benefit structures, specific drug therapies covered, pharmacy networks, and quality of services. Medicare subsidizes premiums by about 75% and provides additional subsidies for beneficiaries who have low levels of income and assets (Medicare Payment Advisory Commission, 2018b).

Health care facilities must demonstrate compliance with the Medicare conditions of participation (providers), conditions for coverage (suppliers) or conditions for certification (rural health clinics) to be eligible to receive Medicare reimbursement.<sup>10-11</sup> Health care facilities that are “provider entities”<sup>12</sup> are allowed to demonstrate this compliance through accreditation by a CMS-approved accreditation program of a private, national Accrediting Organization (AO)<sup>13</sup>. Accreditation on a voluntary basis by a CMS-approved national AO is an alternative to being subject to assessment of compliance by an applicable State Survey Agency. AOs currently have CMS approval for eight provider or supplier program types: hospital, psychiatric hospital, critical access hospitals (CAH), home health agency (HHA), hospice, ambulatory surgical centre (ASC), outpatient physical therapy (OPT), and speech-language pathology services and rural health clinics (RHC). Figure 3 below reports the number of providers which received accreditation from an AO (deemed) and by a state survey agency (non-deemed) in Fiscal Year 2017.

**Figure 3**  
**Number of accredited providers by program type**

Provider type	Deemed (%)	Non-deemed (%)	Total
Hospital	3460 (88)	481 (12)	3941
Psychiatric hospital	419 (85)	72 (15)	491
Critical Access Hospitals	418 (32)	895 (68)	1313
Home Health Agency	4276 (45)	5145 (55)	9421
Hospice	1868 (42)	2606 (58)	4474
Ambulatory Surgical Centres	1530 (28)	3982 (72)	5512
Outpatient physical therapy and speech-language pathology services	206 (10)	1905 (90)	2111
Rural health clinics	339 (8)	3812 (92)	4151
<b>Total</b>	<b>12178 (40)</b>	<b>18436 (60)</b>	<b>30614</b>

Source: Centers for Medicare and Medicaid Services, 2018. Note: Deemed are those providers that received accreditation from an Accrediting Organization. Non-deemed are those providers that received accreditation by a state survey agency.

- 10 Those “conditions” refer to health and safety standards which are the foundation for improving quality and protecting the health and safety of beneficiaries.
- 11 When services are furnished through institutions that must be certified for Medicare, the institutional standards must be met for Medicaid as well. In general, the only types of institutions participating solely in Medicaid are (unskilled) Nursing Facilities, Psychiatric Residential Treatment Facilities and Intermediate Care Facilities for the Mentally Retarded. Medicaid requires Nursing Facilities to meet virtually the same requirements that Skilled Nursing Facilities participating in Medicare must meet. Facilities for the Mentally Retarded must comply with special Medicaid standards.
- 12 “Provider entities” include providers of services, suppliers, facilities, clinics, agencies or laboratories. Physicians, as well as nurses and many allied health professionals are accredited by licensing boards in the state in which they practice. In addition to state-level regulations, physicians are also regulated at the federal level by CMS criteria for reimbursing providers.
- 13 The process of recognition of an AO by CMS is called “deeming”.

As of September 2016, there were nine national AOs with 21 approved Medicare accreditation programs, the largest being The Joint Commission (figure 4) (Centers for Medicare and Medicaid Services, 2018).

**Figure 4**  
Approved Medicare accrediting organizations by type of care

Accrediting organization	Hospital	Psychiatric hospital	CAH	HHA	Hospice	ASC	OPT	RHC
American Association for Accreditation of Ambulatory Surgery Facilities						174	206	194
Accreditation Association for Ambulatory Health Care						767		
Accreditation Commission for Health Care				682	215			
American Osteopathic Association/Healthcare Facilities Accreditation Program	122		27			28		
Community Health Accreditation Partner				1989	761			
Centre for Improvement in Healthcare Quality	39							
DNV GL-Healthcare	264		66					
The Compliance Team								145
The Joint Commission	3035	419	325	1605	892	561		
<b>Total</b>	<b>3460</b>	<b>419</b>	<b>418</b>	<b>4276</b>	<b>1868</b>	<b>1530</b>	<b>206</b>	<b>339</b>

Source: Centers for Medicare and Medicaid Services, 2018. Note: CAH: critical access hospitals; HHA: home health agency; ASC: ambulatory surgical centre; OPT: outpatient physical therapy, RHC: rural health clinics.

A description of the systems used by Medicare to pay for inpatient hospital services, skilled nursing facilities services, outpatient hospital services, physicians and other health professionals, ASC services and managed care as well as a description of quality payment incentive programs and bundled payments is reported below. Of note, there is no spending target or revenue cap at the provider level.

## Hospital acute inpatient services

In 2016, 3238 hospitals provided almost 9.2 million discharges under Medicare’s acute inpatient PPS, and 1345 CAH<sup>14</sup> provided 309 000 discharges. The number of discharges declined from 2015 to 2016 at both PPS hospitals and CAHs (Medicare Payment Advisory Commission, 2018c).

The acute inpatient prospective payment system (IPPS) rates are intended to cover the costs that reasonably efficient providers would incur in furnishing high quality care.<sup>15</sup> The IPPS pays per discharge rates that begin with two national base payment rates —covering operating and capital expenses — which are then adjusted to account for two broad factors that affect hospital costs of providing care: the patient’s condition and related treatment strategy, and market conditions in the location of the facility.

To account for patient needs, discharges are assigned based on Medicare severity diagnosis related groups (MS-DRGs),<sup>16</sup> in other words, patient groups with similar clinical conditions that require similar amounts of hospital resources. Each MS-DRG has a relative weight that reflects the expected relative cost of inpatient treatment for patients in that group. CMS recalibrates the MS-DRG weights annually, without affecting overall payments, based on standardized costs for all cases in each MS-DRG.

To account for local market conditions, the payment rates for MS-DRGs in each local market are determined by adjusting the national base payment rates to reflect the relative input-price level in the local market (wage index).

In addition to these two factors, the operating and capital payment rates are increased for facilities that operate an approved resident training program (based on hospital teaching intensity)<sup>17</sup> or that treat a disproportionate share of low-income patients. Conversely, rates are reduced for certain transfer cases, and outlier payments are added for cases that are extraordinarily expensive. Figure 5 shows how an inpatient payment is calculated.

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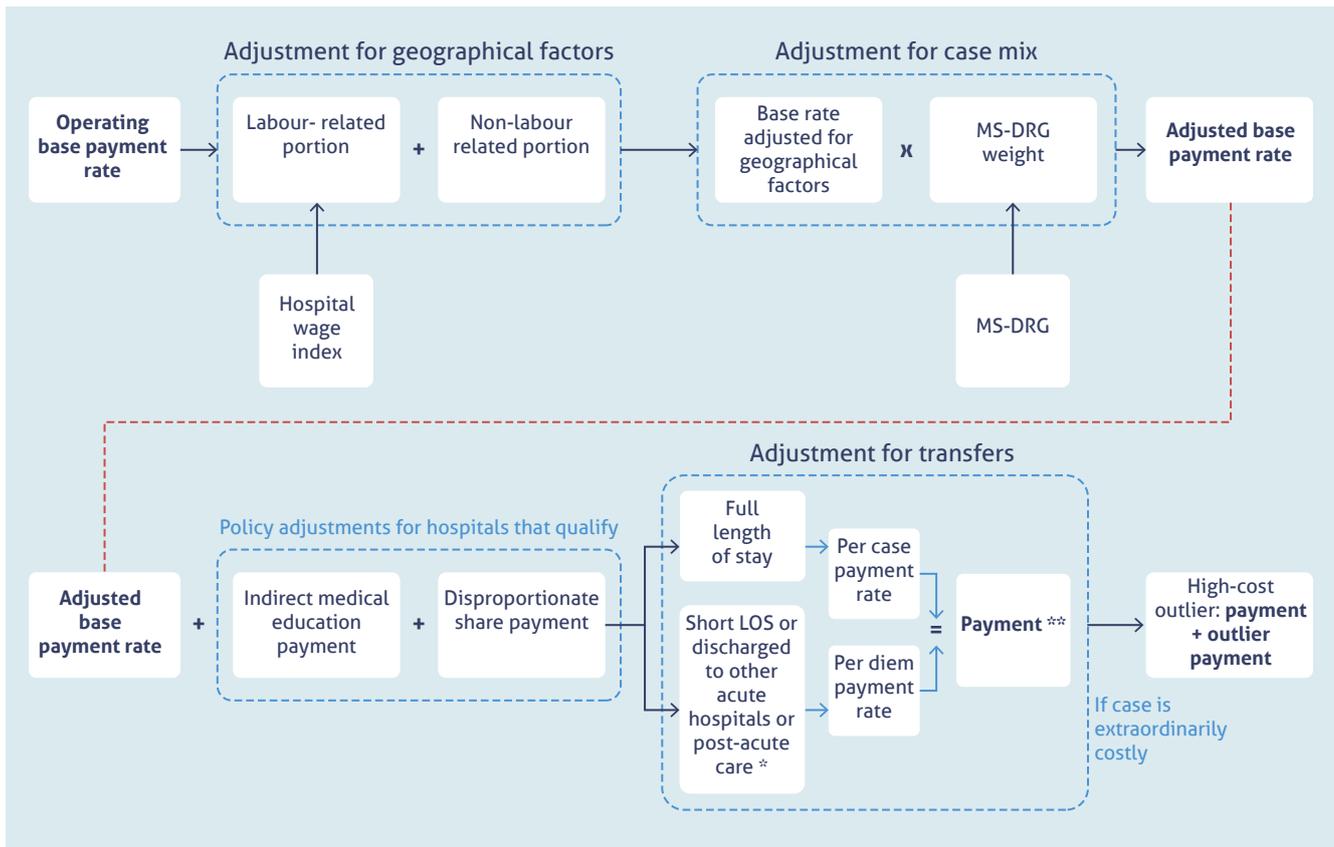
14 Eligible hospitals must meet the following conditions to obtain CAH designation: have 25 or fewer acute care inpatient beds; be located more than 35 miles from another hospital; maintain an annual average length of stay of 96 hours or less for acute care patients and provide 24/7 emergency care services.

15 Equity in payment — which means that hospitals in similar situations get paid the same price for the same service — is an underlying key principle of the IPPS design framework. This also means that payment is not hospital specific.

16 The MS-DRGs system has 335 base DRGs, most of which are split into two or three MS-DRGs based on the presence of either a comorbidity or complication or a major comorbidity and complication.

17 Medicare pays separately for the direct costs of operating approved training programs for residents.

**Figure 5**  
Calculation of Medicare acute inpatient payment



Source: Adapted from Medicare Payment Advisory Commission, 2018e.  
Note: \* Transfer policy for cases discharged to post-acute care settings applies for cases in 280 selected MS-DRGs. \*\* Additional payment made for certain rural hospitals.

### Skilled nursing facilities services

The total number of skilled nursing facilities (SNFs) has increased moderately since 2009, and the mix of facilities shifted from hospital-based to freestanding facilities. In 2017, hospital-based facilities made up 5% of the 15 277 SNF facilities. Medicare covered 2.3 million admissions with an average 25.7 days covered per admission in 2016 (Medicare Payment Advisory Commission, 2018c).

The Medicare SNFs benefit covers skilled nursing care, rehabilitation services and other goods and services and pays facilities a pre-determined daily rate for each day of care. The prospective payment system rates are expected to cover all operating and capital costs that efficient facilities would be expected to incur in furnishing most SNF services, with certain high-cost, low-probability ancillary services (such as magnetic resonance imaging and radiation therapy) paid separately.

Daily payments to SNFs are determined by adjusting the base payment rates for geographic differences in labour costs and case mix. To adjust for labour cost differences, the labour-related portion of the total daily rate is multiplied by the hospital wage index in the SNF's location. The daily base rates

are adjusted for case mix using a system known as resource utilization groups (RUGs)<sup>18</sup>. Each RUG has associated nursing and therapy weights that are applied to the base payment rates.

### Outpatient hospital services

Most hospitals provide outpatient services, including outpatient surgery and emergency services. From 2007 to 2017, overall spending by Medicare and beneficiaries on hospital outpatient services increased by 115% (Medicare Payment Advisory Commission, 2018c).

The unit of payment under the outpatient prospective payment system (OPPS) is the individual service as identified by Healthcare Common Procedure Coding System codes. CMS classifies services (and their codes) into ambulatory payment classifications (APCs) based on clinical and cost similarity. All services within an APC have the same relative weight. In addition, drugs and biologicals whose costs exceed a threshold (US\$ 110 per day in 2017) have separate APCs. Furthermore, CMS assigns some new services to “new technology” APCs based only on similarity of resource use. CMS chose to establish new technology APCs because some services were too new to be represented in the data the agency used to develop the initial payment rates for the OPPS<sup>19</sup>.

CMS reviews and revises the APCs and their relative weights annually. The review considers changes in medical practice, changes in technology, addition of new services, new cost data and other relevant information. CMS consults with a panel of outside experts as part of this review. CMS also annually updates the conversion factor by the hospital market basket index minus a multi-factor productivity adjustment.

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<sup>18</sup> A new case-mix classification system — the Patient-Driven Payment Model (PDPM) — will be used as from October 1 2019. In the PDPM, there are five case-mix adjusted components: Physical Therapy (PT), Occupational Therapy (OT), Speech-Language Pathology (SLP), Non-Therapy Ancillary (NTA), and Nursing. Each resident is to be classified into only one group for each of the five case-mix adjusted components. For each of the case-mix adjusted components, there are a number of groups to which a resident may be assigned: 16 PT groups, 16 OT groups, 12 SLP groups, six NTA groups and 25 nursing groups. As opposed to RUG, in which a resident’s classification into a single group determines the case-mix indexes and per diem rates for all case-mix adjusted components, PDPM classifies residents into a separate group for each of the case-mix adjusted components, which each have their own associated case-mix indexes and per diem rates. Additionally, PDPM applies variable per diem payment adjustments to three components, PT, OT, and NTA, to account for changes in resource use over a stay. The adjusted PT, OT, and NTA per diem rates are then added together with the unadjusted SLP and nursing component rates and the non-case-mix component, as is done under RUGs, to determine the full per diem rate for a given resident.

<sup>19</sup> Services remain in these APCs for two to three years, while CMS collects the data necessary to develop payment rates for them.

## Physician and other health professional payment system

In 2016, total primary care services had grown to 148.8 million units of service, an increase of about 10% compared with 2012. Primary care physicians accounted for most of these services (73%). Primary care services billed by advanced practice nurses<sup>20</sup> grew from 15.3 to 28.2 million, or 19%, from 2012 to 2016. Primary care services billed by physician assistants increased to 12.5 million, or 8% (from 7.5 million or 6% in 2012) (Medicare Payment Advisory Commission, 2018c).

Medicare reimburses specialist services (including office visits, surgical procedures and a broad range of other diagnostic and therapeutic services) according to a relative value scale that ranks several reimbursable medical procedures based on complexity and resources used.

Since 1992, the price of such services is calculated based on Relative Value Units (RVUs) developed with extensive input from the physician community, the United States Department of Health and Human Services, and academics. Medicare's physician fee schedule determines payments for over 7500 physician services. Physician services, as classified by Current Procedural Terminology (CPT) codes and Healthcare Common Procedure Coding System (HCPCS) codes, range from those requiring considerable amounts of physician time and effort, clinical staff, and specialized equipment, to those that require little if any physician time and minimal other resources.

For each service, Medicare determines RVUs for three types of resources. First, physician work accounts for the time, technical skill and effort, mental effort and judgment, and stress to provide a service. Second, practice expenses account for the non-physician clinical and non-clinical labour of the practice, and for expenses for building space, equipment, and office supplies. Third, professional liability insurance accounts for the cost of malpractice insurance premiums<sup>21</sup>.

Adjustments are made to this ranking of services to transform them into fees used for payment. The payment is determined by multiplying the total value of those three factors by a "conversion factor," a dollar amount determined by CMS. The amount is adjusted after applying a geographic adjustment factor considering the varying costs of providing care based on resources available at a location. The RVUs are updated annually based on recommendations by the American Medical Association and its Specialty Society RVS Update Committee. CMS reviews the RVUs of new, revised, and some potentially mis-valued services annually. HCPCS codes and the conversion factor are also updated annually.

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20 "Advanced practice nurses" include certified registered nurse anaesthetists, anaesthesiologist assistants, nurse practitioners, certified nurse-midwives and clinical nurse specialists.

21 Relative Value Units (RVUs), Health Policy Forum, January 12, 2015 [http://www.nhpf.org/library/the-basics/Basic\\_RVUs\\_01-12-15.pdf](http://www.nhpf.org/library/the-basics/Basic_RVUs_01-12-15.pdf).

## Ambulatory surgical centre

ASCs are distinct entities that furnish ambulatory surgical services not requiring an overnight stay. The most common ASC procedures are cataract removal with lens insertion, upper gastrointestinal endoscopy, colonoscopy, and nerve procedures. The number of Medicare-certified ASCs grew at an average annual rate greater than 1% from 2010 through 2016 to 5532 centres. 94% of those centres are for-profit facilities located in urban areas (Medicare Payment Advisory Commission, 2018c).

The unit of payment in the ASC payment system is the individual surgical procedure. Each of the approximately 3500 procedures approved for payment in an ASC is classified into an ambulatory payment classification (APC) group based on clinical and cost similarity. There are several hundred APCs. All services within an APC have the same payment rate. The ASC system largely uses the same APCs as the OPSS. The relative weights for most procedures in the ASC payment system are based on the relative weights in the OPSS. These weights are based on the geometric mean cost of the services in that payment group according to outpatient hospital cost data. The ASC system uses a conversion factor to translate the relative weights into dollar amounts.

## Managed care

The Medicare Advantage (MA) program gives Medicare beneficiaries the option of receiving benefits from private plans rather than from the traditional fee-for-service (FFS) Medicare program. In 2017, the MA program included almost 3,300 plan options offered by 185 organizations and enrolled about 19 million beneficiaries (32% of all Medicare beneficiaries). Medicare pays plans a fixed rate per enrollee rather than FFS Medicare's fixed rate per service (Medicare Payment Advisory Commission, 2018d). Payments are enrollee specific, based on a plan's payment rate and an enrollee's risk score. Risk scores account for differences in expected medical expenditures and are based in part on diagnoses that providers code. Plans often have flexibility in payment methods, including the ability to negotiate with individual providers, care-management techniques that fill potential gaps in care delivery (e.g., programs focused on preventing avoidable hospital readmissions) and robust information systems that can potentially provide timely feedback to providers. Plans also can reward beneficiaries for seeking care from more efficient providers and give beneficiaries more predictable cost sharing, albeit one trade-off is that plans typically restrict the choice of providers.

The plan types are:

- HMOs and local preferred provider organizations (PPOs): these plans have provider networks and, if they choose, can use tools such as selective contracting and utilization management to coordinate and manage care and control service use. They can choose individual counties to serve and can vary their premiums and benefits across counties. These two plan types are classified as coordinated care plans (CCPs).
- Regional PPOs: these plans are required to offer a uniform benefit package and premium across CMS designated regions made up of one or more states. Regional PPOs have more flexible provider network requirements than local PPOs. Regional PPOs are also classified as CCPs.
- Private FFS (PFFS) plans: these plans are not classified as CCPs. They have to either locate in areas with fewer than two network plans or operate as network-based PFFS plans.

Two additional plan classifications cut across plan types: special needs plans (SNPs) and employer group plans. SNPs offer benefit packages tailored to specific populations (those beneficiaries who are dually eligible for Medicare and Medicaid, are institutionalized, or have certain chronic conditions). SNPs must be CCPs. Employer group plans are available only to Medicare beneficiaries who are members of employer or union groups that contract with those plans.

Plan bids partially determine the Medicare payments that plans receive. The bid covers an average, or standard, beneficiary and includes plan administrative cost and profit. CMS bases the Medicare payment for a private plan on the relationship between its bid and benchmark (a bidding target).

### Quality Payment Program

The Quality Payment Program, established by the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA), is a quality payment incentive program for physicians and other eligible clinicians, which rewards value and outcomes in one of two ways: Merit-based Incentive Payment System (MIPS) or Advanced Alternative Payment Model (APM).

Under MIPS, clinicians are included if they are an eligible clinician type and meet the low volume threshold, which is based on allowed charges for covered professional services under the Medicare Physician Fee Schedule and the number of Medicare Part B patients who are covered for professional services under the Medicare Physician Fee Schedule. Performance is measured through the data clinicians report in four areas: quality, improvement activities, promoting interoperability and costs.<sup>22</sup>

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<sup>22</sup> See <https://qpp.cms.gov/mips/overview>

An APM is a payment approach that gives added incentive payments to provide high-quality and cost-efficient care. APMs can apply to a specific clinical condition, a care episode or a population.<sup>23</sup>

### Medicare Value-Based Purchasing

The Hospital Value-Based Purchasing (VBP) Program is a CMS initiative that rewards acute-care hospitals with incentive payments for the quality care provided to Medicare beneficiaries. CMS rewards hospitals based on:

- The quality of care provided to Medicare patients
- How closely best clinical practices are followed
- How well hospitals enhance patient experiences of care during hospital stays

Under the Hospital VBP Program, Medicare makes incentive payments to hospitals based on their performance on each measure compared with that of other hospitals during a baseline period or their performance improvement on each measure compared with their performance during the baseline period.

CMS bases hospital performance on an approved set of measures and dimensions grouped into four quality domains: safety, clinical care, efficiency and cost reduction, and person and community engagement. CMS assesses each hospital's total performance by comparing its achievement and improvement scores for each applicable Hospital VBP measure. Hospital VBP payment adjustments are applied to the base operating Medicare Severity DRG payment amount for each discharge occurring in the applicable fiscal year on a per-claim basis. The Hospital VBP Program is funded by reducing hospitals' base operating MS-DRG payments by 2%.

The Hospital Readmissions Reduction Program (HRRP) supports the VBP program by reducing payments to hospitals with excess readmissions. CMS uses excess readmission ratios (ERR) to measure performance for six conditions/procedures: acute myocardial infarction; chronic obstructive pulmonary disease; heart failure; pneumonia; coronary artery bypass graft surgery and elective primary total hip and/or total knee arthroplasty.

CMS calculates ERRs for Medicare FFS beneficiaries admitted for inpatient care at an applicable hospital, with a principal discharge diagnosis of one of the six conditions or procedures listed above. The measures assess all-cause unplanned readmissions that occur within 30 days of discharge from the initial admission. The measures count patients who are readmitted to the same hospital, or another acute care hospital, for any reason, that is regardless of the principal diagnosis.

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<sup>23</sup> See <https://qpp.cms.gov/apms/overview>

CMS calculates a payment adjustment factor for all applicable hospitals. The payment adjustment factor determines the percent the hospital's payment is reduced. In FY 2019, the maximum reduction is 3%. CMS applies the adjustment factor to all base operating DRG payments for discharges in the program year, regardless of the condition.

Beginning in FY 2019, CMS uses a stratified methodology to calculate hospital payment adjustment factors. The stratified methodology has the following steps:

- Hospitals are assigned to one of five groups based on a hospital's dual proportion. The groups are called peer groups. The dual proportion is the proportion of Medicare FFS and managed care stays where a patient was dually eligible for Medicare and full-benefit Medicaid.
- Median ERR is calculated for each measure and peer group. This peer group median ERR is the threshold CMS uses to assess hospital performance relative to other hospitals within the same peer group. Hospitals whose ERR is greater than the peer group median are considered to have excess readmissions.
- CMS assesses hospital performance for each measure for which the hospital has at least 25 discharges for that procedure or condition. If a hospital has excess readmissions on a measure, that measure enters a formula called the "payment adjustment factor formula". The formula used to determine the payment adjustment factor (P) is the following:

$$P = 1 - \min \left\{ 0.03, \sum \frac{NM_m \text{Payment}(dx) * \max \{ (ERR(dx) - \text{Median peer group } ERR(dx)), 0 \}}{\text{All payments}} \right\}$$

where "dx" is any one of the six conditions/procedures, "payments" are base DRG payments and "ERR" is a hospital's performance on that measure.

- The payment adjustment factor formula includes a neutrality modifier ("NM") that ensures that the stratified methodology meets requirements around maintaining the budget neutrality of the program.
- The payment adjustment factor formula calculates the size of the payment reduction. CMS caps the payment reduction at 3%, thereby setting a minimum payment adjustment factor of 0.97.

### Bundled payments

The CMS Innovation Center has launched a new voluntary episode payment model, the Bundled Payments for Care Improvement Advanced (BPCI Advanced) for 32 Clinical Episodes. This model holds clinicians and provider organizations accountable for quality and costs of care across a

defined episode comprising either a hospitalization or procedure and 90 subsequent days. The first cohort of participants has started participation in this model on October 2018, and the initiative will run through the end of 2023.

BPCI-Advanced is defined by following key characteristics:

- Voluntary model
- A single retrospective bundled payment and risk track for Clinical Episodes, which begins on the first day of the triggering inpatient stay or outpatient procedure and extend through the 90-day period starting on the day of discharge from the inpatient stay or the completion of outpatient procedure
- Twenty-Nine Inpatient Clinical Episodes and three Outpatient Clinical Episodes<sup>24</sup>
- Payment is tied to performance on quality measures
- Preliminary target prices are provided in advance

BPCI Advanced aims to encourage clinicians to redesign care delivery by adopting best practices, reducing variation from standards of care and providing a clinically appropriate level of services for patients throughout a clinical episode. It operates under a total-cost-of-care concept, in which the total Medicare FFS spending on all items and services furnished to a BPCI Advanced Beneficiary during the Clinical Episode, including outlier payments, will be part of the Clinical Episode expenditures for purposes of the Target Price and reconciliation calculations (unless specifically excluded).

Acute Care Hospitals (ACHs) and Physician Group Practices (PGPs) can participate as a Non-Convener Participant (NCP), whereas eligible entities that are Medicare-enrolled providers or suppliers, eligible entities that are not enrolled in Medicare, ACHs and PGPs can participate as Convener Participant (CP). A CP is a type of participant that brings together multiple downstream entities, referred to as “Episode Initiators” (EI). A CP facilitates coordination among its EIs and bears and apportions financial risk under the model. A NCP is a participant that is an EI and does not bear risk on behalf of multiple downstream EIs.

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<sup>24</sup> The 29 Inpatient Clinical Episodes are the following: disorders of the liver excluding malignancy, cirrhosis, alcoholic hepatitis; acute myocardial infarction; back & neck except spinal fusion; cardiac arrhythmia; cardiac defibrillator; cardiac valve; cellulitis; cervical spinal fusion; COPD, bronchitis, asthma; combined anterior posterior spinal fusion; congestive heart failure; coronary artery bypass graft; double joint replacement of the lower extremity; fractures of the femur and hip or pelvis; gastrointestinal haemorrhage; gastrointestinal obstruction; hip & femur procedures except major joint; lower extremity/humerus procedure except hip, foot, femur; major bowel procedure; major joint replacement of the lower extremity; major joint replacement of the upper extremity; pacemaker; percutaneous coronary intervention; renal failure; sepsis; simple pneumonia and respiratory infections; spinal fusion (non-cervical); stroke; and urinary tract infection. The Outpatient Clinical Episodes are the following: percutaneous coronary intervention; cardiac defibrillator; and back & neck except spinal fusion.

CMS has selected seven quality measures for the BPCI Advanced model. Two of them, All-Cause Hospital Readmission Measure and Advance Care Plan, are required for all Clinical Episodes. The other five quality measures below only apply to select Clinical Episodes:

- Perioperative Care: Selection of Prophylactic Antibiotic, First or Second-Generation Cephalosporin
- Hospital-Level Risk-Standardized Complication Rate following Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty
- Hospital 30-Day, All-Cause, Risk-Standardized Mortality Rate following Coronary Artery Bypass Graft Surgery
- Excess Days in Acute Care after Hospitalization for Acute Myocardial Infarction
- CMS Patient Safety Indicators

BPCI Advanced involves Medicare FFS payments with retrospective reconciliation based on comparing all actual Medicare FFS expenditures for a Clinical Episode for which the participant has committed to be held accountable to the final Target Price for that Clinical Episode. This results in a positive or a negative reconciliation amount. All positive and negative reconciliation amounts will be netted across all Clinical Episodes attributed to an EI, resulting in a positive or negative total reconciliation amount. This total reconciliation amount for an EI is then adjusted based on quality performance, resulting in the adjusted positive or negative total reconciliation amount, respectively.

For an EI that is a NCP, the adjusted positive total reconciliation amount is the Net Payment Reconciliation Amount (NPRA), which CMS will pay to the participant. If instead this calculation results in an adjusted negative total reconciliation amount, this amount is the repayment amount which must be paid by the participant to CMS.

For CPs, all adjusted positive total reconciliation amounts are netted against all the adjusted negative total reconciliation amounts for the participant's EIs to calculate either a NPRA or a Repayment Amount.

To determine the EI-specific Benchmark Price for an ACH, CMS will use risk adjustment models to account for the following contributors to variation in the standardized spending amounts for the applicable Clinical Episode:

- Patient case-mix
- Patterns of spending relative to the ACH's peer group over time
- Historical Medicare FFS expenditures efficiency in resource use specific to the ACH's Baseline Period

CMS uses an alternative method to determine the PGP's Benchmark Price. Specifically, since physician affiliation to a PGP changes over time, discrepancies often occur between the pool of Clinical Episodes in the Baseline Period and the pool of Clinical Episodes in the Performance Period. Consequently, BPCI Advanced will base the PGP's Benchmark Price on the Benchmark Price for the ACH where the Anchor Stay or Anchor Procedure occurs. CMS will adjust this ACH-specific Benchmark Price to calculate a PGP-specific Benchmark Price that accounts for the PGP's level of efficiency in the past and the PGP's patient case mix, each relative to the ACH.

The Target Price (TP) = Benchmark Price (BP) \* (1 - CMS discount). Preliminary Target Prices will be provided prospectively before each applicant finalizes its participation agreement with CMS and prior to selection of Clinical Episodes. EIs will receive a preliminary Target Price, determined prospectively based upon the historical patient case-mix. A final Target Price will be set retrospectively at the time of reconciliation by replacing the historic Patient Case Mix Adjustment with the realized value in the Performance Period, which will be transparent and specific to the participant's beneficiaries.

If aggregate Medicare FFS expenditures for items and services included in the Clinical Episode are less than the final Target Price (the Target Price updated to account for actual patient case-mix) for that Clinical Episode, then this results in a Positive Reconciliation Amount. If aggregate Medicare FFS payments for items and services included in the Clinical Episode exceed the final Target Price, then this results in a Negative Reconciliation Amount.

Reconciliation payments, both to participants from CMS and from participants to CMS, are capped at  $\pm 20\%$  of the volume-weighted sum of the final Target Prices across all Clinical Episodes netted to the level of the EI within the Performance Period.

Early enrolment data report 1547 participants, 715 (46%) physician group practices and 832 (54%) hospitals (Navathe, Huang, and Liao, 2018). On average, participants enrolled in eight clinical episodes each. As proportions of all selected episodes, major joint replacement of the lower extremity (53%), congestive heart failure (45%), and sepsis (44%) were the most commonly selected inpatient episodes. The least commonly selected inpatient episodes were double joint replacement of the lower extremity (11%) and combined anterior posterior spinal fusion (11%).

## 2 Medicaid

All states, the District of Columbia, and the US territories have Medicaid programs designed to provide health coverage for low-income people. Although the federal government establishes certain parameters for all states to follow, each state administers their Medicaid program differently, resulting in variations in Medicaid coverage across the country. Beginning in 2014, the Affordable Care Act provides states the authority to expand Medicaid eligibility to individuals under age 65 in families with incomes below 133% of the Federal Poverty Level<sup>25</sup> and standardizes the rules for determining eligibility and providing benefits through Medicaid, CHIP and the health insurance Marketplace.

The foundational statutory provision that governs payment for all Medicaid-covered services identifies several fundamental aims for Medicaid payment policy:

- Assure that payments promote efficiency, quality and economy
- Avoid payment for unnecessary care
- Promote access within geographic areas equal to the general population

There is little federal regulation addressing these payment principles, and states have considerable flexibility in the design of policies to achieve these objectives.

Medicaid uses a variety of payment approaches for different types of providers and for different kinds of services. These include:

- FFS payments with payment for each service determined based on a fee schedule, relative value scale, percent of charges, or another basis
- Per day, per visit, or per encounter payments, which include all services rendered during the relevant period
- Per episode or bundled payments, which include services associated with a specific procedure or diagnosis, usually over more than one day, and which can be narrow (e.g., only inpatient services) or broad (e.g., inpatient, outpatient, and ancillary services)
- Capitation, premium, or global payments that provide an individual with coverage for a defined set of benefits (whether they are used or not) for a specific time (generally one month)

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<sup>25</sup> Federal poverty levels are a measure of income issued every year by the Department of Health and Human Services (HHS). They are used to determine eligibility for certain programs and benefits, including savings on Marketplace health insurance, and Medicaid and CHIP coverage.

- Supplemental or incentive payments not directly related to a service, but generally to a provider characteristic (e.g., serves a disproportionate share of uninsured patients, located in a rural area) or a desired outcome (e.g., achieves certain utilization or spending targets, performs well on quality measures)

In the absence of detailed administrative rules, legal challenges (mainly by providers) have been used to determine the criteria by which these principles should be applied.<sup>26</sup>

On 4 January 2016, CMS implemented new regulations that create a standardized, transparent process for states to follow prior to implementing Medicaid provider payment rate changes in the provider payment structure for services provided on a FFS basis. States are now required to consider input from providers, beneficiaries, and other stakeholders when evaluating the potential impacts of rate changes. In addition, states need to analyse the effect that rate changes may have on beneficiary access to care and then monitor the effects for at least three years after the changes are effective.

In 2015, hospital care was the Medicaid largest spending category (33.9%), followed by nursing care facilities and continuing care retirement communities (16.9%) and physicians and clinical services (12.8%) (Medicaid and CHIP Payment and Access Commission, 2017a).

A description of the systems used by Medicaid to pay for inpatient hospital services, skilled nursing facilities services, outpatient hospital services, physicians and other health professionals and managed care is reported below. As each state is subject to a balanced budget, they frequently alter their tariff schedules as financial conditions warrant.

### Hospital acute inpatient services

States have selected, and CMS approved, a wide range of payment methods for inpatient hospital services, including:

- Diagnosis-related groups (DRGs): most states have adopted payment methods based on DRGs, a classification system adopted by Medicare in 1983. Under this method, hospitals are paid a fixed amount per discharge, with outlier payments for especially costly cases.
- Per diem: some states pay hospitals for the number of days that a patient is in the hospital. Under this method, every procedure has the same base rate, which is multiplied by the total number of days during the stay to determine the total payment.
- Cost-based: some states pay for inpatient services based on each individual hospital's reported costs. This approach is less common than DRGs or per diem-based payment. Many

<sup>26</sup> In January 2015, the U.S. Supreme Court heard arguments in the case of *Armstrong v. Exceptional Child Care, Inc.* and determined that only CMS has the authority to decide whether Medicaid rates are sufficient and that the private parties may not bring suit.

states use cost-based reimbursement for certain types of hospitals, such as small hospitals (such as CAHs) and government-owned hospitals.

As of March 2018, 37 states used DRGs<sup>27</sup> and eight established per diem rates for inpatient hospital services. Five states used some other method, such as a per stay payment or cost-based reimbursement (Medicaid and CHIP Payment and Access Commission, 2018a). For each of these payment methods, a state establishes a base payment. For DRG payments, states typically establish either a base rate specific to each hospital, a state-wide base rate, or a rate based on hospital peer groups. For per diem and cost-based payment methods, base payments are determined using hospitals reported costs.

States adjust hospitals' base payments according to a variety of factors. These include:

- Outlier (48 states): payments are adjusted to account for cases that are extraordinarily costly.
- Location (18 states): payments are adjusted for different geographic areas, generally to reflect significant underlying differences in the cost to provide care in rural versus urban areas.
- Hospital type: some states adjust the base payment or use a different payment method entirely for certain hospitals. For example, many states have separate payment policies for small hospitals, CAHs, teaching and academic medical centres, government-owned hospitals and children's hospitals.

All states have implemented non-payment policies for provider preventable conditions, including health care-acquired conditions such as foreign object retained after surgery and stage III and IV pressure ulcers, and other provider-preventable conditions such as surgical or other invasive procedure performed on the wrong body part. Thirty-two states made incentive payments to hospitals for reducing readmission rates.

States can supplement low FFS base payments by using upper payment limit (UPL)<sup>28</sup>, disproportionate share hospital (DSH)<sup>29</sup> or uncompensated care pool payments to pay for Medicaid shortfall, which is the difference between a hospital's Medicaid payments and its cost to provide services to Medicaid-enrolled patients (Medicaid and CHIP Payment and Access Commission, 2018b).

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27 Some states use the All-patient refined (APR), others the Medicare severity (MS) and a few the All-patient (AP) DRG classification system.

28 UPL payments are lump-sum payments that are intended to fill in the difference between FFS base payments and the amount that Medicare would have paid for the same service.

29 Medicaid DSH payments are statutorily required payments to hospitals that serve a high share of Medicaid and low-income patients.

## Skilled nursing facilities services

State Medicaid programs typically pay nursing facilities a daily rate. State programs generally establish nursing facility payment rates through a cost-based or price-based methodology. In a few cases, states use a combination of the two.

- Cost-based: rates are established based on each nursing facility's reported costs. Typically, each facility's costs are divided by the number of days a patient is in the facility to determine a per diem (daily) amount. Facilities are then paid their actual costs per day up to a predetermined ceiling.
- Price-based: rates are established based on the costs of a group of facilities. All facilities in a group are paid the same base rate or price per day.

As of October 2014, 30 states used cost-based methods and 12 states established prices for nursing facilities. Nine states used a combination of these approaches (Medicaid and CHIP Payment and Access Commission, 2014).

States typically adjust base nursing facility rates according to a variety of factors which include:

- Acuity or case-mix (40 states): rates are adjusted to account for the acuity (level of need) of nursing facility residents. The most common source of information on resident acuity is known as the Minimum Data Set, which is also used to determine Medicare nursing facility payment.
- High-need patients (39 states): rates are adjusted to account for residents with particularly high needs such as ventilator dependence or traumatic brain injury.
- Peer groups (29 states): rates are determined based on peer groups of facilities of similar size and in the same geographic area.

States may also make supplemental payments or incentive-based payments to nursing facilities:

- Supplemental payments (20 states): these are typically lump-sum payments that are not directly associated with an individual nursing facility service. Such payments are often made to public facilities.
- Incentive payments: 23 states made incentive payments based on measures of quality of care. Also, 23 states made payments based on efficiency, typically to reward providers for keeping costs below a specified amount.

## Physician and other health professional payment system

State Medicaid programs, like Medicare and commercial payers, typically pay physicians and other clinicians using a fee schedule that establishes base payment rates for every covered service. State Medicaid programs that pay physicians on a direct, FFS service basis generally use one of three methods for establishing base payment rates (fee schedules):

- The resource-based relative value scale (RBRVS): this system, initially developed for the Medicare program, assigns a relative value to every physician procedure based on the complexity of the procedure, practice expense and malpractice expense. The relative value is multiplied by a fixed conversion factor to determine the amount of payment. State Medicaid programs can use the relative value units and conversion factors established by Medicare or apply their own conversion factors and then update or change the factors when appropriate.
- Percentage of Medicare: this system adopts the Medicare fee schedule, which is based on RBRVS, but pays Medicaid providers a fixed percentage of the Medicare amounts. The Medicaid fee schedule in a state would then be updated automatically whenever Medicare adjusts its physician payment amounts. The amount Medicaid pays is typically less than 100% of the Medicare amount.
- State-specific factors: states can develop their own physician fee schedules, typically determined based on market value or an internal process. States may develop fee schedules when there is no Medicare or commercial equivalent or when an alternate payment methodology is necessary for programmatic reasons (e.g., to encourage provider participation in certain geographic areas).

As of November 2016, 23 states used the RBRVS, 14 states paid physicians a percentage of the Medicare fee schedule and 11 states had a state-developed fee schedule for physician services (Medicaid and CHIP Payment and Access Commission, 2017b).

States may adjust base physician payment rates according to a variety of factors which include:

- Site of service (30 states): payment rates are adjusted to account for the service site (e.g., physician's office or in an institutional facility).
- Patient age (25 states): separate fee schedules for adults and children are developed, particularly for physician services for which there is no adult equivalent (e.g., neonatal critical care) or where the paediatric protocols for an office visit are significantly different from adult protocols.
- Provider type (15 states): separate fee schedules for primary care physicians, mid-level professionals (e.g., nurse practitioners, physician assistants, or nurse midwives), and

specialists are developed. A state may pay mid-level practitioners a percentage of the physician fee schedule or pay specialists an additional amount for certain services.

As of November 2016, every state made some type of adjustment to the base physician fee schedule. The most common adjustments were for advanced practitioners (provider type) and site of service.

States may also make incentive or add-on payments to physicians. Common add-on payments include:

- Academic health centre (26 states): additional payments are made for professionals practicing in an academic health centre to account for the higher average acuity of their patients.
- Primary care case management (22 states): primary care case management programs, in which enrollees are assigned to a primary care provider who receives a small additional payment each month to assume responsibility for coordinating the enrollee's care and assure access.
- Health home (17 states): an incentive or add-on payment for Medicaid physicians practicing in a designated health home is offered.
- Quality or pay-for-performance (eight states): an incentive or pay-for-performance payment is offered if a physician meets certain quality benchmarks, such as a reduction in emergency department use or compliance with diabetes treatment protocols.

In most cases, physician payment is triggered when the provider submits a claim indicating that a service has been provided. Each claim contains a record of the services provided and these services are reported using billing codes. Physician services are commonly reported using CPT codes that are developed and maintained by the American Medical Association.

### **Outpatient hospital services**

State Medicaid programs generally use one of four approaches to pay for hospital outpatient services:

- Fee schedule: a fee schedule is a state's complete list of services and the corresponding payment amounts, which are typically determined based on market value, an internal process, or as a percentage of the Medicare rate. States often have accommodations for services without an established fee.
- Cost-based reimbursement: states pay a percentage of hospital costs, typically as reported in a hospital's Medicare cost report. These costs have a maximum allowable reimbursement rate as well as other state-specific limits.
- APC groups: the APC system, used by Medicare, bundles individual services into one of 833 APCs based on clinical

and cost similarity. All services within an APC have the same payment rate. A single visit may have multiple APCs and multiple separate payments.

- Enhanced ambulatory patient groups (EAPGs): EAPGs bundle ancillary and other services commonly provided in the same medical visit; payment is based on the complexity of a patient's illness.

As of November 2015, 18 states used a bundled payment approach, such as APC or EAPG, 16 used a cost-based system and 13 states used a fee schedule (Medicaid and CHIP Payment and Access Commission, 2016).

States may adjust outpatient payment rates according to a variety of factors. These include but are not limited to:

- Hospital type: some states adjust the base payment or use a different payment method entirely for certain hospitals. For example, 29 states have separate payment policies for small hospitals and critical access hospitals. Less commonly, states establish separate payment policies for teaching hospitals (16 states), government-owned hospitals (11 states), children's hospitals (nine states) and psychiatric facilities (eight states).
- Location (six states): payments are adjusted for services provided in specific geographic areas, to reflect significant underlying differences in the cost to provide care in rural versus urban areas.
- Exempt services: other services, such as clinical laboratory services and partial hospitalizations, are excluded from the outpatient payment methodologies in most states. These services are usually paid for using a different method, such as a cost-based reimbursement.

Forty-five states require prior authorization for certain services before approving payment. The most common services requiring prior authorization are various forms of rehabilitation; physical, occupational, and speech therapies; mental health and certain psychiatric services, and certain diagnostic imaging or radiology services.

States may also provide incentive or add-on payments for outpatient hospital services in addition to the base payment. States commonly provide add-on payments to the following hospital types:

- Government owned: just over 20 percent of US hospitals in 2011 were state or local government owned or operated (Medicaid and CHIP Payment and Access Commission, 2016). About a third of states provide supplemental payments to these hospitals for outpatient services.
- Safety net (nine states): supplemental payments to safety-net hospitals, which provide a significant amount of care to vulnerable populations, are made.

- Academic health centre (13 states): additional payments are made for services provided in an academic health centre to account for higher patient acuity.
- Quality incentives (six states): incentive payments as part of initiatives to improve the quality of health care or to reward hospital efficiency are made.

### Managed care

In 2014, almost 60 percent of all Medicaid beneficiaries were enrolled in a comprehensive managed care plan. States have incorporated managed care into their Medicaid programs for a number of reasons. Managed care provides states with some control and predictability over future costs. Compared with fee for service, managed care can allow for greater accountability for outcomes and can better support systematic efforts to measure, report and monitor performance, access and quality. In addition, managed care programs may provide an opportunity for improved care management and care coordination.

Use of managed care varies widely by states, both in the arrangements used and the populations served. Medicaid programs use three main types of managed care delivery systems (Medicaid and CHIP Payment and Access Commission, 2018c):

- Comprehensive risk-based managed care. In such arrangements, states contract with managed care plans to cover all or most Medicaid-covered services for their Medicaid enrollees. Plans are paid a capitation rate, a fixed dollar amount per member per month, to cover a defined set of services. The plans are at financial risk if spending on benefits and administration exceeds payments; conversely, they are permitted to retain any portion of payments not expended for covered services and other contractually required activities.
- Primary care case management (PCCM). In a PCCM program, enrollees have a designated primary care provider who is paid a monthly case management fee to assume responsibility for managing and coordinating their basic medical care. Individual providers are not at financial risk in these arrangements and continue to be paid on a FFS basis. Several states have enhanced their PCCM programs with targeted care monitoring and chronic illness management to specific enrollees with high levels of need, and by incorporating performance and quality measures and financial incentives for providers.
- Limited-benefit plans. Most states contract with limited-benefit plans to manage specific benefits or to provide services for a particular subpopulation, such as providing inpatient mental health or combined mental health and substance abuse inpatient benefits, non-emergency transportation, oral health or disease management.

States use a variety of methods to set rates for risk-based managed care plans, but all must pay within an actuarially sound range. Many use an administrative process in which a specific rate is set by the state. Others use a competitive bidding or negotiation process. States may also use hybrid approaches, such as setting a range of rates and then asking plans to bid competitively within that range.

At least 24 states use measures of health status to risk adjust their rates, rather than relying on demographic factors alone. Such techniques are meant to adjust rates to better reflect a plan's mix of enrollees and their expected care needs and related expenditures.

### 3 Private health insurance

States are the primary regulators of private health plans. Each state requires insurance issuers to be licensed to sell health plans in the state, and each state has a unique set of requirements that apply to state-licensed issuers and the plans they offer. State insurance laws have sought to keep insurance companies financially solvent, protect against fraud, ensure that consumers receive the benefits promised under their insurance policies and promote the spreading of health risks (Corlette et al., 2017). State regulation of insurance is grounded in laws enacted by each state, and as a result can vary significantly. State Departments of Insurance (DOI) are the primary entities that work directly with insurers to ensure compliance with federal and state standard. The range of regulatory and oversight tools provided via state laws includes in most cases licensing (insurance companies are required to apply for a "certificate of authority"), rate review (DOI have the authority to review premium rates before they are implemented), policy review (DOI review and approve insurers' policy forms before they can be sold), network adequacy, marketing practices and market oversight.

The federal government also regulates state-licensed issuers and the plans they offer. Federal requirements establish a federal floor with respect to access to coverage (e.g., prohibition from basing applicant eligibility on health status-related factors), premiums (e.g., a tobacco user can be charged up to 1.5 times the premium charged to a non-tobacco user), benefits (as an example, minimum hospital stay after childbirth), cost sharing (e.g., limits on annual out-of-pocket spending) and consumer protection (e.g., the percentage of premium revenue spent on medical claims). However, federal law does not prevent a plan from establishing varying reimbursement rates for providers based on quality or performance measures (Fernandez, Forsberg and Rosso, 2018).

Private sector health care prices are largely unregulated (except in the state of Maryland, see below) and agreed upon through negotiations between insurance plans and the providers with whom they contract. Negotiated transaction prices are often unknown to final consumers and to the public<sup>30</sup> as they have been treated as commercially sensitive (“Chaos behind a veil of secrecy” in Uwe Reinhardt’s words (2006)). These prices can vary substantially for similar services across providers and insurers (Clemens, Gottlieb and Moln, 2017). On average, commercial prices are about 50% higher than average hospital costs and are often far more than 50% above Medicare payment rates (Cooper et al., 2019; Medicare Payment Advisory Commission, 2018a; Selden et al., 2015). Prices also vary substantially across regions, across hospitals within regions and even within hospitals (Cooper et al., 2019). At the state level, Massachusetts, New York, Rhode Island, Vermont, and New Hampshire have all published reports on the causes and extent of provider price variation within their borders. All reports conclude or assume that high prices are correlated with a provider’s position within the health care market, which the reports define in terms of size, competitive position and/or brand. Although these studies were designed differently and use slightly different methodologies, the results are informative. In Massachusetts, “the highest-priced hospitals were consistently paid 2.5 to 3.4 times more than the lowest-priced hospitals for the same set of services” (The Commonwealth of Massachusetts, 2017). The New York report (New York State Health Foundation, 2016) concludes that, depending on the region, in 2014 the highest-priced hospitals were paid blended prices 150% to 270% more than the lowest-priced hospitals. The Rhode Island report (Xerox, 2012) determines that in 2010, its highest-paid hospital received rates that were 210% more for inpatient care and 73% more for outpatient care. The Vermont report (University of Vermont College of Medicine, University of Massachusetts Medical School, and Wakely Consulting Group 2014) finds that in 2012 its highest-paid hospital was paid 180% more for inpatient care. Finally, the New Hampshire report (London et al., 2012) finds that in 2009 its highest-paid hospital was paid 217% more.

Insurers and providers negotiate how much providers are paid for services. Like any negotiation, provider payments reflect the parties’ respective bargaining positions. For example, if an insurer covers a large percentage of the patient population, it can steer a large amount of business to the “in-network” providers with which it contracts. Providers may agree to accept relatively lower rates from the insurer to access this patient volume and capture this source of revenue. On the other hand, if a provider has a good reputation or strong brand name, offers specialty services, or is the largest or only provider in the area, it may have the leverage to demand higher rate from insurers and have greater increases in prices over time (Baker et al., 2014).

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30 The federal government adopted the requirement for hospitals — as of 1 January 2019 — to post list prices for all their services to promote “transparency” in health care in the belief that health markets would work better if consumers had more information.

Providers' market power and negotiating leverage are derived from several complex and mutually reinforcing factors, including reputation, location, and unique service offerings. Some hospitals and physicians can demand higher prices based on a reputation for quality, regardless of whether that reputation is correlated with objective measures of higher quality. Others benefit from their prominence as well-known, research-oriented, academic health centres. Insurers often believe that, without these so-called must-have providers, their networks will not be attractive to employers and consumers. Institutional details have been also found to have an influence on physician services pricing, with large providers likely to engage in detail bargaining with insurers over service-specific pricing, whereas insurers offer small physicians' groups contract based on a fixed fee schedule.

While factors that contribute to increased negotiating leverage in health care markets are complex and the outcome of price negotiations between dominant insurers and dominant providers — also known as a bilateral monopoly<sup>31</sup> — is difficult to predict, the result appears clear: prices bear little relation to the cost of production and price variations are not adequately explained by differences in hospital costs of delivering similar services at similar facilities.

A common feature of contracts negotiated between private health plans and providers is a form of benchmark to Medicare. This enables contractors to simplify their contracts, use the information available from Medicare on the relative cost of providing services as a benchmark and ensure access to "medically necessary" services (Clemens, Gottlieb and Molná, 2017). Hospital prices negotiated with private health plans have been found to be partly associated with Medicare payment rates (Cooper et al., 2019), whereas payment rates set by Medicare significantly influence private insurance payments to physicians, in particular, in markets with low physician concentration or high insurer concentration (Clemens, Gottlieb and Molná, 2017). Three quarters of the services and 55% of the spending (physicians) are benchmarked to Medicare. Deviations from Medicare payment rates involve contracts with large physicians' groups and payments for diagnostic imaging services. Benchmarking is strongest in payment for services where the average cost reimbursement will be most aligned with marginal costs.

The information content of the relative value scale on which Medicare's payments are based can be interpreted as a knowledge standard and, more generally, as a public good. However, as prices convey signals and guide firms when they make production decisions and consumers as they allocate their budgets, Medicare price distortions may result in inefficient allocation of resources among providers and levels of care, and inefficient provider cost structure.

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31 As a matter of economic theory, under a "bilateral" monopoly, output falls below competitive levels and consumers are worse off than they would be with competitive structures in both markets (Blair, Kaserman, and Romano, 1989).

The markets for hospitals, specialist physician organizations, and primary care physician organizations at the Metropolitan Statistical Area (MSA) level became more concentrated across the United States between 2010 and 2016 (Fulton, 2017). In 2016, 90% of MSAs were highly concentrated<sup>32</sup> for hospitals, 65% for specialist physicians, 39% for primary care physicians and 57% for insurers. Insurance markets are highly concentrated: the national market shares of the four largest commercial health insurers was 83% in 2014 (up from 74% in 2006) (Dafny, 2018), and the two largest insurers had 70% or more of the market in half of the MSA (Gaynor, 2018).

Consolidation between hospitals, physician practices and insurers who are close competitors has reduced competition, leading to higher prices through enhanced bargaining position and leverage in negotiations with the relevant counterpart (Melnick and Fonkych, 2016; Dafny 2018; Gaynor, 2018).

## 4 Reference pricing

Reference pricing is a type of health benefit design that gives consumers seeking health care services an incentive to shop around for the best deal. Under reference pricing, the health insurer sets a cap — or “reference price” — for certain elective treatments and procedures (e.g., knee replacement) that represents the maximum amount the insurer will pay for the treatment or procedure regardless of the health care provider selected by the patient. If the patient selects a provider who has negotiated a price with the insurer that is at or below the reference price, the entire price is covered by the insurer and the patient owes nothing. If the patient selects a provider whose price is higher than the reference price, the insurer will pay the reference amount, leaving the patient responsible for the difference.

Reference pricing may increase pressures for price competition and lead to further cost-reducing innovations in health care products and processes (Robinson, Brown and Whaley, 2017). It could save money when there are big price variations and consumers have the time and information to shop for the best option in areas with several providers. However, if low-priced providers increase prices to the reference price or near it, potential savings will not materialize (Fronstin and Roebuck, 2014).

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<sup>32</sup> The Herfindhal-Hirschman index (HHI) is used to measure market concentration. It is calculated by squaring the market share of each firm competing in a market and summing those values across all firms. Highly concentrated markets are those with HHIs greater than 2500.

## 5 Balance billing

In 29 states and the District of Columbia, there are no state laws or regulations that protect privately insured consumers from balance billing by out-of-network providers in Emergency departments or in-network hospitals (Lucia, Hoadley, and Williams, 2017). Given that many insurance plans have very minimal or do not have any out-of-network coverage, exposure to balance billing is a source of increased concern to consumers (Hempstead, 2018).

Medicare participating providers<sup>33</sup> cannot balance-bill for additional charges, whereas non-participating providers can balance-bill beneficiaries, but by law the amount they balance-bill cannot exceed 15% of the Medicare-approved payment amount for non-participating providers for each service (95% of the Medicare fee schedule amount)<sup>34</sup>.

Additional protections apply to Medicare beneficiaries with low incomes and limited savings who are enrolled in the Qualified Medicare Beneficiary (QMB) program. Beneficiaries enrolled in the QMB program do not have to pay Medicare cost sharing (deductibles, copayments, and coinsurance) and Medicare participating and non-participating providers are not allowed to bill them for Medicare cost sharing or balance billing amounts. The Medicaid program in the beneficiary's state is responsible for paying for cost-sharing expenses. The amount paid for cost sharing, however, may be limited according to state rules (Kosimar, 2017).

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<sup>33</sup> Medicare participating providers are those that have signed an agreement to accept the Medicare-approved amount as full payment for covered services, whereas non-participating providers are those that haven't signed an agreement to accept Medicare rates but they can still choose to accept Medicare rates for individual services.

<sup>34</sup> <https://www.medicare.gov/your-medicare-costs/part-a-costs/lower-costs-with-assignment>.

## 6

### Are hospitals cost shifting?

One argument for why prices have been rising is that hospitals are simply cost shifting by demanding higher private payment rates to make up for lower payment rates from Medicare and Medicaid. Price differences alone do not provide evidence of cost shifting because different payers may have a different willingness to pay for services. At issue is whether one set of payers (usually private insurers) is paying more because someone else (usually public payers) is paying less. The notion that high private payment rates are efforts to cost shift assumes that hospitals operate under a structure so that any reduction in payment rates from public programs like Medicare must be made up by increases in private payment rates.

There is an alternative theory that hospitals in concentrated markets with high private payment rates have negative Medicare margins because of higher costs (Frakt, 2014). Weak cost controls could be caused by the lack of competition in these markets. In this scenario, higher payments from private payers compensate for higher costs rather than for lower payments from public programs. This theory is consistent with findings from the Massachusetts Attorney General (The Commonwealth of Massachusetts, 2017) that higher prices for health care in the state reflected the hospitals' higher cost structures but were not necessarily caused by them. This theory is also consistent with recent studies demonstrating that private payment rates and market conditions are related to hospital cost structure. Hospitals in markets with less competition appear to be less efficient and thus have higher cost structures; this reduces their overall margins and necessitates higher commercial rates.

A study of 61 hospitals participating in the value-based purchasing initiative of the Integrated Healthcare Association demonstrated that hospitals in concentrated markets are more likely to focus on revenue enhancement from private payers — cost shifting — while hospitals in competitive markets are more likely to focus on cost moderation. A review of inpatient payment rates across hospital markets between 1995 and 2009 found that the hospitals most adversely impacted by Medicare cuts — that presumably had the highest Medicare volumes — did not make up the shortfall with increased prices from other payers, while those affected the least actually increased revenues. These studies find that what looks like cost shifting may be inefficient behaviour related to markets lacking competition (National Academy of Social Insurance, 2015).

## 7 Maryland<sup>35</sup>

In 1977, Maryland became the first and only state to receive a waiver from CMS, allowing the state to set rates for all patients, regardless of their insurance, so long as the state was able to keep the cost growth below the national level. An independent state agency, the Health Services Cost Review Commission (HSCRC)<sup>36</sup>, was also empowered to set prices for hospital procedures across the state. These rates are updated each year based on multiple factors, including the Medicare “market basket” forecast, economic conditions, productivity improvements, changes in case mix and the previous year’s performance. Hospitals can appeal the commission if they feel that rates are unfair.

Evidence shows that Maryland’s rate setting program has consistently held hospital cost growth per admission to below the national average (Murray, 2009). Between 1976 and 2007, Maryland had the second lowest rate of increase in costs per admission in the US. The Maryland experience shows the advantages of a system that ties all stakeholders together under a common set of rules and illustrates the importance of an independent authority to set rates that ensure cost containment and provide the means of financial stability to hospitals.

The fact that Maryland’s established rates have been relatively generous — set higher than Medicare reimbursements in the rest of the country — ensured that hospitals were able to cover their costs and have sufficient incentives to continue to provide the service, avoiding shortages. Additionally, the use of quality measures has protected against decreases in the quality of services provided. However, in recent years, the cost per admission grew at a faster rate in Maryland than in the rest of the nation, leading to concerns that, absent a change in this trajectory, Maryland’s long-standing waiver could be in jeopardy. Furthermore, the focus on cost per admission was poorly aligned with other health care delivery system reforms under way in Maryland and nationally that focus on comprehensive, coordinated care across delivery settings.

On January 1, 2014, Maryland implemented its All-Payer Model for hospitals, which shifted the state’s hospital payment structure to an all-payer, annual global hospital budget that encompasses inpatient and outpatient hospital services (Rajkumar et al., 2014). Maryland’s All-Payer Model builds on the state’s all-payer hospital rate setting system. The All-Payer Model operates under an agreement with CMS<sup>37</sup> that limits per

35 The state of Maryland has a population of 6 million inhabitants served by 47 general acute care hospitals.

36 The HSCRC works closely with the Maryland department of health, and its seven commissioners are appointed by the Maryland governor. The agency employs 39 full-time staff, and its budget of US\$ 14.1 million is funded by a fee collected from hospitals. The HSCRC operates an Advisory Committee and technical Working Groups for formal expert technical consultation. The HSCRC is independent and thus its decisions are not reviewed by the legislative or executive branches.

37 <http://www.hsrc.state.md.us>

capita total hospital cost growth for both Medicare and all payers and generates US\$ 330 million in Medicare savings over 5 years. Under the Maryland All-Payer Model, the HSCRC establishes an annual global budget<sup>38</sup> built from allowed revenues during a base period (the year 2013), which are adjusted for following years using a number of factors, both hospital specific and industry wide: an allowed rate of hospital cost inflation, approved changes in the hospital's volume based on changes in population demographics and market share, rising costs of new outpatient drugs, and additional adjustments related to reductions in potentially avoidable utilization and quality performance (Health Services Cost Review Commission, 2018).

The HSCRC sets an agreement with each hospital in Maryland following the "Global Budget Revenue" (GBR) model. This model is a revenue constraint and quality improvement system designed by the HSCRC to provide hospitals with strong financial incentives to manage their resources efficiently and effectively in order to slow the rate of increase in health care costs and improve health care delivery processes and outcomes. The GBR model is consistent with the hospital's mission to provide the highest value of care possible to its patients and the communities it serves. The GBR model assures hospitals that adopt it that they will receive an agreed-on amount of revenue each year — i.e., the hospital's "Approved Regulated Revenue" under the GBR system — regardless of the number of Maryland residents they treat or the amount of services they deliver provided that they meet their obligations to serve the health care needs of their communities in an efficient, high quality manner on an ongoing basis.

The GBR model removes the financial incentives that have encouraged hospitals to increase their volume of services and discouraged them from reducing their levels of "Potentially Avoidable Utilization". It also provides hospitals with flexibility to use their agreed-on global budgets to effectively address the objectives of better care for individuals, higher levels of overall population health and improved health care affordability. In accepting the agreement, the hospital agrees to operate within the GBR's financial constraints and to comply with the various patient-centred and population-focused performance standards established by the HSCRC, including all the existing components of the Maryland Hospital Acquired Conditions program, the Quality Based Reimbursement program and the readmissions reduction program. The hospital agrees also to cooperate with HSCRC in the collection and reporting of data needed to assess and monitor the performance of the GBR model and in the refinement of the GBR model and the related performance standards in the future.

The HSCRC then sets rates for services that Maryland hospitals use to bill all payers so that total payments (based on expected utilization) will match the global budget. As under Maryland's previous hospital payment system, each hospital bills payers

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<sup>38</sup> The global budgets encompass 95% of hospital revenues.

for services provided using the hospital's service-specific rates. Unlike the previous system, the global budget establishes a ceiling on hospital revenues. In this context, hospitals have an incentive to ensure that revenues do not fall short of or exceed their budgets. To the extent that actual utilization deviates from projected utilization and hospital revenues vary from the global budget, a one-time adjustment to the approved budget for the following year is made to compensate hospitals for charges less than the approved budget and to recoup charges in excess of approved revenues. However, hospital revenues are expected to conform closely to the global budgets, otherwise penalties are applied to discourage patterns of overcharging or undercharging.

To compensate for some amount of deviation from the underlying utilization assumptions, hospitals are permitted to adjust their rates during the course of the year to reach their global budgets<sup>39</sup>. However, there are limits on the size of adjustments that are permitted<sup>40</sup> and rate adjustments must be applied uniformly to all services.

Maryland's All-Payer Model has continued to reduce both total expenditures and total hospital expenditures for Medicare beneficiaries without shifting costs to other parts of the health care system outside of the global budgets. These reductions were driven by reduced expenditures for outpatient hospital services. In contrast, there were no statistically significant impacts on total expenditures or total hospital expenditures among commercial insurance plan members. Maryland hospitals were able to operate within their global budgets without adverse effects on their financial status (RTI International, 2018). However, the current approach, which is focused on hospitals, does not sufficiently provide for comprehensive coordination across the entire health care system. Because of this limitation, the federal government required Maryland to develop a new model that encompasses all of the health care that patients receive, both inside the hospital and the community. To this aim, on July 9, 2018, Maryland and the federal government signed the Total Cost of Care Model (TCCM) State Agreement, which became effective January 1, 2019. To achieve a patient-centred system, the TCCM includes the following key elements:

- Care will be coordinated across both hospital and non-hospital settings, including mental health and long-term care.
- The TCCM will invest resources in patient-centred care teams and primary care enhancements.
- Maryland will set a range of quality and care improvement goals. Providers will be paid more when patient outcomes are better.

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<sup>39</sup> The HSCRC monitors hospital charges and service volume through monthly reports to ensure compliance with the global budget of each hospital.

<sup>40</sup> Hospitals are permitted to vary their charges from the approved rates plus or minus 5% without permission. Up to 10% variation is allowed but requires permission from the HSCRC. The HSCRC will consider variation beyond 10% under special circumstances such as to avoid penalizing hospitals for reductions in Potentially Avoidable Utilisation.

- Maryland will set a range of population health goals addressing opioid use and deaths, diabetes, and other chronic conditions.
- State flexibility will facilitate programs centred on the unique needs of Marylanders, the provider community, geographic settings, and other key demographics.

As part of the federal agreement to put the new TCCM in place, all-payer hospital cost growth will continue to be limited to 3.58% per capita, a limit that was set in 2014 based on the long-term growth of Maryland's economy. As part of this Model, Maryland commits to saving US\$ 300 million in annual total Medicare spending by the end of 2023.

A central part of the TCCM is the Maryland Primary Care Program which is intended to support the delivery of advanced primary care throughout the state and allow community providers to play a vital role in prevention, improving health outcomes and controlling total health care spending growth. CMS will provide funding directly to the practices to strengthen and transform the delivery of primary care around five functions: access to care; care management; comprehensiveness and coordination; patient and caregiver experience; and planned care and population health. Care Transformation Organizations<sup>41</sup> will assist practices in meeting care transformation requirements by providing care coordination services; support for care transitions; data analytics and informatics; standardized screening; and assistance with meeting care transformation requirements.

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<sup>41</sup> A Care Transformation Organization is defined as an entity that hires and manages an interdisciplinary care management team capable of furnishing an array of care coordination services to practices. The interdisciplinary care management team may furnish care coordination services such as: pharmacist services, health and nutrition counselling services, behavioural health specialist services, referrals and linkages to social services, and support from health educators and community health workers (<https://health.maryland.gov/mdpcp/Pages/care-transformation-organizations.aspx>).

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