3/

Payment methods

Price setting is central to establishing sound payment systems for health and hospital services. Factors contributing to determining price levels include the total amount of public money spent on health, service delivery costs, wages for specialists and other health workers, as well as the burden of disease and its complexity. This paper focuses on the subset of settings described in the nine case studies to assess how price setting is integrated into provider payment systems.

Reinhardt (2006, 2011, 2012a) identified three main dimensions of payment methods for health care:

- The base or *unit of activity* upon which prices are defined and set.
- The level of the payment or *price per unit* of the chosen base.
- The *administrative and economic process* by which that price level is determined.

Each of these dimensions is important in aligning payment systems with the goals that health systems are trying to achieve and balancing the interests and financial risk taken by patients, health providers, payers, and communities. This section focuses on the base for payment, or the unit of activity upon which prices are defined and set.

3.1 The base for payments

Building on existing studies (Berenson et al., 2016, Miller, 2007), the base for payments are described by the main category of payment and the extent to which they contribute to (or detract from) broader health systems objectives (Figure 8).

Budget-based line item and global payments are typical in many low- and middle-income settings, but these are gradually being replaced by other methods (Mathauer and Wittenbecher, 2013). This is because such methods are not strongly aligned with the costs that health care providers may incur in delivering different types of services; as such, they may provide incentives for under-provision of needed care. Line item budgets specify detailed amounts for each line item (i.e., personnel, medicines, supplies, etc.) based on the previous year's budget allocation. The advantages of line-item budgets are predictability and control. At the same time, they are not linked to the type and volume of services provided, nor do they provide any incentives for efficiency or quality. Global budgeting has replaced line-item budgeting in many settings that rely on regulation to control health spending. A global budget provides fixed funding for a specific population group and offers more flexibility in allocating resources. Like line-item budgets, global budgets are commonly based on prior years' allocations, although capitation and other methods can be used (Berensen et al., 2016; Miller, 2007).

Figure 8
Main categories of base for payments, and whether they could contribute to (+) or detract from (-) health system objectives

	Health system outcomes						
Base for payment	**Increasing utilization (number of cases)**	**Increasing volume (number of services)**	**Controlling expenditures**	**Promoting efficiency**	**Promoting quality of care**	**Administrative ease**	**Transparency**
Budget							
Line item budget	–	–	+	–	unclear	+	+
Global budget	–	–	+	unclear	unclear	+	–
Activity based							
Fee-for-service	+	+	–	–	unclear	+	+
Per diem	+	+	–	–	unclear	+	–
Diagnosis Related Groups (DRG)	+	–	unclear	+	unclear	–	+
Population based							
Capitation	–	–	+	+	unclear	+	–
Consolidated							
Bundled episode	unclear	+	unclear	+	unclear	–	–
Global capitation	–	–	+	unclear	unclear	+	–
Incremental							
Pay for performance	+	+	unclear	unclear	unclear	–	+

Sources: Geissler et al., 2011; Berenson et al., 2016; authors.

Payment methods directly linked to activities include FFS, per diem, and DRGs. These approaches require a well-defined planned episode of care and strong evidence that such care will achieve the desired outcomes. FFS is typically based on a schedule that lists the prices for individual services, with the definition of services based on established classification codes, such as the Current Procedural Terminology.[3] Fees are developed using relative weights or relative value units. One example is the resource-based relative value scale (RBRVS). The RBRVS was initially developed in the 1990s for the Medicare program in the USA and is now commonly used in other settings. It assigns a relative value to every physician procedure or service based on two main variables: the relative amount of physician time, level of skill, training, and intensity in providing a given service, and the costs of maintaining a practice including rent, equipment, supplies, and non-physician staff costs. The relative value is multiplied by a fixed conversion

3 The Current Procedural Terminology is a numeric coding system used primarily to identify medical services and procedures furnished by physicians and other health care professionals (AMA, 2019).

factor (the base rate) to determine the price. The limitations in RBRVS include values inflated for specialist payment services and insufficiently valuing time and effort required to manage patients with complex conditions and multi-morbidities (Berenson and Goodson, 2016).

The FFS method rewards activity. It tends to result in an over-provision of services because of the incentives for volume regardless of patient need. Per diem payments offer a fixed amount per day of hospital or residential care regardless of care provided or costs incurred. In many settings, per diem payments are adjusted for case mix or estimated for each hospital ward or specialty. They are administratively simple but provide incentives for longer lengths of stay. In contrast, DRGs provide strong incentives for reducing length of stay. DRG payments group patients with similar clinical characteristics, use cost information to determine weights based on average treatment costs, and apply a conversion factor to generate a price for each DRG. In comparison with FFS, DRGs help to contain costs by bundling all goods and services provided during hospitalization into one unit (base) for payment (Annear and Huntington, 2015). In many settings, DRGs have replaced global budgets in order to reward hospital activity (Berenson et al., 2016). A key drawback is administrative complexity.

A growing number of provider payment mechanisms are emerging that explicitly seek to align payment incentives with health system objectives. Ongoing evaluations are essential.

Capitation is a population-based payment, whereby a fixed payment is made prospectively for a defined benefits package per person for a period, regardless of the services provided. Capitation typically adjust for age and gender but not for health status. Primary care capitation generally requires a system in which a gatekeeper or a medical home provides routine care and approves referrals to other health care providers. With a fixed amount, the doctor has a financial incentive to reduce unnecessary care and thus control costs. At the same time, there is an incentive for an under-provision of care and referring complex patients to other health care providers.

The level of aggregation of the services included in the price is a factor in determining the level of financial risk sharing between the payer and provider. FFS payments are the most highly disaggregated (the least bundled) and the global budget is the most aggregated (the most bundled). In the case of FFS payments, health care providers can bill more individual services to cover their costs. Therefore, risk sharing is in favor of the providers, and the payers bear the financial risk. In the case of global budgets and capitation payments, the price is highly aggregated. For example, a capitation payment could be expected to cover many kinds of services for a given person over the course of a year. In this case, the health care providers receive one payment regardless of the services provided.

Therefore, the payer faces limited financial risks linked to the type and amount of services provided, because there is certainty about the expenditure per person covered.

Figure 9
Predominant base for payment for primary care, by type of provider

Setting	Remuneration of provider setting					Remuneration of physicians	
	FFS	P4P	Global budget	Cap	Other	Salary	FFS
A. Private practice group							
Australia	x			x			x
Japan	x		x			x	
USA	x						x
B. Private solo practices							
France	x	x		x	x	x	x
Germany				x	x		x
England				x		x	
Republic of Korea	x	x					x
Thailand (SHI)	x					x	
Thailand (UHC)				x		x	
C. Public clinics							
Thailand				x		x	
Malaysia			x			x	

Sources: case studies (see annexes). Note: FFS: fee-for-service; P4P: pay for performance; Cap: capitation; SHI: Social health insurance; UCS: Universal Coverage Scheme. Primary care and outpatient specialists are not differentiated in Japan or the Republic of Korea. In England, block contracts are still the predominant payment mechanism for the community sector and mental health sector. In Thailand, SHI FFS refers to subcontractors; for UHC and public clinics, capitation is inclusive of salaries.

Integrated approaches attempt to combine payments across sectors to facilitate a more coordinated and flexible approach to care. Such integration can balance the objectives of maximizing beneficial incentives and minimizing potential unintended consequences of different methods (Cashin, 2015). Several kinds of consolidated base for payments exist, such as bundled episode payments and global capitation. A bundled payment methodology involves combining, or blending, the payments for physicians, hospitals, and other health care provider services into a single amount. Bundled episode payments provide a single amount for all services that cover care provided over one episode from beginning to end.

Extending the definition of an episode beyond discharge to follow-up care has been done to motivate health care providers to improve care coordination, communication, reduce costs, and ultimately improve quality of care in addition to lowering costs and utilization. Unintended consequences may include incentives for more cases and procedures that may not be clinically warranted to make up for lost revenues and the under-provision of patient care. Further, administrative costs may be high, not all procedures can be bundled together into one package, and risk-adjustment is needed for high-cost, high-need patients. Evidence about bundled payments is quite limited and the impact to date is mixed (Bertko and Effros, 2011; Delbanco, 2018).

Under global capitation, one payment is made to an integrated health system that is responsible for delivering the primary and referral service package to a relatively large defined population. Payments are typically adjusted for age, sex, and health status. The provider has an incentive for efficiency and cost control, and the payment method promotes integrated care and coordination. However, similar to bundled payments, the needs of high-cost, high-need patients may not be sufficiently covered.

Traditional ways of paying health care providers – such as FFS and capitation – do not explicitly reward providers for delivering better quality care. A growing number of new provider payment mechanisms are therefore emerging that explicitly seek to align payment incentives with health system objectives by rewarding the achievement of targeted performance measures. Mixed impact of these incentives has been reported, however, and ongoing evaluations are essential (Eijkenaar et al., 2013). Studies have not consistently found associations between the amount of the incentive payments and behavioural change (Scott, Lui and Yong, 2018).

3.2 Primary care and outpatient specialists

The most common means of purchasing primary care services is through capitation and FFS; and outpatient services are commonly purchased through FFS, in which health care providers are reimbursed for the activities that they carry out (Figures 9 and 10). FFS schedules are used in France, Japan, Australia, Republic of Korea, the Thai Social Health Insurance scheme, and the USA. In Germany, physicians (especially general practitioners) receive a capitation or lump-sum payment per patient. In countries such as Germany and the USA, the schedule may vary by payer or region.

To counter the disadvantages of FFS (such as lack of incentives for quality and incentives for volume), it can be combined with other mechanisms to promote efficiency and cost control. FFS has been combined with pay for performance (P4P) in France and the Republic of Korea, and capitation in Australia, France, and England. Under Medicaid in the USA, states commonly

make incentive payments to physicians, including those practicing at academic health centres, those participating in primary care coordination and management, home health care; and pay for performance initiatives.

Figure 10
Predominant base for payment for outpatient specialist care, by type of provider

Setting	Remuneration of provider setting					Remuneration of physicians	
	FFS	P4P	Global budget	Cap	Other	Salary	FFS
A. Private practice group							
Australia	x						x
Japan	x		x			x	
USA	x	x			x		x
B. Private solo practices							
France	x				x		x
Germany				x	x		x
England	x					x	
Republic of Korea	x	x					x
Thailand (SHI)				x		x	
C. Outpatient department of public hospitals							
Australia					x		x
Thailand (UCS)				x	x	x	
Malaysia			x			x	

Source: case studies (see annexes). Note: FFS: fee-for-service; P4P: pay for performance; Cap: capitation; SHI: Social health insurance, UCH: Universal coverage scheme. In Thailand, capitation payments are inclusive of salary. In Japan, payment is made to the facility and not to individual physicians.

In England capitation payments are used for primary care, and FFS is applied for outpatient specialists. It can be noted that the general practitioner funding formula for capitation payments in England do adjust for morbidity and mortality. In Malaysian public facilities, global budget is used for both primary care and outpatient specialists, whereby a prospective lump-sum payment is made to health care providers to coverage aggregate costs. In Thailand, the Universal Coverage Scheme that provides care for most of the population uses capitation as base for payment for primary and outpatient specialist care, with the capitation payment inclusive of salary. Malaysia remunerates physicians in the public sector through salary payments. In France, an increasing number of general practitioners working in primary care practice are salaried.

3.3 Inpatient care

In many settings, inpatient payment methods in public hospitals employ DRGs as the base for payment (Figure 11). Implementing DRGs requires classifying health care services and patient case-mix from the most to least complex and assigning prices to them. The financial incentives in the DRG payment have provided strong incentives for changing hospital behaviours.

Figure 11
Predominant base for payment for acute inpatient hospital services, by type of provider

Setting	Public hospitals	Private non-profit	Private for profit
Australia	DRG	Procedure/service	Procedure/service
England	DRG	Procedure/service	Procedure/service
France	DRG, bundled payments for public health services, P4P	DRG, bundled payments for public health services, P4P	DRG, P4P
Germany	DRG	DRG	DRG
Japan	Case-weighted per diem (non-acute); Diagnosis procedure combination (acute); FFS (Outpatient)	Case-weighted per diem (non-acute); Diagnosis procedure combination (acute); FFS (Outpatient)	Case-weighted per diem (non-acute); Diagnosis procedure combination (acute); FFS (Outpatient)
Malaysia	Global budget	FFS	FFS
Republic of Korea	FFS	FFS	FFS
Thailand (UCS)	DRG, global budget, central reimbursement	DRG, global budget, central reimbursement	DRG, global budget, central reimbursement
USA (public)	DRG, per diem	DRG, per diem	DRG, per diem

Source: case studies (see annexes). Note: DRG: Diagnosis Related Group; FFS: fee-for-service; P4P: pay for performance.

The Republic of Korea primarily uses FFS for both public and private hospitals, with limited use of DRGs. Malaysia also uses FFS in private hospitals. Japan uses diagnosis procedure combination for acute care and case-weighted per diem for non-acute care in both public and private hospitals, which can be combined with FFS. By bundling together hospital and physician payments into one unit, Japan addresses the problem of volume and substitution (Ikegami and Anderson, 2012). Other predominant base for payments include combinations such as DRGs, bundled payments for public health services and P4P in France; DRGs, global budget, central reimbursement in Thailand; and global budget in Malaysian public hospitals. In settings that use global budgets, prices are similarly estimated for budget allocations.

3.4
Long-term care

The demand for long-term care (LTC) services is increasing, as well as its importance in health care and social spending (de la Maisonneuve and Martins, 2014; WHO, 2017). This is related to the size and growth of older population groups, many of whom require not only medical care but also assistance with activities in daily living, such as washing, dressing, cleaning and cooking. LTC encompasses both kinds of support in most settings. The base for payment method varies by setting and categories of facility (Figure 12). For most of the settings in this study, assessments are in place that restrict access to government benefits and determine the financial amount for which beneficiaries are eligible. The common thread is the adjustment of the payment level based on level of the complexity of the health condition, physical functioning and medical needs.

In Australia, the federal government subsidizes non-medical care and support for older persons. The subsidies are held by consumers (for home care) or providers (for long-term residential care). Older persons contribute to the cost of their care and accommodation based on means testing, and government subsidies are available for those with low incomes and assets. Annual and lifetime caps are in place to limit the level of means-tested care fees that residents pay. In Australia, the level of funding to the provider is determined by the Aged Care Financing Instrument (ACFI), which consists of 12 sets of questions about care needs and two diagnosis sections. Australia established in 1997 the position of the Aged Care Pricing Commissioner. The Commissioner is an independent statutory office holder who reports to the Minister. The Commissioner's role is to increase the level of transparency in the pricing of residential aged care services and ensure that aged care recipients are charged appropriately through approval of prices beyond the maximum set by the federal government. In addition, the Aged Care Financing Authority (ACFA) is a committee of experts who provide independent advice to the government on funding and financing issues.

Figure 12
Payment methods for long-term care and the basis of adjustment for health need

Setting	Facility type	Payment method	Basis of adjustment for health need
Australia	Nursing home	A means tested medical care fee is applied based on the Aged Care Financing Instrument (ACFI) to determine need. Payments are covered by residents with government subsidies, including a basic daily fee for residential services (covered by residents), accomodation fees (paid by residents and government), and fees for any additional services (paid by residents).	The ACFI consists of 12 sets of questions and two diagnostics sections to determine the overall care profiles and the average cost per stay per person.
England	Nursing home	All costs are covered for those with long term conditions determined as eligible for National Health Service (NHS) Continuing Health Care. A weekly contribution is made for those who don't meet these requirements but require some nursing care (£158.16 per week). Other nursing home costs are means tested. For those on very low incomes, the local authority pays.	The NHS Continuing Health Care assessment measures breathing, nutrition, continence, skin, mobility, communication, cognition, behaviour and other dimensions.
France	Long term residential care	All facilities (private or public) are paid for under the care package, including long-term care. The case-based payment is adjusted for patient need based on scores using the iso-weighted care group (GPMS). Accomodation is paid by the patients.	GMPS measures 238 condition-profiles by evaluating 50 clinical conditions and 12 profiles of care. For each condition-profile, eight resource groups are delineated. These groups define the social care plan, based on an assessment of the dependency calculated using the Gerontology Autonomy and Iso-Resource Groups model, which measures activities in daily living.
	Home care	Health care prices are fixed by the social health insurance fund with fees for services. Prices for social care services are unregulated. Reference prices are used to calculate subsidies (based on the level of autonomy).	
Germany	Outpatient and home care	Care is covered by compulsory long-term care (LTC) insurance. All outpatients receive a monthly lump sum for short-term inpatient care, semi-inpatient services at night, or services to support relatives. Additional monthly contributions are provided if all services are done at home, for professional outpatient services, and for inpatient services.	Financial contributions by LTC insurance depends on the enrollee's need for nursing care. Patient needs are evaluated based on an assessment of physical, medical, cognitive and psychological needs, and the person's ability to live independently and social interactions. Patients are graded on a scale from 0 to 100 and allocated to one of five stages.
	Nursing home	Nursing care charges are negotiated individually between a nursing home, welfare organisations and the LTC funds, whose enrollees contribute at least 5% of the nursing home's days. Patients in nursing homes contribute to nursing home costs in five different ways: fixed copayment; payment for housing, utilities, and meals; investment costs; training levy set by the state; and other additional services.	
Japan	Health facility for elders	Case based payments are adjusted for patient needs, and financed from compulsory LTC insurance. The maximum cash entitlement is determined by functional capacity, and ranges from $50 to $350 per month. Beneficiaries must pay coinsurance ranging from 10% to 30% based on household income. Compulsory LTC insurance covers home helper visits and visiting nurse services; day care; loan of wheelchairs; care provided prior to going to health facilities; and LTC medical facilities.	Seven eligibility levels are based on functional capacity.

Setting	Facility type	Payment method	Basis of adjustment for health need
Republic of Korea	Long term care hospitals	A per-diem case-based payment is determined by medical need. Public LTC insurance is provided. The benefits package includes home and institutional care; home-visit care; nursing; bathing; and assistive devices such as wheelchair, walker, and bath chair, etc. for home care services; aged care facilities; and housing for institutional services. The benefits ceiling per month for residential care depends on five different functional levels determined by a health needs assessment.	Five different functional levels.
USA (Medicare)	Skilled nursing facilities	A predetermined per diem payment is paid based on patient needs. The payment is expected to cover all operating and capital costs, with high-cost, low-probability ancillary services (i.e., magnetic resonance imaging and radiation therapy) paid separately. Adjustments are made for geographic differences in labour costs and case mix. In 2019, the Patient Drive Payment Model (PDPM) will be used that classifies residents into a separate group for each case-mix adjusted component and each has their own case-mix indexes and per diem rates.	The PDPM uses five case-mix adjusted components: physical therapy, occupational therapy, speech-language pathology, non-therapy ancillary, and nursing. Each resident is classified into one group for each component.
Thailand	Home visit	Fixed fee per patient.	-

Source: case studies (see annexes). Note: LTC: Long-term care; P4P: pay for performance; NHS: National Health Service.

In England, all costs are covered for those with long-term conditions assessed as eligible based on a Continuing Health Care assessment, measuring basic physical and cognitive functioning, whether at home or in long-term residential care. A weekly contribution is made for those who don't meet these requirements in residential care but who require some nursing care. All nursing home costs are means tested. Non-medical care costs for low-income patients are covered by the local authority.

In France, nursing home facilities, whether private or public, are funded by case-based payments. There is a three-part tariff comprised of a care package paid by social health insurance, a long-term care (or dependency) bundle paid by the local authorities, and an accommodation fee paid by the patient. The care package for each patient is calculated based on the iso-weighted care group (GPMS) scores, which generate 238 condition-profiles corresponding with the average care needs and dependency level of people living in the facility. The average level of resources required for the 238 profiles was defined by specialists and reported as points per cost item. The dependency level is determined by the Gerontology Autonomy and iso-resource Groups. This instrument uses ten variables measuring physical and mental capacities and seven variables for domestic and social activities (i.e., cooking, household tasks, mobility). For people living at home, medical and social care services are provided and paid for separately. Health care is financed under regulated health insurance prices. Social care

services are provided by other public and private entities, and prices are not regulated. However, reference prices are used by the government to calculate the amount of the subsidies, and these reference rates vary by local authority (*département*) (from 13 EUR to 24 EUR per hour).

In Germany, LTC insurance is compulsory, and financial contributions vary based on the need for nursing care. Evaluations of patient need are based on physical, medical, cognitive and psychological assessments, and the ability to live independently. These assessments are graded on a scale from 0 to 100, which is divided into five stages of need. All people who receive care in an outpatient setting receive a monthly lump-sum contribution for short-term inpatient care, semi-inpatient services at night or for services that support relatives. In addition, they receive a monthly contribution of between EUR 316 to 901, if services are entirely provided by the family and relatives at home; EUR 689 to EUR 1995 for professional outpatient services; and EUR 700 to EUR 2005 for inpatient services.

In Japan, LTC insurance is compulsory for everyone 40 years and older. The fees have been revised to align with policy goals.

For nursing homes, prices are calculated on a per diem basis. If the monthly sum of nursing care charges is higher than the monthly lump-sum payment, residents pay the difference irrespective of their level of need. Nursing care charges are negotiated individually between a nursing home, welfare organizations and LTC funds, whose enrollees contribute at least 5% of the nursing home's nursing days. During these negotiations, nursing homes explain any increase in fees. Nursing home cost data are benchmarked based on size, and those with costs in the lower one-third are deemed cost-efficient. Patients contribute to nursing care charges by paying a fixed copayment based on the monthly average of nursing care charges, after deducting monthly LTC contributions and divided by the number of residents. Patients also cover costs for housing, utilities, and meals; investment costs of nursing homes (i.e., building, equipment and maintenance); a training levy; and additional costs, such as wellness services, superior housing and individual meal plans.

In Japan, LTC insurance is compulsory for everyone 40 years of age and older. Benefits are restricted to services, and the maximum cash equivalent is determined by seven eligibility levels. The levels are based on functional capacity and range from about US$50 to $350 per month. Beneficiaries must pay coinsurance, ranging from 10% to 30% based on household income level. The fee schedule has the same structure as that of the health insurance. The fees and conditions of billing have been revised to align with policy goals. For example, bonus payments for home care agencies are given to employ more experienced workers. The fee schedule is revised every three years, and the base rates differ according to geographic adjustments (with Tokyo as the highest at 11.4% above the base rate).

The Republic of Korea introduced public insurance for LTC, managed by the National Health Insurance Service. The benefits package includes home and institutional care, home-visits for activities in daily living; assistive devices; aged care facilities and institutional services. The benefits ceiling for residential care depends on the need assessment. The payment for residential LTC facilities is per diem adjusted for case mix using a health assessment of five functional levels of the beneficiary. The fee is determined by the insurance service, with no negotiation of fees with providers, based on an analysis of provider activity and cost data.

Starting in 2019, the Medicare program in the USA will apply per diem case-mix adjusted payments for nursing homes using the Patient-Driven Payment Model (PDPM). Five case-mix adjusted components are used: Physical Therapy (PT), Occupational Therapy (OT), Speech-Language Pathology (SLP), Non-Therapy Ancillary (NTA), and nursing. Each resident is classified into one group for each of the five components, mainly based on the primary diagnosis clinical category, and function and cognitive levels. A resident may be assigned to one of 16 PT groups, 16 OT groups, 12 SLP groups, 6 NTA groups, and 25 nursing groups. Each component has their own associated case-mix index and per diem rate. Additionally, the PDPM applies per diem payment adjustments to three components (PT, OT, and NTA) to account for variations in resource use. The adjusted PT, OT, and NTA per diem rates are then added together with the unadjusted SLP, nursing component rates and the non-case-mix component to determine the full per diem rate for a given resident.