



Payment Arrangements for Private Healthcare Purchasing Under Publicly Funded Systems in Low- and Middle-Income Countries: Issues and Implications

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Abstract

This paper examines private healthcare purchasing under publicly financed health systems in low- and middle-income countries (LMICs) to argue that the payment methods and rates applied to private and public health providers need careful attention to ensure equity, efficiency and quality in healthcare service provision. Specifically, public purchasers should develop a clear mechanism to establish justifiable payment rates for the purchase of private health services under publicly funded systems, using cost information and appropriate engagement with private health providers. In order to determine the validity of payment arrangements with private providers, clarification of the shared roles and responsibilities of public and private healthcare providers is required, including specification of types of services to be delivered by public and private providers, and the services for which public providers receive government budget and salaries above payments for other publicly funded services. In addition, carefully designed payment methods should include incentives to encourage healthcare providers to deliver efficient, equitable and quality health services, which requires consideration of how the healthcare purchasing market is structured. Furthermore, governments should establish sound legal frameworks to ensure that public purchasers establish ‘strategic’ payment arrangements with healthcare providers and that healthcare providers are able to respond to the incentives sent by the payment arrangements. To deepen understanding of public purchasing of private healthcare services and gain further insight in the LMIC context, in-depth empirical studies are necessary on the payment methods and rates used by public purchasers in a range of settings and the implications of payment arrangements on efficiency, equity and quality in healthcare service provision.

1 Introduction

In an attempt to move towards universal health coverage (UHC), many low- and middle-income countries (LMICs) have reformed, or are reforming, health financing systems, often moving from a public integrated system to a public purchasing-based system (i.e. public contract system) in which purchasers and providers are organizationally separate [1, 2]. One of the key changes in such reform is the redefinition of the healthcare purchasing market and the establishment of a public purchaser(s) that buys healthcare services from both public and private healthcare providers. The mix

of public and private providers delivering healthcare services under public funding systems should aim to maximize utilization of existing public and private health resources and increase the entire population’s access to efficient and quality healthcare services by introducing competition [3–5].

In public purchasing-based health financing systems, healthcare providers are often accredited to ensure quality in health facilities, and public purchasers may use contracts with accredited healthcare providers to purchase healthcare services for beneficiaries and/or members of the system [6]. However, little is known about the details of the purchasing arrangements established between public purchasers and private healthcare providers when public contract financing models are implemented; whether purchasing arrangements, particularly payment rates and mechanisms, vary for public and private healthcare providers (and for for-profit and not-for-profit private providers) and, if they vary, the reason(s) for the differences [7]. In LMIC settings, only a limited number of studies have examined the purchasing arrangements with private healthcare providers operating under

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Key Points for Decision Makers

An increasing number of publicly funded systems in low- and middle-income countries (LMICs) are purchasing healthcare services from private providers.

A transparent mechanism should be developed to establish justifiable payment rates and subsequently determine whether private healthcare purchasing arrangements impact on the efficiency, equity and quality of health service provision.

Clarification of the roles and responsibilities of public and private healthcare providers is necessary to determine if payment arrangements are appropriate.

Payment arrangements should be carefully designed to send healthcare providers appropriate incentives for desired behaviour, with consideration given to how the health purchasing market is structured.

Governments should establish sound legal frameworks that ensure payment arrangements for healthcare provision assist public purchasers to ‘strategically’ purchase private healthcare under the public system.

public contract models; the rationale behind the purchasing arrangements; issues occurring as a result of purchasing arrangements; and the best means for public purchasers to buy private healthcare services under public contract systems [8, 9].

The type of purchasing arrangements used to buy services from public and private healthcare providers is determined by a number of factors in a country’s healthcare market, including supply-side factors, such as the public and private provider mix and the roles of public and private healthcare providers; and demand-side factors, such as the nature and characteristics of purchasers. In addition, purchasing arrangements can be shaped by the legal and regulatory framework in which the market operates, including the public finance management framework, the government’s arrangements with public providers, and the regulatory framework for private healthcare provision [4, 10–14].

The payment arrangements between the public purchaser and private healthcare providers under publicly financed systems have efficiency and equity implications. The use of different purchasing arrangements for public and private providers can cause inefficiencies: a payment rate higher than the optimal level can result in more public spending than necessary, which may also lead to price increases across the system, and fragmented payment mechanisms may bring unnecessary administrative costs [15]. If the payment rate is too low, there is no incentive for private providers to

compete for services covered by publicly financed mechanisms [14]. Conversely, use of the same payment rates for public and private providers can cause conflict if, for example, public healthcare providers receive an operating budget from government in addition to payments for services from public purchasers [5]. This may in turn affect private healthcare providers’ willingness to participate in the public-funded system, or produce unwanted behaviours in healthcare service providers [16, 17].

Faced with an increase in the use of a public–private mix to deliver healthcare services in publicly funded systems in LMICs, it is important for governments to ensure that public resources are used for public benefit, and to facilitate equitable access to quality healthcare services while making the most of the available resources. Moreover, past experience in Europe and Australia suggests that when publicly funded health systems purchase both private and public services, private providers are more likely to operate for the benefit of public health and efficiently use public funds if the government creates a regulatory and legal environment with clear accountability mechanisms between government and healthcare providers [18].

This paper focuses on the payment arrangements, including payment methods, payment rates and contracts, for public and private healthcare services provided under publicly funded systems in LMICs. Specifically, the paper discusses (1) the types of private purchasing that occurs under publicly funded systems in different healthcare markets; (2) the payment arrangements established under publicly funded systems with a particular focus on the payment mechanisms and payment rates used to purchase healthcare services from public and private providers; and (3) key issues for consideration when developing payment arrangements for private healthcare purchasing under publicly funded mechanisms. This article is an opinion piece based on a review of recent literature and policy documentation.

2 Methods

The literature review on which this paper is based employed a case study approach [19] in which the public purchasing mechanism used to buy healthcare services from public and private providers is the case, and the payment arrangements between a public purchaser and private healthcare providers are the unit of analysis. These payment arrangements can vary according to the public–private provider mix that operates in a healthcare market [14]. Consequently, the review used case selection criteria that consider the public–private provider mix as an important contextual factor that influences purchasing arrangements.

Mackintosh et al. [11] examined the public–private healthcare provider mix by looking at three dimensions of

the private sector in health systems: (1) the private share of health spending; (2) the degree to which the public sector relies on user fees; and (3) the share of treatment visits obtained by the private sector. They subsequently identified the following categories for the public–private healthcare mix: (1) dominant private sector—private providers dominating both primary and secondary healthcare service delivery, with out-of-pocket payments making up a large share of total health expenditure; (2) private sector complementing a universalist public sector—a moderate to low share of private health expenditure; a moderate to low share of private health service delivery; very low or no public fees; (3) high-cost private sector leading a stratified system—the higher income population use private insurance to access private healthcare providers and the lower income population use the public sector healthcare system; (4) highly commercialized public sector—a small proportion of private healthcare providers; highly autonomous public providers heavily reliant on fees and charges; and (5) stratified private sector—different groups of the population use different types of private healthcare providers; private hospitals and clinics are used by the higher income population, and private facilities and faith-based hospitals and clinics are used by the lower income population. From one to three cases in each category were selected for detailed examination. In addition to the public–provider private mix, the case selection considered: (1) whether public systems purchased healthcare from private providers; (2) geographical variation between cases; and (3) accessibility of relevant information. The fourth category (i.e. highly commercialized public sector) was excluded from the review as it appears to be a unique case that has occurred in China, where a country-wide healthcare financing reform is currently underway [20]. A total of 10 cases were identified and subsequently categorized according to the public–private mix operating in the country. Table 1 shows the key healthcare financing indicators for the countries whose healthcare mechanisms are examined; Table 2 summarizes each case; and Table 3 provides brief descriptions of the payment arrangements in publicly funded systems in the countries examined in the documentation review.

Data were primarily gathered through a review of the literature, including: (1) policy, legislative and regulatory documents; (2) grey literature available through international organizations; and (3) academic papers. The literature was accessed through the online portals of governments, research organizations and international development agencies, as well as academic citation databases.

The following arrangements between purchasers and providers were examined: (1) provider payment mechanisms; (2) payment rates; and (3) contract terms, including conditions relating to reporting, monitoring and governance structures for managing contracts and payments. The payment

Table 1 Key indicators for the selected countries Source: WHO Global Health Expenditure Database (<http://www.who.int/healthaccounts/ghed/en>)

Public–private healthcare mix	Dominant private sector		Private sector with a universalist public sector	High-cost private sector leading a stratified system			Stratified private sectors			
	India	Nigeria		Philippines	Thailand	Argentina	Chile	Colombia	Ghana	Malawi
Domestic private health expenditure as a percentage of current health expenditure	72	78	65	21	27	40	29	52	17	25
Out-of-pocket as a percentage of current health expenditure	62	77	53	11	15	34	16	40	11	24
Voluntary health insurance as a percentage of current health expenditure	5	<1	11	7	9	6	10	2	3	1
Government financing arrangements as a percentage of current health expenditure	23	14	23	68	30	2	6	30	50	62
Compulsory health insurance as a percentage of current health expenditure	5	1	12	11	43	58	68	10	0	8

Table 2 Summary of the selected publicly funded healthcare financing mechanisms

Financing mechanism	Rashtriya Swasthya Bima Yojana (RSBY)	Formal Social Health Insurance Programme (FSSHIP)	Philippine Health Insurance Program (PhilHealth)	Social Health Insurance (SHI)	Social Health Insurance (Obras Sociales)	Fondo Nacional de Salud (FONASA)	General Social Health Insurance System (NHIS)	National Health Insurance Scheme (NHIS)	SLAs with Christian Health Association of Malawi (CHAM)	SLAs with faith-based hospitals
Country	India	Nigeria	Philippines	Thailand	Argentina	Chile	Colombia	Ghana	Malawi	Tanzania
Financing type	Exemption from user fees	Mandatory HI	Mandatory HI	Mandatory HI	Mandatory HI	Mandatory HI	Mandatory HI	Mandatory HI	Tax-funded system	Tax-funded system
Purchasing model	Public contract	Public contract	Public contract	Public contract	Public contract	Public contract	Public contract	Public contract	Contract under the public integrated system	Contract under the public integrated system
Target population	Population under the poverty line	Federal government workers, private formal sector workers	Entire population	Private formal sector workers	OSNs for formal sector and independent workers; OSPs for provincial government employees	Entire population; choice of coverage by FONASA or private health plans (ISAPRES)	CR for the formal sector; SR for those with an inability to pay	Entire population	Entire population	Entire population
Sources of funding	Central and state governments	Contributions from employees and employers (currently financed by the central government)	Contributions from the formal sector (both employees and employers) and informal sector; government subsidies for the poor	Employees, employers and government each contribute 1.5% of salary, with a ceiling on deductions from monthly salaries	Contributions from employees and employers, and government subsidies	Employees contribute 7% of their salary, with a ceiling on monthly contributions; government subsidies for the poor	CR: contributions from employees and employers; SR: earmarked federal taxes, municipal taxes, and cross-subsidization from CR	NHI levy; Social Security and National Insurance Trust; contributions from the informal sector	MoH budget, external donor funds	Budget from local government authorities
Benefit entitlements	Capped hospitalization and transport expenses	Comprehensive	Comprehensive	Comprehensive non-work-related illnesses	Benefits vary; OSNs guarantee a standard benefit package as defined by the government	Comprehensive	Comprehensive	Comprehensive	EHPs, but non-EHPs also included depending on disease burden in the district	Essential benefit package

SLAs Service Level Agreements, HI health insurance, OSNs Obras Sociales Nacionales, OSPs Obras Sociales Provinciales, ISAPRES Instituciones de Salud Previsional, CR contributory regime, SR subsidized regime, NHI National Health Insurance, MoH Ministry of Health, EHPs essential health packages

Table 3 Payment arrangements in publicly funded systems

Health financing mechanism	Provider payment mechanisms and payment rates	Contract
Health Insurance for the poor (Rashtryia Swasthya Bima Yojana [RSBY]) in India	<p>Case-based payments used to purchase hospital care</p> <p>No difference in payment rates for public and private providers</p> <p>The upper limit for reimbursement is US\$450 per family per year</p>	<p>The Ministry of Labour and Employment is the central coordinating agency</p> <p>The SNA liaises with private insurance companies to manage contracts with both public and private healthcare providers</p> <p>Public and private healthcare providers are ‘empanelled’ before they enter into contracts with the SNA</p> <p>Contracts are mostly annual; in cases of multi-year contracts, contracts must be renewed annually (involving revising prices)</p> <p>Hospitals have autonomy over the use of funding from RSBY payments</p>
Formal Sector Social Health Insurance Programme (FSSHIP) in Nigeria	<p>Capitation payments for primary healthcare services and fee-for-service payments for secondary services</p> <p>No difference in payment rates for public and private providers</p>	<p>NHIS contracts health maintenance organizations to manage agreements between the NHIS and healthcare providers on primary and secondary healthcare service provision</p> <p>NHIS accredits and registers healthcare providers; facilities are re-accredited annually</p> <p>Health facilities, both public and private, set their own user fee schedules</p>
Philippine Health Insurance Program (PhilHealth) in the Philippines	<p>Outpatient care is moving towards capitation payments with fixed copayments and case-based payments for selected procedures</p> <p>Non-catastrophic inpatient care is subject to case-based payments</p> <p>Catastrophic inpatient care incurs case-based fees, with prescribed maximum copayments, under contracts negotiated with a limited number of hospitals</p> <p>No difference in the payment rates for public and private providers</p>	<p>PhilHealth uses a ‘Performance Commitment’ contract with accredited healthcare providers</p> <p>PhilHealth accredits both healthcare professionals and facilities</p> <p>Facilities must be re-accredited annually and professionals re-accredited every 3 years</p>
Social Health Insurance (SHI) in Thailand	<p>Contracted hospitals receive inclusive capitation payments for outpatient and inpatient services based on the number of registered members</p> <p>Capitation payments are not age-adjusted</p> <p>Additional risk-adjusted fixed payments per member for the management of chronic and high-cost diseases, additional payment per member for healthcare utilization in the past year</p> <p>Additional fee-for-service payments for specific services and medical equipment</p> <p>No difference in payment rates for public and private providers</p>	<p>Local PhilHealth offices manage payments to healthcare providers</p> <p>User fees are not subject to any form of regulation – facilities can charge the rates they deem appropriate</p> <p>The Social Security Office of the Ministry of Labour contracts private and public providers</p> <p>A Social Security Committee, consisting of member representatives of the Social Security Fund, the government and experts, and chaired by the Permanent Secretary of Labour, reviews the finances of the Social Security Fund, including the SHI (SHI is one benefit of the Social Security Fund to which private, formal sector workers contribute)</p>

Table 3 (continued)

Health financing mechanism	Provider payment mechanisms and payment rates	Contract
Social Health Insurance (Obras Sociales [OS]) in Argentina	<p>Payment arrangements with providers vary across the OS</p> <p>Many OSNs shifted from FFS to capitation payments</p> <p>Reimbursement rate based on the standard package of services defined by the government</p>	<p>Social Health Insurance consists of about 300 funds that operate at the national (OSNs) and provincial (OSP) levels</p> <p>OSNs are associated with particular industries and are managed by unions</p> <p>The national SSS, the health sector regulatory body, controls and monitors OSNs and their contracts with service providers</p> <p>The SSS does not have regulatory authority over OSPs at the provincial level</p> <p>Legislation in 1991 and 1993 gave OSs greater freedom to negotiate contracts with providers</p> <p>Both the OSN and the OSP contract more private providers than public facilities</p> <p>The Technical Institute for Accreditation of Health Care Organizations accredits public and private hospitals, although accreditation is not mandatory</p> <p>FONASA manages financial contracting, while the Health Ministry (MINSAL) is responsible for managing health facilities and facility standards</p> <p>Fees are regulated through the ISAPREs in the private sector</p> <p>The General Social Health Insurance System contracts health-care insurers – EPSs and EPS-Ss</p> <p>The EPSs manage the contributory system, while EPS-Ss manage the subsidized system</p>
National Health Fund (Fondo Nacional de Salud [FONASA]) in Chile	<p>Public providers—a combination of historic budgets (hospitals), capitation (primary healthcare providers), fee-for-service (FFS), and case-based payment</p> <p>Private providers—FFS and case-based payment</p> <p>Funds pooled into health plans (EPSs and EPS-Ss)</p>	<p>Providers must be accredited and must obtain a permit from the provincial government to operate</p> <p>EPSs and EPS-Ss can spend a maximum of 30% of their total healthcare expenditure on their own providers</p>
General Social Health Insurance System in Colombia	<p>EPSs receive risk-adjusted capitation payments from the Administradora de los Recursos de la Seguridad Social en Salud (ADRESS), a national solidarity fund, to cover the costs of delivering a mandatory benefit package to CR beneficiaries, while EPS-Ss receive capitation payments from local municipalities for SR beneficiaries</p> <p>EPSs and EPS-Ss either provide services directly or contract public or private providers to deliver services</p> <p>EPSs and EPS-Ss pay providers in different ways. Usually, capitation payments are made for outpatient care, and fee-for-service or case-based payments are made for inpatient care</p> <p>EPSs and EPS-Ss annually negotiate payment arrangements with healthcare providers (both public and private)</p> <p>Case-based payment (G-DRG) for inpatient and outpatient care</p>	<p>Providers must be accredited and must obtain a permit from the provincial government to operate</p> <p>EPSs and EPS-Ss can spend a maximum of 30% of their total healthcare expenditure on their own providers</p> <p>EPS-Ss are required to use 40% of the funds they collect through premiums on public providers</p> <p>The NHIA enters into healthcare service delivery contracts with public, CHAG, and private healthcare providers—healthcare providers must be credentialled by the NHIA before they enter into contracts</p> <p>Local NHIA offices manage contracts with, and payments to, healthcare providers</p>
National Health Insurance Scheme (NHIS) in Ghana	<p>NHIA reviews payment rates annually in consultation with healthcare providers, and rates are subject to the approval of the Health Minister</p>	

Table 3 (continued)

Health financing mechanism	Provider payment mechanisms and payment rates	Contract
Tax-funded system with SLAs between the MoH and the Christian Health Association of Malawi (CHAM) [Malawi]	<p>Public providers, including the CHAG, receive salaries and other subsidies from the MoH</p> <p>Private providers receive higher payment rates than public and CHAG providers</p> <p>Public hospitals receive budget from the MoH, and primary healthcare facilities receive supplies from DHOs</p> <p>CHAM facilities receive case-based payments from the MoH</p>	<p>The Health Facility Regulatory Agency (HeFRA) licenses healthcare facilities. Public and CHAG healthcare facilities are currently exempted from licensing requirements</p> <p>The MoH contracts CHAM faith-based health facilities using SLAs covering the provision of free healthcare to the underserved population and focusing on maternal and neonatal care</p> <p>SLAs are signed at the central level of the MoH and the CHAM secretariat; management of the contract is undertaken at the district level</p>
Tax-funded system with SLAs between LGAs and voluntary agencies, including faith-based providers (Tanzania)	<p>Government pays salaries to CHAM facilities</p> <p>The budget for each SLA is capped</p> <p>Payment rates under SLAs are based on standard costings</p> <p>Line-item budget for public healthcare providers</p> <p>Methods of paying faith-based providers vary between LGAs</p> <p>Contracted faith-based facilities receive funds from LGAs to cover recurrent expenditure, including salaries</p> <p>Payment rates vary between LGAs</p>	<p>DHOs transfer funds to CHAM</p> <p>The MCM registers and licenses medical and dental practitioners, and maintains a database of registered staff</p> <p>The MCM must accredit CHAM facilities before facilities can enter into SLAs</p> <p>LGAs are responsible for signing contracts with, and providing funds to, healthcare facilities</p> <p>The MOHSW oversees the LGAs</p> <p>Agreements between faith-based providers and LGAs are renewed annually</p> <p>The MOHSW has different market entry requirements for public and private providers</p> <p>Municipalities set healthcare prices charged by public facilities</p> <p>Prices at public facilities are very rigid, while prices at private providers are flexible and easily changed</p>

DRG diagnosis-related group, *SNA* State Nodal Agency, *NHIS* National Health Insurance Scheme, *OSNs* Obras Sociales Nacionales, *OSPs* Obras Sociales Provinciales, *SSS* Superintendencia of Health Services, *FFS* fee for service, *ISAPRES* Instituciones de Salud Previsional, *EPSs* Entidades Promotoras de Salud, *EPS-Ss* Empresas Promotoras de Salud Subsidiadas, *CR* contributory regime, *SR* subsidized regime, *CHAG* Christian Health Association of Ghana, *MoH* Ministry of Health, *SLAs* Service Level Agreements, *DHOs* District Health Offices, *MCM* Medical Council for Malawi, *LGAs* Local Government Authorities, *MOHSW* Ministry of Health and Social Welfare, *G-DRG* Ghana Diagnosis Related Groupings

arrangements with private providers were compared with those with public providers and, if the arrangements were different, the reason for differences investigated. Analysis of the above information allowed issues associated with payment arrangements for private providers to be identified.

3 Current Payment Arrangements Under Publicly Funded Systems in Selected Low- and Middle-Income Countries (LMICs)

3.1 Private Healthcare Purchasing Under Publicly Funded Health Systems

Private healthcare purchasing exists under different types of publicly funded health systems, which can be classified as (1) the mandatory health insurance system, targeting either specific segments of the population or the entire population, to purchase healthcare services from both public and private healthcare providers; (2) contracting of private healthcare providers under the tax-funded system, alongside publicly funded public services; and (3) social protection mechanisms, such as user fee exemption mechanisms for poor and vulnerable populations. Examples of the first classification include the National Health Insurance Fund (Fondo Nacional de Salud, or FONASA) in Chile, the General Social Health Insurance System in Colombia, the National Health Insurance Scheme (NHIS) in Ghana, and Social Health Insurance (SHI) for private formal sector workers in Thailand; the second classification includes Service Level Agreements (SLAs) with faith-based providers (Christian Health Association of Malawi [CHAM]) in the Malawi tax-funded health system; and the third classification is exemplified by the Health Insurance for Poor (Rashtriya Swasthya Bima Yojana or RSBY) scheme in India.

3.2 Payment Methods and Payment Rates

While healthcare services are purchased using a range of payment mechanisms, in an attempt to improve efficiency in resource use, many mandatory insurance mechanisms have shifted, or are shifting, away from fee-for-service payments to close-ended payment systems (i.e. capitation and case-based payments). For example, the Thai SHI uses inclusive capitation payments for outpatient and inpatient services at contracted hospitals, with capitation rates based on the number of members registered with the hospital [21]. Additional risk-adjusted, fixed payments are made per beneficiary for the treatment of chronic and high-cost diseases. In Ghana, under the NHI, Ghana Diagnostic Related Groupings (G-DRG) are used for services and itemized fees with a fee schedule for medicines [22].

A number of insurance mechanisms apply the same payment methods and rates to public and private healthcare providers. This includes the Formal Sector Social Health Insurance Programme (FSSHIP) in Nigeria, PhilHealth in the Philippines, SHI in Thailand, and the RSBY in India [16, 21, 23, 24]. In Mongolia, mandatory health insurance schemes pay lower diagnosis-related group (DRG) rates to private hospitals than to public providers to account for the fact that private hospitals have their own fee schedules and are allowed to charge balance billing to health insurance members [25]. However, in Ghana, the NHI pays higher case-based payment rates to for-profit private healthcare providers on the basis that public healthcare providers, including faith-based healthcare providers, receive salaries and other government subsidies from the Ministry of Health (MoH) [22].

In fact, in many LMICs with mandatory insurance mechanisms, public healthcare facilities receive an operating budget from government while also receiving payments from publicly funded insurance mechanisms (although the amount of funding public providers receive may be adjusted if they receive payments from the publicly funded insurance system). Staff in public healthcare facilities usually receive salaries directly from government. For example, in the Philippines, public healthcare facilities receive line item budgets from the MoH and local governments, and staff are paid salaries by these organizations [23]. Similarly, in Argentina, public providers receive an operating budget from the government to allow for the fact that there are people who are not covered by mandatory insurance but who access tax-funded public sector healthcare services [26, 27].

SLAs use different payment methods for public and private healthcare providers. For the SLAs in Malawi, while public healthcare providers receive government funding to deliver healthcare services, faith-based healthcare facilities receive government payments, including case-based payments. In both Malawi and Tanzania, faith-based healthcare providers receive government subsidies in addition to SLA payments. In Malawi, the MoH pays the salaries of staff working in contracted faith-based healthcare facilities [28]. In Tanzania, local government authorities (LGAs) provide funding to contracted faith-based healthcare providers to cover recurrent expenditure, including salaries [29].

3.3 Governance Structure and Contract Management

Three types of contract management systems are used with the healthcare providers operating in publicly funded systems, i.e. management by (1) local (public) insurance agencies; (2) private (for-profit) organizations; and (3) decentralized or local government offices.

In contract management systems using local insurance agencies, such as in Ghana, local offices manage the contracts with and payments to healthcare providers [30]. In the Philippines, local PhilHealth offices coordinate with local government units to manage payments to healthcare providers [23]. In Chile, FONASA manages the financial contracting of healthcare providers using local offices, while the MoH uses their own offices to monitor healthcare service delivery [31].

The second type of contract management system, use of private (for-profit) organizations, is seen in Colombia, where the General Social Health Insurance System contracts healthcare insurers—Entidades Promotoras de Salud (EPSs) to manage healthcare service delivery in the Contributory Regime (CR) for formal sector workers; and Empresas Promotoras de Salud Subsidiadas (EPS-Ss) to manage healthcare service delivery in the Subsidized Regime (SR) for those unable to pay insurance contributions [32, 33]. In Nigeria, the NHIS contracts health maintenance organizations (HMOs) to manage healthcare providers for the FSSHIP, and HMOs act as purchasing administrators [16]. Similarly, under the Indian RSBY, the State Nodal Agency (SNA) contracts insurance companies to manage agreements with both public and private healthcare providers [24].

For SLAs, while both Malawi and Tanzania delegate the task of contract management to local government offices, slight differences exist between the two cases. In Malawi, SLAs are signed at the central level between the MoH and the CHAM secretariat (a group of faith-based healthcare providers) and contract management is undertaken at the district level wherein District Health Offices (DHOs) are responsible for transferring funds to faith-based healthcare facilities [34]. In Tanzania, LGAs are responsible for signing contracts with and providing funds to faith-based healthcare facilities and the MoH oversees the LGAs [29]. Where two layers of purchasers exist and a local organization acts as a purchasing administrator, it is critical for the higher-level public purchaser to appropriately oversee and coordinate the local health administrators who undertake administrative purchasing tasks [35].

4 Potential Issues Associated with Private Healthcare Purchasing in LMICs

4.1 Efficiency, Equity and Quality Implications of Payment Rates and Payment Methods

Payment arrangements can affect the efficiency, equity and quality of health systems. The combination of payment methods and payment rates sends signals to healthcare providers that can shape their behaviour. When fee-for-service is used as a payment method, higher payment rates (or rates

above the marginal cost of services) can result in excess service provision [36], while lower payment rates (less than the marginal cost of services) can shift the risk to patients either by little care being supplied or balance-billing additional charges to patients [14, 37, 38]. On the other hand, when close-end payment methods such as capitation and case-based payment are used to reduce the cost of healthcare service provision, payment rates should correctly reflect the cost of supplying the service [14]. Apart from the potential for underprovision of services and the selection of less severe cases that is inherent under such provider payment methods, if the payment rates are too low, there is no incentive for healthcare providers to compete for patients by providing quality services [39]. Consequently, it is important for public purchasers to carefully design the payment arrangements with healthcare providers, i.e. payment methods and rates and associated conditions of payment, in such a way that the incentive for healthcare providers to act in their own self-interest is removed and the incentive for healthcare providers to address health system issues is increased [38].

Where different payment arrangements are applied to public and private healthcare providers, and private providers receive higher payment rates than public providers, there is potential for the disparate payment arrangements to cause inefficiencies in terms of unnecessary costs to the public purchaser (when the payment rates for public providers are sufficient to cover the costs of providing the healthcare services). If the process by which payment rates are determined is unclear, and/or appropriate evidence and full costing are not used in setting fee schedules, the rates applied to public providers may not reflect the actual cost of providing services. In such cases, it is difficult to assess the inefficiencies associated with using higher payment rates for private providers. In fact, in many countries, the use of evidence-based or full costing approaches to determine payment rates is not clearly documented [9]. Use of higher payment rates for private healthcare providers may also cause cost pressure on healthcare supply across the system, resulting in an overall increase in healthcare expenditure in a country [15]. Furthermore, different payment arrangements can also cause inefficiencies due to the additional administrative costs required to run multiple payment systems.

Where the same payment rates are applied and the payment rates are too low and/or are considered 'low' by private providers, the private providers either decide not to take part in the publicly funded system, treat patients covered by the publicly funded system differently [14], or balance bill the additional charges to patients where it is allowed [37]. The issues associated with low payment rates can occur even when different payment arrangements are used for public and private healthcare providers (i.e. regardless of whether lower or higher payment rates are applied to private providers, the private providers consider the payment rates to be

inadequate to cover the cost of providing services). However, dissatisfaction among private providers may be greater when the same payment rates and methods are applied to private and public sectors, as the public sector receive government budget in addition to the payment from public purchasers.

Apart from the technical argument on the determination of optimal payment rates, the issue of ‘higher’ or ‘lower’ payment rates and the associated healthcare provider behaviour can be also linked to the extent to which healthcare providers are satisfied with the payment rates. Under the FSSHIP in Nigeria, private providers report that FSSHIP payment rates (both public and private) for member healthcare services are low and complain that public healthcare providers receive budget and salaries from the state government, while private providers do not. There is anecdotal evidence from private providers that their dissatisfaction with FSSHIP payment arrangements has resulted in discrimination against FSSHIP patients in private healthcare facilities [16]. The problems occur because (1) the basis for the calculation of payment rates is unclear therefore it is difficult to determine whether the rates are appropriate; and (2) the process by which payment rates were determined was not transparent and did not include all key stakeholders, such as private providers, creating strong dissatisfaction among that group [16]. Stakeholder engagement in the process of determining fee levels is important as it helps make the basis for payment rates clearer and provides the opportunity for coordination between purchasers and healthcare providers, which can reduce provider dissatisfaction with payment rates and mitigate unfavourable behaviour.

4.2 Parallel Funding Flows to Public Healthcare Providers and the Roles of Public and Private Healthcare Providers

As seen in the FSSHIP in Nigeria [16, 17], private healthcare provider dissatisfaction with payment rates is partly linked to the fact that public providers receive varying levels of budget from the government on top of payments from the public purchaser. It is important to determine why governments continue to fund public providers or specific services delivered by public providers when mandatory insurance and other financing mechanisms operate in a country and healthcare services are purchased from both public and private providers. This requires clarification of the roles of public and private healthcare providers in the delivery of healthcare services. In many countries, government facilities provide prevention and health promotion services and emergency care, provide some care at no cost (e.g. care for the elderly, maternal care, care for the destitute, etc.), maintain facilities with a good range of capabilities, maintain other public health infrastructure, and deliver benefit entitlements covered by mandatory health insurance, which may (or may

not) differ from those delivered by private providers, while private providers deliver services covered by mandatory health insurance and private practice services.

The role of private healthcare may differ according to the healthcare market. As mentioned in the Methods section, this paper applied the categorization developed by Mackintosh et al. [11] to classify the public–private mix in the healthcare purchasing market in a number of health systems in Africa, Asia and Latin America. In countries with a dominant private sector and those with a private sector leading a stratified system, the private sector has a substantial role in healthcare service delivery, both in primary and secondary care, whereas the private sector in the stratified private sectors mainly services the more wealthy population, who are covered by private and/or social insurance. In countries where the private sector compliments a universalist public sector, the private sector has a relatively small role in healthcare service provision, particularly hospital care, and there are very low or no public sector fees. In countries with a stratified private sector, different types of private healthcare providers are used by different socioeconomic segments of the population.

In addition to the share of healthcare service delivery held by private providers, varying public sector reliance on fees and charges can also affect demand for the private sector. The distribution of service provision between public and private providers determines the significance of the private sector in healthcare service provision in a health system; helps to clarify roles of public and private providers; contributes to understanding why and the extent to which the public sector should be paid by the government; and establishes the negotiating power of providers in purchasing arrangements with public purchasers.

Furthermore, in determining the roles of public and private healthcare providers in a health system, it is important to consider the coherence in population and service coverage when multiple healthcare financing mechanisms operate and both private and public healthcare providers engage with financing mechanisms. In a number of the countries examined, mandatory health insurance covers certain segments of the population (e.g. formal sector workers) and the rest of the population access healthcare services under the tax-funded system. When this occurs, while mandatory health insurance is used to purchase healthcare services from both private and public providers, public providers continue to deliver services to those without insurance coverage under the tax-funded system. Similarly, while SLAs with faith-based healthcare providers limit entitlements to the essential benefit packages defined by the government (with the exception of Malawi, where non-essential services can be included, depending on disease burden of a district) [29, 34], all insurance mechanisms examined cover a comprehensive range of benefit entitlements, including both outpatient and

inpatient services [21, 23, 27, 32, 33, 40]. How and what mechanisms cover the services that are not provided by other financing mechanisms can also contribute to understanding the roles shared between public and private healthcare providers. Careful consideration should be given to the roles of public and private providers in the health system, and the resources and resourcing arrangements necessary to ensure that both types of providers are able to undertake their specific tasks in the health system.

4.3 Multiple Funding Flows in the Healthcare Purchasing Market

Providers, both public and private, often receive funding from multiple healthcare purchasers. Typically, public providers not only receive budget from government but also receive payments from publicly funded insurance mechanisms, whereas private providers receive payments from private health insurance companies, individuals and the publicly funded mechanism. When determining payment arrangements with private providers under the publicly funded system, it is important to not only consider payment arrangements with public providers but also the funding that private providers receive through other mechanisms. Payment rates, the size of population covered, and parallel funding flows, including the payment rates offered by each funder, can send signals that shape healthcare provider behaviour. For instance, private providers may compare the payment arrangements in the fee-for-service schedule that they set for private practice with the case-based payments they receive from the publicly funded system [15]. Subsequent assessment of the different payment arrangements can direct healthcare providers to certain behaviour. In order to avoid unwanted behaviour as a result of multiple funding flows, the government can help to coordinate funding flows by setting rules on payment arrangements and/or providing a regulatory framework that controls payment rates.

4.4 Price and Payment Regulation

The statutory framework within which the healthcare purchasing market operates needs to allow government and/or the public purchaser to design the payment arrangements with private healthcare providers so that they encourage efficiency, equity and quality. The existence of robust regulatory frameworks for setting and/or controlling payment rates at healthcare facilities in LMICs varies between countries. For example, in the countries reviewed, India, Nigeria and the Philippines have no strict remuneration control in place, neither for public nor private healthcare facilities [41–45], and Ghana, Malawi and Tanzania allow private facilities to set their own fee schedules [29, 30, 46]. As discussed earlier, designing incentives requires consideration of the roles of

public and private healthcare providers, understanding of how the parallel funding flows from government are structured, and awareness of how multiple funding flows operate in the health system. Good statutory arrangements should clarify the shared roles and responsibilities of public and private providers in the health system; use regulations and other legal frameworks to align and standardize the payment arrangements for all or some purchasers and healthcare providers; and regulate to mitigate potential negative or unintended behaviour in providers.

5 Policy Implications: How Best to Engage with Private Sectors

There are a number of areas that policy makers in LMICs should consider in order to address issues associated with public purchasers paying private providers to deliver healthcare services. Of these, payment rates for private and public healthcare providers requires careful attention. First, governments or public purchasers should establish transparent mechanisms to decide justifiable payment rates. Without such mechanisms, it may be difficult to determine whether healthcare purchasing arrangements impact on efficiency in the use of public resources, and to design payment arrangements for private providers so that they send signals that encourage equitable and quality healthcare service provision. Determination of payment rates requires information on 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 [47]. The mechanism may also require engagement with healthcare providers in order to make the process transparent, reduce provider dissatisfaction with payment rates, and mitigate any unfavourable consequences for patients that are associated with provider dissatisfaction with payment arrangements.

Second, in order to determine justifiable payment arrangements with private providers, clarification of the shared roles and responsibilities of public and private healthcare providers is required, including specification of the types of services to be provided by public and private providers, and the services for which public providers receive government budget and salaries on top of other publicly funded service payments.

Third, payment arrangements should include carefully designed incentives that direct private healthcare providers to deliver efficient, equitable and quality healthcare services. This requires the government and/or public purchasers to carefully examine the healthcare purchasing market, including examination of the interaction of incentives sent by multiple healthcare financing mechanisms.

Fourth, governments should create sound statutory frameworks that allow public purchasers to design payment

arrangements that enable the strategic purchase of private healthcare in the public system for the efficient use of resources, and to discourage unfavourable provider behaviour, including differential treatment of patients and/or balance billing that can reduce equitable access to quality healthcare services.

Lastly, in order to deepen understanding of public purchasing of private healthcare services and gain further insight into the LMIC context, it is important to develop an analytical framework, underpinned by organizational and institutional theory, for use in in-depth empirical studies on payment rates and methods and the other purchasing arrangements used by public purchasers in a range of settings, and to further investigate the efficiency, equity and quality consequences associated with those healthcare purchasing arrangements.

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Compliance with Ethical Standards

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Ethics approval This study is based on a review of existing literature and, given that there is no first-hand data collection, does not involve any ethical issues.

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