

PRICE SETTING AND REGULATION IN HEALTH SERVICES



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HEALTH FINANCING POLICY BRIEF NO. 7

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Price setting and regulation in health services / Sarah L. Barber, Luca Lorenzoni, Tomáš Roubal.

(Health Financing Policy Brief, No. 7)

ISBN 978-92-4-000498-6

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Suggested citation. Price setting and regulation in health services. Geneva: World Health Organization; 2020 (Health Financing Policy Brief, No. 7). Licence: CC BY-NC-SA 3.0 IGO.

Cataloguing-in-Publication (CIP) data. CIP data are available at <http://apps.who.int/iris>.

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Printed in Switzerland.

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Key Messages

- With the increasing levels of public funding to health care, countries are taking strategic approaches in defining what services are purchased and paid for, and how to link payments with quality and performance.
- The price for health services is the amount that must be paid to elicit the supply and quality of health care services that society wishes to have and is willing to pay for.
- The process or negotiation by which prices are determined can be grouped into three main methods: individual negotiations between providers and purchasers, collective negotiation between associations of providers and purchasers, and unilateral decisions by purchasers.
- Collective and unilateral price setting eliminate price discrimination and have performed better in controlling the growth in health care costs. Both have the potential to improve quality better than individual negotiations. A single or collective purchaser also has the power to put some discipline into prices.
- Price adjustments are typically made to ensure coverage and access, for example, to health care providers in rural and remote areas; those treating disproportionately high numbers of low-income or high-cost patients to ensure coverage and quality; and facilities providing medical education.
- Countries have eliminated balance billing as a means of financial protection, in which providers are not permitted to charge patients more than the prices established for covered services.
- Building institutional capacity for price setting and regulation can support the use of prices as policy instruments to attain broader health-related objectives, i.e., guarantee coverage and financial protection, enhance quality and access, and increase efficiency.

ACKNOWLEDGMENTS

Information in this brief relies on a previous WHO/OECD publication by Barber, Lorenzoni, and Ong (2019a, 2019b). In preparing the earlier publication, substantive technical input and detailed annexes were prepared by Jane Hall, Maryam Naghsh Nejad, Kees Van Gool, Michael Woods, Sue Nowak, Alberto Marino, Zeynep Or, Coralie Gandré, Jonas Schreyögg, Ricarda Milstein, Naoki Ikegami, Chiu Wan Ng, Soonman Kwon, Viroj Tangcharoensathien, Walaiporn Patcharanarumol, Taweeri Greetong, Waraporn Suwanwela, Nantawan Kesthom, Shaheda Viriyathorn, Nattadhanai Rajatanavin, Woranan Witthayapipopsakul, Jain Nishant. From WHO, we thank Peter Cowley, Jon Cylus, Tamas Evetovits, Paul Ong, Liviu Vedrasco, Lluís Vinyals Torres. Inke Mathauer and Joe Kutzin provided valuable comments on this brief. The authors remain responsible for errors and omissions.

We gratefully acknowledge financial support from the Kobe Group, Japan.

1. WHAT CONSTITUTES PRICE SETTING AND REGULATION FOR HEALTH SERVICES?

The purpose of this brief is to explain health services price setting and regulation in the context of accelerating progress towards universal health coverage (UHC). There is a special focus on the implications for middle-income settings, where increases in public spending have been accompanied by new ways of purchasing, organizing, and delivering health care (Mathauer & Wittenbecher, 2013). This paper focuses on health services; price setting and regulation for goods, in particular, medicines and medical devices, follow different approaches that are detailed elsewhere (WHO, 2015).

Provider payment systems consist of one or more payment methods including prices and rules,¹ regulations, and supporting systems such as contracting and monitoring mechanisms. These systems create economic signals and incentives that influence behavior. Any payment method has three dimensions: the base upon which prices are defined and set; *the process by which the price level is determined*; and *the price level per unit of payment* (Reinhardt 2006, 2011, 2012). This paper focuses on the second and third dimensions and describes the processes by which price levels are determined.

Price setting refers to an administrative process or negotiation by which prices are determined after the unit for payment is

established (e.g., a general practitioner service, a day of care in a residential facility, or a case of hospitalization). These processes can be grouped into three main methods (Reinhardt, 2012):

- Individual negotiations between providers and purchasers.
- Collective negotiation between associations of providers and purchasers
- Unilateral decisions by purchasers.

From a societal perspective, the price is the amount that must be paid to elicit the supply and quality of health care services that society wishes to have and is willing to pay for. Hence pricing supports broader health systems objectives, i.e., guarantee coverage and financial protection, enhance access and quality, and increase efficiency.

Price regulations usually aim at ensuring price transparency, setting price ceilings on commercial health plans, defining rules for out-of-network provider prices, and instructing providers on conditions of billing within the legislative framework for the health care sector.² This paper focuses on balance billing in which providers are permitted to charge patients more than the price established for covered services, and limitations imposed on balance billing that have been established in some settings as a means of financial protection.

¹ A set of prices and rules used by a purchaser to pay a provider may also be referred to as “tariff”.

² This legislative framework usually comprises a competition, consumer and market authority.

2. WHY IS PRICE SETTING FOR HEALTH SERVICES IMPORTANT IN THE CONTEXT OF UHC?

Middle-income countries represent more than 70% of the world's population and a large share of the disease burden (World Bank, 2019). While increases in public spending on health are occurring across all countries, the share of public spending on health doubled between 2000 and 2016 in middle-income countries (WHO, 2018). With the increase in public spending on health, countries are paying more attention to value for public spending on health, and the decisions about how to channel funding and organize services to respond to people's needs. This is particularly true for inpatient services and curative outpatient care, which accounts for 70% of total public spending on health on average globally (WHO, 2018). As health systems mature, policy decisions about the services covered, payments to providers, and the conditions for those payments become the determining factors in individual care-seeking behaviors (Getzen, 2006). Copayments can determine an individual's decision about whether and which care to access; as such, policies about coverage, payments and prices thus support the progress towards UHC, especially in middle income countries. Given that health

care is far from being a classic market for goods and services, the economic rationale for setting prices is to control costs, foster competition on quality, and mitigate against excessive financial claims (Kumar et al., 2014)

Policy interventions are particularly important because health care markets are characterized by such failures as information asymmetry and lack of information on prices and quality that preclude consumer choice. For many commodities, consumers assess the price and value of goods; in health in developed countries, users have health insurance or access to public services and, consequently, they pay nothing or a relatively small co-payment when using health services. Users are also represented in the market by agents (health care practitioners) instead of operating by themselves, and thus face information asymmetry. These differences make consumers less sensitive to price signals. In addition, the price signals that connect purchasers and providers operate differently because prices are not formed directly by the interplay of demand and supply.

3. HOW DOES PRICE SETTING AND REGULATION FIT WITHIN HEALTH FINANCING POLICY?

Price setting and regulation for health services is a key component of strategic purchasing. It is linked with revenue raising, given that ultimately the prices must be in line with the available resources. There are also associations with pooling, i.e., price setting and regulation can be used to harmonize payment methods and rates across different

schemes or pools. Countries have aligned pricing policies with the broader goals of ensuring financial protection, equitable distribution of resources according to health needs, promotion of quality and public health objectives, as well as controlling the growth in health care expenditures and increase efficiency (Table 1).

Table 1. Key health financing policy issues and ways in which countries have aligned pricing and policy goals

	Policy issues	Ways in which countries have aligned pricing with policy goals
Revenue raising	Ensuring that promised benefits do not exceed available revenues to avoid implicit rationing and informal payments.	Prices are set within the boundaries of available resources.
Pooling	Ensuring that pooling enables the equitable distribution of resources according to needs, and the provision of public health goods.	Prices can be used to harmonize payment methods and rates across different schemes or pools, and strengthen cross subsidization across risk pools. Price differences across pools can, on the other hand, worsen the fragmentation and increase inequity across pools and their members.
Purchasing	Purchasing arrangements and payment methods should be aligned with broader service delivery objectives.	Prices are set at appropriate levels so as not to offset incentives in payment mechanisms. In example, prices for capitation payments must be at the appropriate level to avoid the provision of low quality care, provider selection of healthier patients, or referral of complex cases that require a higher intensity of services to another service provider. Similarly, fee for service payments should be priced to avoid provider incentives to increase volumes by providing additional (unnecessary) services. Balance billing (in which providers charge higher than the regulated prices) can be prohibited to promote financial protection.

Table 1 (cont.)

	Policy issues	Ways in which countries have aligned pricing with policy goals
Purchasing	Purchasing arrangements and payment methods should be aligned with broader service delivery objectives.	<p>Price adjustments are typically made to ensure coverage and access, for example, to health care providers in rural and remote areas; those treating disproportionately high numbers of low-income or high-cost patients to ensure coverage and quality; and for facilities providing medical education.</p> <p>Price schedules enable purchasing services from the private health care sector and provide benchmarks for negotiations between private purchasers and health care providers.</p>
Financial management	Limits are established on total annual health spending.	Countries have used unilateral administrative price setting or collective negotiation in conjunction with other instruments such as expenditure caps to control growth in health care spending.

4. WHAT DO WE KNOW ABOUT PRICE SETTING AND REGULATION FOR HEALTH SERVICES FROM THEORY AND PRACTICE?

The process by which prices are determined can be grouped into three approaches:

- Individual negotiations between providers and purchasers.
- Collective negotiation between associations of providers and purchasers.
- Unilateral decision by purchasers.

Regardless of the approach used, there is an assumption that providers have the ability to respond to financial incentives. We assume, therefore, that provider costs are not exogenous; in other words, providers exercise a degree of control over their costs and do not operate under a fixed cost structure.

4.1. INDIVIDUAL NEGOTIATIONS

Under individual negotiations, prices are agreed upon through negotiations between an individual purchaser, such as a health insurer or health coverage scheme, and an individual provider of health care services. There are several key features of individual negotiations. Like the negotiation of any good, prices reflect the parties' respective bargaining positions. Under individual negotiations, a concentration of purchasers and providers with stronger market power will have equally strong bargaining power. In theory, if a purchaser covers a large share of the population, beneficiaries can be guided to use "in-network" providers with which it contracts. Under such a system, providers may agree to accept relatively lower prices from the purchaser to ensure patient volume and capture guaranteed revenue. However, in practice, providers with good reputations or brands, specialized services, or those representing the largest or sole provider in

the region have strong leverage to demand higher prices from purchasers and can control price changes over time (Baker et al., 2014; Berenson et al., 2015).

Under individual negotiations, there will be price discrimination, in which identical services can be purchased by different purchasers at different prices. An example of individual price negotiation is the United States of America (US) private health care market, characterized by variations in prices for the same services that bear little relation to the cost of providing those services, its quality or patient severity (Commonwealth of Massachusetts, 2017). In addition, administrative costs are high because individual negotiations with multiple purchasers are associated with higher expenditures on health insurance marketing and administration, negotiation time, claims assessment and other billing activities.

4.2. COLLECTIVE NEGOTIATIONS

Under collective negotiations, a national purchasing agency or an association of purchasers (i.e., health insurers) negotiate with associations of hospitals or health providers. The outcome of these negotiations would typically be a uniform fee schedule that would apply to all purchasers and providers. Wide differences exist in the levels of negotiation. For hospital services across OECD countries, prices are established through collective negotiations at central level (e.g., Australia, France, Greece, Hungary, Japan, Korea, Austria, Belgium, and Turkey; or local level (e.g., Finland, Spain, Sweden, Canada, Switzerland). In Germany, Denmark, Italy, and Poland, diagnosis-related group (DRG) weights are centrally defined and rates are set at local level (Paris, Devaux & Wei, 2010).

There are several key features of collective negotiations. Price discrimination present in individual negotiations is eliminated, given that an identical service is purchased at the same price. Collective negotiations also face much lower administrative costs in comparison with individual negotiations, given that substantially fewer resources are dedicated negotiations with purchasers. At

the same time, the level of conflict among the different stakeholder groups participating in the negotiation may increase as the space and the scope of negotiations widens. The process reflects in many cases the strength of a country's domestic institutions and associations. Representatives of provider associations must have the mandate to negotiate – whether legal or explicitly expressed by their respective association. The degree of bargaining power of the different professional associations may result in lower prices and payment for those with weaker influence.

In addition, competition policy and legislation has bearing on the ability to engage in collective negotiations. The methods and processes may be subject to competition laws and regulations, depending on whether health price negotiation is considered an economic activity or conducted in the interest of social welfare. Competition law in the European Union recognizes that doctors and hospitals are economic entities within a market, but that public health purchasers have a social purpose (Kumar et al., 2014). Therefore price negotiations for health prices are permitted.

4.3. UNILATERAL PRICE SETTING

The third method of determining price levels is unilateral administrative price setting by a purchaser. When prices are administered, a form of yardstick competition rewards a given firm depending on its standing vis-a-vis an exogenous benchmarking independent of the costs incurred by each provider. For example, a purchaser could choose to reimburse hospitals at the average costs of production per unit of service observed across a set of providers. By doing so, this gives incentives to higher-cost providers to improve efficiency and reduce their costs.

At the same time, providers with below-average costs have incentives to keep costs below the benchmark to retain the marginal difference. Where prices are set unilaterally by a purchaser, providers can compete on quality rather than price to attract consumers and increase volumes. As such, pressures to reduce costs could result in efficiency gains rather than reduced quality. Fixed price systems also allow transferring the financial risk linked to service provision from the purchaser to the provider.

Table 2. Process of price setting, advantages, disadvantages, key requirements, and country examples

	Advantages	Disadvantages	Institutional requirements	Country examples for hospital services
Individual negotiations between providers and purchasers	<p>In theory, purchasers can accept lower prices from designated providers to ensure patient volume and capture guaranteed revenue.</p> <p>May allow more flexibility in adapting services to patient’s preferences.</p>	<p>Providers with good reputations, specialized services, or sole providers can negotiate higher prices and control price changes.</p> <p>Price discrimination exists in which different payers pay different prices for the same services.</p> <p>No price transparency exists.</p> <p>Administrative costs can be high because of expenditures on health insurance marketing and administration, negotiation time, and billing activities linked to multiple purchasers.</p>	<p>High administrative capacities and expenditures for marketing, billing, and claims assessment.</p>	<p>US private insurers, private for-profit hospitals in Thailand and Mexico, specialist services in South Africa.</p>
Collective negotiations between associations of providers and purchasers	<p>Price discrimination is eliminated, given that an identical service is purchased at the same price.</p> <p>Strong ability to use prices as policy instruments for public health objectives.</p> <p>Allows purchasers to exert market power and reflect the overall budget and fiscal affordability of the health sector and thus limit price increases.</p> <p>Relatively lower administrative costs in comparison with individual negotiations.</p> <p>Prices are transparent to providers and public.</p>	<p>Price levels may reflect differing bargaining power among professional associations.</p> <p>Potential for conflict among the different stakeholder groups participating in negotiations.</p> <p>Methods and processes may be subject to competition policy and legislation, and limit application to private health care sector.</p>	<p>Requires strong health information systems and human resource capacities.</p> <p>Where cost-based, requires reliable detailed cost data from providers.</p> <p>Institutionalized transparent and formalized process required for negotiations.</p> <p>Organized professional associations with capacity and mandate to negotiate.</p>	<p>For hospital services, collective negotiations at central level undertaken in Australia, France, Greece, Hungary, Japan, Korea, Austria, Belgium, and Turkey; or local level in Finland, Spain, Sweden, Canada, Switzerland. In Germany, Denmark, Italy, and Poland, DRG weights are centrally defined and rates are set at local level.</p>

Table 2 (cont.)

	Advantages	Disadvantages	Institutional requirements	Country examples for hospital services
Unilateral decisions by purchasers	<p>Provides incentives for higher-cost providers to improve efficiency.</p> <p>Price discrimination is eliminated, given that an identical service is purchased at the same price.</p> <p>Price schedules generated can be used as a public health good in providing benchmarks for private insurers.</p> <p>Strong ability to use prices as policy instruments for public health objectives, i.e., through add on payments or other price adjustments.</p> <p>Strong ability for purchasers to exert market power and reflect the overall budget and fiscal affordability of the health sector and thus limit price increases.</p> <p>Relatively lower administrative costs in comparison with individual negotiations.</p> <p>Prices are transparent to providers and public.</p>	<p>May reduce patient choice.</p>	<p>Where cost-based, requires reliable information from providers regarding costs, volumes, and outcomes.</p> <p>Requires strong health information systems and human resource capacities.</p> <p>Institutionalized transparent process in setting prices applicable to all providers.</p> <p>Requires regular updating to encourage innovations.</p>	<p>For hospital services under the US Medicare and Medicaid programs, Australia, Ireland, Norway.</p>

A comparison of the three approaches is summarized in Table 2. Like collective negotiations, the unilateral administrative method eliminates price discrimination, given that a fixed price is established. In comparison with individual negotiations, unilateral administrative price setting incurs lower administrative costs by insurers and health systems, but additional regulatory expenses may apply (Anderson & Herring,

2014). Moreover, system investments are needed to ensure that the process under unilateral price setting is transparent and promotes trust and confidence in the results.

In terms of controlling price levels, the process of collective negotiations allows purchasers to exert market power vis-a-vis providers and their groups, reflect the overall budget and fiscal affordability

of the health sector, and thus limit price increases. They also usually impose some overall expenditure controls (i.e., volume controls). This ability is even stronger in case of unilateral administrative price setting. Evidence (primarily from the US) suggests that, where properly structured and evaluated, unilateral price setting by a purchaser performed better in reducing cost growth in comparison with market-based systems (Anderson, 1991, Atkinson, 2009; Sommers, White & Ginsburg, 2012; Murray & Berenson, 2015, Anderson et al., 2019).

From an international perspective, the comparative price level index for hospital services is lower in France where 83% of revenues are based on negotiated prices set within an overall budget envelope as compared with the US (Lorenzoni & Koechlin, 2017). In the hospital sector, evidence is mixed as to whether competition for quality is more likely to occur in markets with fixed prices (Allen, Fichera & Sutton, 2016; Anderson, 1991; Gaynor, Moreno-Serra & Propper, 2013; Gaynor & Town, 2011).

4.4. PRICE ADJUSTMENTS AND ADD ON PAYMENTS TO INCORPORATE PROVIDERS' EXOGENOUS DIFFERENCES IN COSTS

Price adjustments and add-on payments are common when prices are set unilaterally or negotiated collectively, to ensure that specific services or caring for specific populations are covered, particularly where

there are additional costs of providing care or it is considered unprofitable. In this manner, pricing can be an important tool in allocating resources to where they are most needed.

Table 3. Price adjustments and add on payments to incorporate providers' exogenous differences in costs

Country	Geographic adjustments	Outlier payments	Public health goods
Australia	Adjustments made for approximately 400 hospitals serving small, rural or remote populations, based on size, location and type of services.	Adjustments are made for outliers, with long-stays receiving a per diem rate.	For population based services that are not described in terms of activity, block funding is directed to states and territories to allocate to the hospitals.
England	Costs are multiplied by nationally determined by a market forces factor (MFF), which is unique to each provider and reflects relative costs of care across the country, with London providers attracting the largest MFF.	Adjustments are made for long or short stays and specialized services.	Adjustments are made to support specific policy goals such as providing care compliant with best practices.

Table 3 (cont.)

Country	Geographic adjustments	Outlier payments	Public health goods
France	Geographic adjustment is made only for Parisian area (Ile-de-France) and for overseas territories.	Adjustments are made both for long and very short stays and specialized services.	Add-on payments are made for medical education, research, investments for improving quality of care and for supporting local public policy goals such as providing prevention, out-reach for precarious populations, etc.
Germany	Recently, the government has initiated add-on payments to hospitals if they are located in financially unattractive regions, but are vital to medical services to the region.	Since 2018, 205 add-on payments were made for patients with high needs for nursing care or the provision of additional services and pharmaceuticals which are not included in the DRG system yet.	Add-on payments are made for medical education, specialized units and medical centers or the delivery of care to medically demanding patients.
Japan	None.	Adjustments are made for long stays.	None. Public health goods are funded from different sources (i.e., screening by health plans directly contracting providers, public health and immunization by direct gov't funding and user charges).
Thailand (UCS)	Adjustments are made for districts having higher unit costs due to sparse population such as mountainous areas or island districts to ensure adequate funding for operations.	No adjustment of outliers.	No adjustments; such services are mostly funded by the Ministry of Public Health.
United States (Medicare)	Medicare Wage Index accounts for local market conditions, by adjusting national base payment rates to reflect the relative input-price level in the local market.	Outlier payments are added for cases that are extraordinarily costly.	Operating and capital payment rates are increased for facilities that operate an approved resident training program (on the basis of hospital's teaching intensity) or that treat a disproportionate share of low-income patients.

Table 3 (cont.)

Country	Geographic adjustments	Outlier payments	Public health goods
United States (Medicaid)	Physicians receive 10% bonus payments for providing services in areas facing health professional shortages. 18 states make adjustments for variations in input costs across geographic regions.	48 states adjust for cases that are extraordinarily costly. Additional payments are made to disproportionate share hospitals that serve Medicaid patients and the uninsured. Supplemental payments are made that comprise the difference between Medicaid payments and the maximum allowable upper payment limit. Uncompensated care pool payments cover Medicaid shortfalls.	Some states apply adjustments by category of hospitals (i.e., small in scale, teaching centers, children’s hospitals).

Geographical price adjustments are made to ensure that health facilities are adequately reimbursed and compensated for factors outside their control. Adjustments are also made for goods that broadly benefit society and communities, such as medical

education and public health activities. In some settings, prices are adjusted to account for activities related to education, research, and innovation as well as national priorities including certain categories of medical treatment (Table 3).

4.5. COST-BASED PRICING

Where prices are cost-based, the costs per unit of service, economies of scale and scope, high entry and capital costs and marginal benefits of quality should be factored in to pay providers a fair and equitable price. Cost-based prices should reflect the costs that a reasonably efficient provider incurs in supplying services at the quality expected by the purchaser, while at the same time recognising the legitimate and unavoidable costs faced by some providers.

To estimate costs, purchasers use different data sources and costing methodology to structure the information collection systems and verification. The process of activity and data cost collection varies widely across settings in terms of the scope of the exercise, grouping of clinical conditions, definition of costs for inclusion and exclusion, sample

sizes and frequency of data collection. In Thailand, micro costing data is being used to establish actual costs (Khiaocharoen et al., 2011). In some cases, such as independent physicians’ practices in the US, the fee schedule is based on relative resources needed to provide each service because there is no dataset of costs for physicians’ practices. In other cases, such as the Republic of Korea (Korea), the availability and reliability of cost data is a key challenge as most providers are private and reluctant to provide detailed information on their financial conditions. Well-developed health information systems, human resource capacity and ready access to reliable data are prerequisites for effective use of cost-based payment systems by regulators (Özaltın & Cashin, 2014).

4.6. BALANCE BILLING AND FINANCIAL PROTECTION

Different policy approaches – ranging from allowing specialists to charge higher prices (e.g., France) to regulating the co-payments users face (e.g., Japan and Korea) – influence the level of household out-of-pocket expenditure and access to care. A key policy question is whether the prices set are binding for providers or whether the providers are permitted to charge patients more than the price set for covered services. Whether or not prices cover the full cost of a service is an important policy lever that influences the affordability of health care services to individuals (Kumar et al., 2014). Balance billing means that health care providers charge patients for amounts higher than the fixed or negotiated prices, and the patient

must pay the difference. Where balance billing is not prohibited, some groups of patients may face additional out-of-pocket fees. The policy of fully reimbursing prices set influences the affordability of health care services to individuals. In the US, for example, it is common that balance billing occurs when patients are billed for services provided by providers outside of their insurance network (Lucia et al., 2017). In some settings (e.g., Japan, Malaysia, Republic of Korea, Thailand, Germany, and the USA Medicare program for participating providers), balance billing is prohibited to increase affordability and ensure financial protection.

4.7. USING PRICE LEVELS TO CONTROL FOR VOLUMES AND AIM FOR BUDGET NEUTRALITY

Prices are also influenced by the budget envelope. Expenditure ceilings have been used to link prices to the overall budget and redistribute resources for health among various providers. In some settings, overall growth in health care spending is constrained by using macro-economic metrics, e.g., economic growth rates, expected payroll increases, inflation rates, increases in health care utilization, and population growth and ageing (Reinhardt, 2012).

For example, in France, for high volume and fast-growing DRGs (i.e., knee prosthesis and cataract surgery), the Ministry sets a threshold based on the growth rate for that activity nationally. If the hospital's caseload grows faster than the threshold, the price is reduced by 20% (Or & Gandré, 2019).

In Germany, a hospital's budget is linked to changes in the volume of services thereby limiting strong fluctuations in the overall budget from year to year. Deductions are used to incentivize hospitals to remain within the negotiated budget. If a hospital performs more services than agreed upon, it receives only 35% of the reimbursement rate; if a hospital performs fewer services than negotiated, it receives a reimbursement of 20% for the services it should have theoretically performed (Schreyögg & Milstein 2019).

In Japan, the Prime Minister establishes the global revision rate, or the de facto global budget for health expenditures based on an evaluation of the political and economic situation. Factors considered

include information from the survey of pharmaceutical prices and data about the revenues and expenditures in health care facilities. Subsequently a line-by-line revision of the fee schedule is undertaken based on the global budget constraint and changes in volume and prices. The government contains

expenditure increases by lowering the fees for items that have had rapid increases in volume and/or can be delivered at lower costs by providers. For example, physician fees for an initial visit are four-times higher than for a repeat visit (Ikegami, 2019).

4.8. INSTITUTIONAL ENTITIES FOR PRICE SETTING AND REGULATION

In recognition of its complexity, many countries have established or designated specific entities to carry out price setting and regulation (Barber, Lorenzoni & Ong, 2019b). In some settings (e.g., England, Japan, Republic of Korea, Thailand), the tasks for price setting and regulation have been under the responsibilities of the relevant government ministry. The benefits of this approach are strong linkages among the different levels of care and the close alignment between pricing policies and government objectives.

In other settings, independent agencies were established with the responsibility for developing and updating hospital prices and fee schedules. This has occurred in Australia, France, Germany, and the state of Maryland in the US, for example. The mandate of these agencies is to develop a credible price schedule for hospitals, including grouping services based on their complexity, taking into consideration the available health

resources, burden of disease, and clinical protocols and pathways.

Characteristics of successful systems include political independence, formal systems of communication with stakeholders, credibility in the eyes of the public, freedom from conflicts of interest, and political standing to resist both industry capture and political pressures. In some cases, such as Germany, these entities have independent sources of funding that are separate from general revenues.

A balance must be found between maintaining dialogue with stakeholders, including the health industry, while also observing objectivity and independence. To address this challenge, formal consultation processes have been implemented that involve stakeholders in the discussion of the base price and the cost elements that it covers. Feedback from health care providers involved in care provision may ensure acceptability of the regulated prices.

5. WHO'S PERSPECTIVE

Experiences in price setting and regulation in middle- and high-income settings provide lessons learned relevant for all countries in their strategic purchasing. The main objective of pricing in the context of strategic purchasing is to change provider behavior. Price setting may be particularly relevant for low- and middle-income settings that are increasing their public funding to health and looking to other settings for useful experiences. In this paper, we introduce the approaches to price setting in different countries, and how countries have used prices to send signals to health care providers and align their behaviors with policy objectives, such as coverage and financial protection.

Among the three approaches to price setting, both collective negotiations and unilateral price setting have several key advantages, including eliminating price discrimination. Countries have used both approaches as policy levers to drive provider behaviors and promote fiscal affordability. Under both approaches, price adjustments can be made to provide additional resources for health facilities that serve low-income individuals and communities, thereby ensuring a more equitable distribution of health resources and better coverage. Transparency is higher in such systems.

Many countries have shifted towards cost-based pricing. Where prices are cost-based (average or marginal) or normative (efficient), both collective negotiation and unilateral price setting require information about input costs, output volumes, and outcomes. This usually implies investments in health information systems, human resource capacity for data collection and analysis, and ready access to reliable data. In several settings, reforms have been

implemented alongside investments in data collection and analysis needed to monitor progress. Where prices are not cost-based, evidence is needed to justify prices as fair. As such, low- and middle-income settings can initiate payment reforms and, in doing so, build critical capacities in health information systems and data collection.

Both collective negotiations and unilateral price setting require institutionalized, accountable and transparent processes for setting prices or negotiating them. This requires clear understanding among providers and purchasers about the rules and processes for price setting, and that such processes are done in a transparent, equitable and fair manner within the legislative framework for the health care sector.

In several settings, specialized entities have been established to separate the technical task of determining costs from the more political exercise of negotiating how much to pay for services. In some cases, data are commissioned or collected to estimate the cost of providing services upon which prices are then based. Characteristics of such systems include political independence, formal systems of communication with stakeholders, and freedom from conflicts of interests, and flexibility to adjust prices in response to both provider behaviors and external factors such as changes in market structure, and legitimate and unavoidable costs faced by some providers.

Ultimately, pricing is not only about covering costs but also providing the right incentives. Countries should fully use pricing as another key instrument to drive broader health system objectives.

REFERENCES

- Allen T, Fichera E, Sutton M. Can payers use prices to improve quality? Evidence from English hospitals. *Health Economics*. 2016; 25: 56-70. <https://doi.org/10.1002/hec.3121>
- Anderson GF. All-payer rate setting: down but not out. *Health Care Financing Review*. 1992;1991 (Suppl):35-41.
- Anderson G, Herring B. The All-Payer Rate Setting Model for Pricing Medical Services and Drugs. *American Medical Association Journal of Ethics*. 2015;17(8):770-775. doi:10.1001/journalofethics.2015.17.8.pfor1-1508.
- Anderson GF, Hussey P, Petrosyan V. It's Still The Prices, Stupid: Why The US Spends So Much On Health Care, And A Tribute To Uwe Reinhardt. *Health Affairs*. 2019; 38(1): 87-95. <https://doi.org/10.1377/hlthaff.2018.05144>
- Atkinson G. State Hospital Rate Setting Revisited. Issue Brief. New York: The Commonwealth Fund. 2009.
- Barber SL, Lorenzoni L, Ong P. Price setting and price regulation in health care: lessons for advancing universal health coverage. Geneva: World Health Organization, Organization for Economic Co-operation and Development; 2019a. License:CCBY-NC-SA 3.0 IGO. <https://apps.who.int/iris/handle/10665/325547>.
- Barber SL, Lorenzoni L, Ong P. Institutions for health care price setting and regulation: A comparative review of eight settings. *Int J Health Plann Mgmt*. 2019b;1–10. <https://doi.org/10.1002/hpm.2954>
- Baker LC, Bundorf MK, Royalty AB, Levin Z. Physician Practice Competition and Prices Paid by Private Insurers for Office Visits. *JAMA*;2014;312(16):1653-62. doi:10.1001/jama.2014.10921
- Berenson RA, Ginsburg PB, Christianson JB, Yee T. The Growing Power Of Some Providers To Win Steep Payment Increases From Insurers Suggests Policy Remedies May Be Needed. *Health Affairs*. 2015; 31(5): 973-81. <https://doi.org/10.1377/hlthaff.2011.0920>
- Commonwealth of Massachusetts. Special commission on provider price variation report; 2017 (<http://www.mass.gov/anf/budget-taxes-and-procurement/oversight-agencies/health-policy-commission/ppv-report-final.pdf>, Accessed 21 January 2020).
- Gaynor M, Moreno-Serra R, Propper C. Death by market power: reform, competition, and patient outcomes in the National Health Service. *American Economic Journal: Economic Policy* 2013; 5:134-166.
- Gaynor M, Town RJ. Chapter Nine. Competition in Health Care Markets. In: Pauly MV, McGuire TG, Barros PP, editors. *Handbook of Health Economics*. Volume 2; 2011: 499-637. <https://doi.org/10.1016/B978-0-444-53592-4.00009-8>
- Getzen TE. Aggregation and the Measurement of Health Care Costs. *Health Services Research*. 2006;41 (5):1938–1954. <https://doi.org/10.1111/j.1475-6773.2006.00558.x>

Ikegami, N. Case study: Japan. In Barber SL, Lorenzoni L, Ong P. 2019. Price setting and price regulation in health care: lessons for advancing universal health coverage. World Health Organization (WHO) and Organization for Economic Co-operation and Development (OECD). License: CC BY-NC-SA 3.0 IGO. <https://apps.who.int/iris/handle/10665/325547>.

Khiaocharoen O, Pannarunothai S, Zungsontiporn C, Riewpaiboon A. Patient-level costing for the Thai Diagnosis Related Group in Thailand: a micro-costing approach. *BMC Health Services Research* 2011;11(Suppl 1):A2. doi:10.1186/1472-6963-11-S1-A2

Kumar A, de Lagasnerie G, Maiorano F, Forti A. Pricing and competition in Specialist Medical Services. An overview for South Africa. OECD Health Working Paper No. 70, OECD Publishing. 2014 <http://dx.doi.org/10.1787/5jz2lpxcrhd5-en>.

Lorenzoni L, Koechlin F. International comparisons of health prices and volumes: New findings. Paris OECD Publishing. 2017.

Lucia K, Hoadley J, Williams A. Balance Billing by Health Care Providers: Assessing Consumer Protections Across States. The Commonwealth Fund. 2017.

Mathauer I, Wittenbecher F. Hospital payment systems based on diagnosis-related groups: experiences in low- and middle-income countries. *Bulletin of the WHO*. 2013;91(10):746–756A. <http://dx.doi.org/10.2471/BLT.12.115931>

Murray R, Berenson RA. Hospital Rate Setting Revisited. Dumb Price Fixing or a Smart Solution to Provider Pricing Power and Delivery Reform? The Urban Institute; 2015

Özaltın A, Cashin C. Costing of Health Services for Provider Payment: A Practical Manual. Joint Learning Initiative 2014.

Or Z, Gandré C. Case study: France. In Barber SL, Lorenzoni L, Ong P. 2019. Price setting and price regulation in health care: lessons for advancing universal health coverage. World Health Organization (WHO) and Organization for Economic Co-operation and Development (OECD). License: CC BY-NC-SA 3.0 IGO. <https://apps.who.int/iris/handle/10665/325547>.

Paris V, Devaux M, Wei L. Health Systems Institutional Characteristics: A Survey of 29 OECD Countries. OECD, Directorate for Employment, Labour and Social Affairs, OECD Health Working Papers 50; 2010. <https://doi.org/10.1787/18152015>

Reinhardt UE. The Pricing Of U.S. Hospital Services: Chaos Behind A Veil Of Secrecy. *Health Affairs*. 2006;25(1):57-69. <https://doi.org/10.1377/hlthaff.25.1.57>

Reinhardt UE. The many different prices paid to providers and the flawed theory of cost shifting: is it time for a more rational all-payer system? *Health Affairs*. 2011;30(11):2125-33. <https://doi.org/10.1377/hlthaff.2011.0813>

Reinhardt UE. The Options for Payment Reform in U.S. Health Care. *Economix -The New York Times*; 2012 (<https://economix.blogs.nytimes.com/2012/02/17/the-options-for-paymentreform-in-u-s-health-care/>, Accessed 25 April 2019).

Schreyögg J, Milstein R. Case study: Germany. In Barber SL, Lorenzoni L, Ong P. 2019. Price setting and price regulation in health care: lessons for advancing universal health coverage. World Health Organization (WHO) and Organization for Economic Co-operation and Development (OECD). License: CC BY-NC-SA 3.0 IGO. <https://apps.who.int/iris/handle/10665/325547> .

Sommers A, White C, Ginsburg PB. Addressing hospital pricing leverage through regulation: state rate setting. Washington DC: National Institute for Health Care Reform; 2012.

World Bank. Open Data (<https://data.worldbank.org/>, Accessed 22 February 2019)

World Health Organization (WHO). WHO Guideline on Country Pharmaceutical Pricing Policies. Geneva: World Health Organization, 2015

World Health Organization (WHO). Public Spending on Health: A Closer Look at Global Trends. Geneva: World Health Organization, 2018.



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ISBN 978-92-4-000498-6

