Role and contribution of the private sector in moving towards universal health coverage

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Contents

Acknowledgment..4
Executive summary...5
Overview of the private health sector 7
Regulation of the private health sector 15
Purchase of private sector health services 24
Performance outcomes of public–private partnerships 36
Conclusion 42
Proposed framework of action for engaging the private sector in moving towards universal health coverage……………………………………………………..……………….………...46
Annex 1. Tables on performance impact of public private partnership schemes..................47
References 52

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Executive summary

Attainment of universal health coverage is a progressive realization for Member States of the World Health Organization (WHO) Eastern Mediterranean Region and can be accomplished by expanding the breadth of population covered by services, the depth of services covered and the extent of financial risk protection. The private sector has grown exponentially in most countries in the Region and remains an untapped key partner for moving towards universal health coverage. Regulation, information provision and purchasing of services remain important tools for harnessing the private sector towards strategic universal health coverage goals.

Private sector growth has taken place with too little policy to guide growth. Private sector utilization is particularly high in countries in the Region where public sector spending on health is low and consequently shows the private sector emergence to be a result of insufficient or underperforming public sector services. Essential information on private sector composition, service coverage, quality and pricing continues to be patchy, although notable efforts have begun in many countries. Recent studies show that the private sector has fairly adequate services in middle- and high-income countries but needs quality oversight in low-income countries. Payment for private health services can be substantial even for routine procedures such as Caesarean sections, highlighting the need for a safety net.

The private sector contribution varies according to the context of particular countries, and hence demands locally responsive strategies for harnessing value-added services. In certain countries, government partnerships with the private sector have focused on specialty hospital services to complement gaps in government services. In other countries these have been targeted towards private sector management of hospital and diagnostic facilities, while in yet other countries the private health sector has established itself in providing primary care services in urban centres and expanding to rural areas.

Regulation of entry of private health providers and of the industry is practiced in some form in all countries in the Region. However, regulation of hospitals and clinics remains a grossly overlooked area and is necessary for harnessing the private sector towards universal health coverage. For enactment of regulations, policy coordination is required between larger economic private sector growth policies and those enacted by the health sector. The notion of stewardship is only beginning to be realized in ministries of health and needs to be backed up by formal dedicated structures for regulation, either within or outside the ministry. These need to be supported by databases for private sector mapping, accreditation tools and adequate human resource and budgetary support. The essential approach to regulation remains undecided and uncertain in most countries, and new approaches involving multi-stakeholder regulation and the use of incentives and self-accreditation are important options, as opposed to punitive action with state as the sole actor. Consumer information, while available to varying extents for drugs and food products, has not been extended to health services in the Region and requires a multiplicity of arrangements to serve as an effective tool for patient safety and financial access. Consumer information and protection relies on a multiplicity of arrangements across legal and health ministries, consumer bodies and private health providers, and if hastily introduced can lead to delays in redress, unnecessary litigation and growth of expensive medical technology as a defensive mechanism by the medical sector.

Purchasing private health services has been more widely practised than regulation in developing economies and has a growing body of evidence on its effectiveness. Purchasing

private sector services for health in the Region initially began with support services for hospitals, expanding to hospital beds and specialty services, and recently has involved purchasing primary and preventive care services from nongovernmental organizations. Purchasing by the state in the Region has usually been through evolving national health insurance schemes, contracting out management of government health facilities, contracting out the private sector for specific service delivery schemes, and in a few countries through health vouchers and community health insurance schemes.

Global evidence provides encouraging and significant evidence of the overall impact of public–private partnerships in increasing the use of primary health care services but there is an uneven increase across different services and much depends on the design of the public–private partnership. Although public–private partnerships have increased access to services, they have generally not reached the poorest segments of the population. Among the different public–private partnerships, vouchers have the best service coverage, at least for safe motherhood and primary care, followed by community-based health insurance and National Institute of Health schemes. Public–private partnerships have resulted in improvement of infrastructure and availability of drugs, staff and supplies, but information on the technical process of care remains thin. The evidence as to whether public–private partnerships can bring about a reduction in patient out-of-pocket expenditure is inconclusive. Few instances of reduction in client expenditure is inconclusive have been reported for community-based health insurance and National Institute of Health schemes and for contracting out and voucher schemes, but there are data gaps.

Contracting experience has shown that the private sector grows and adapts in response to purchasing. However, necessary preparatory work within government needs to be done prior to purchasing of services. This requires demarcated structures for open competitive tendering to avoid monopolies, as well as skills for prior estimation of unit costs, development of performance-based contracts and independent monitoring. The costs of purchasing private sector services and the enrolment of low-income clientele can be high and needs to be built into state budgets prior to embarking on public–private partnerships. Policy support for purchasing and financing the private sector for universal health coverage has tended to be lukewarm and country experience shows that a slow and cautious expansion of public–private partnerships over time has been better for fostering trust and harmonious working between public and private sectors. Finally, while the policy push for public–private partnerships has usually come from international donors there needs to be caution in the use of donor funding for embarking on public–private partnerships for universal health coverage as this can lead to fragile programmes.

Overview of the private health sector in the Region

Introduction

WHO defines universal health coverage as “access to key promotive, preventive, curative and rehabilitative health interventions for all at an affordable cost, thereby achieving equity in access” *(1)*. The diverse definition attempts to include disadvantaged and excluded groups in terms of access to care, ensuring that financial hardships do not act as a barrier in that regard *(2)*. Universal health coverage is an integral approach to a country’s overall human and economic development strategy. It has also been defined in the Rio+20 Political Declaration as being crucial to “enhancing health, social cohesion and sustainable human and economic development” *(3)* and has received considerable attention on the global stage, particularly within the context of the debate on the post-2015 development goals *(4)*. Importantly, WHO has a framework for action *(5)* on advancing universal health coverage in the Region, based on the following four domains:

- developing a vision and strategy for universal health coverage
- addressing coverage of financial risk protection
- expanding the coverage of needed health services
- ensuring population eligibility, entitlement and actual coverage.

Challenges to universal health coverage

In the past two decades the private sector has expanded significantly in the Region. In some countries, an estimated 70% of the population seek health care from the private sector *(6)*. Yet issues related to the private health sector have not been addressed properly by many ministries of health. In most low- and middle-income countries of the Region, the perceived quality of care in the public sector is poor, and accessibility and affordability to comprehensive health services is a challenge. Even in high-income states, where quality is expected to be less of an issue, there is insufficient information and lack of a database on private health sector. Moreover, private sector health care providers have no, or minimal role in developing national health policies. This is not only due to lack or insufficient information and intelligence with regard to the private health sector, but to a lack of trust between the public and private sectors, and lack of, or poor, regulatory mechanisms that can bring public and private sector health care providers together. However, there is evidence across the world that the private health sector can contribute effectively in all three dimensions of universal health coverage.

Public–private partnerships for universal health coverage

Public–private partnerships have gained significant global policy attention in recent times and have been implemented by a growing number of countries within and outside the Region. A notable, although less visible trend, is also now seen in focal countries of the Region. Public–private partnerships in the health sector can be defined as an institutional relationship between the government and the private sector (non-profit organizations, commercial private sector), to achieve a shared health goal on the basis of a mutually agreed division of labour *(7)*. It requires a written agreement that specifies the obligations of each organization involved, the objectives of the partnership, and how the partnership will be managed or governed *(8)*.

Public–private partnerships are essential in moving towards universal health coverage, so as to fill gaps in coverage, prevent government from overstretching its capacity in delivering for

all, and harnessing the rapidly growing private sector towards national and state policy goals. Regulation, provision of consumer information, and purchasing of private health services are essential to ensure that issues of quality of services and patient safety are integrated into private health care delivery, in addition to access and equity of public sector services.

Public–private partnerships can be informal, such as the provision of incentives, target setting , training and support for supplies to the private health sector by the state, or they can be more explicit and formal, involving purchase of services by the state or binding legislative control.

Aim

Mapping private health services in countries in the Region is a priority for WHO and a commitment to do so was included in a paper presented to the WHO Regional Committee for the Eastern Mediterranean in 2012 *(6)*, while development of a regional strategy for cooperation with the private sector was discussed in a technical meeting prior to the session in 2013. The Regional Office completed a preliminary analysis of the private sector in countries of the Region and also two studies on regulation of the private sector in the Region.

This paper provides material for discussion on harnessing the private health sector in the Region, by pulling together published material from within the Region and supplementing this with hard evidence from outside the Region. Despite limitations in the availability of data and the challenges associated with data mining, a systematic effort has been made to pull together the best available data and information. Specifically, it provides information for discussion on the following areas:

- the current role of the private sector, with a particular emphasis on regulation, consumer information and purchasing/financing of private health services towards universal health coverage;
- analysis of drivers and constraints in strengthening the role of the private health sector in establishing regulatory mechanisms and service provision in the countries of the Region;
- proposing a framework that includes regulation, service provision and financing as a basis for the enhanced role of the private sector in moving towards universal health coverage;
- proposing a list of priorities for countries in the Region and the role of WHO in supporting Member States in strengthening public–private partnerships.

The private sector in the Region: an overview

The important role of the private health sector in health care delivery in most countries of the Region is increasingly being acknowledged by the ministries of health in the Region. Despite this recognition, it has not been possible to formulate an evidence-based strategy on the role and contribution of the private health sector in provision of health care services in moving towards universal health coverage.

A recent assessment of the private health sector in 12 countries in the Region shows that the role of the private health sector is not well defined, its capacities are poorly understood, their contribution in preventive care and screening is not optimal and even practices and care

delivery are not monitored. The range of services provided varies from one to another private care provider within the same country, standards are questionable, regulation is poor and there is insufficient information about the financial burden to the users of these services. The user rates for the private sector in relation to outpatient services range from 33% to 86%.[1] Between 11% and 81% of the poorest quintile in the same groups of the countries use private sector services.[2]

Private sector growth

The role, capacity and contribution of the private health sector in the Region needs to be better understood. Despite a paucity of data, available information suggests unprecedented growth of the private sector in many countries. Private sector hospitals account for up to 20% of the total number of hospital beds in most countries and 40–80% of the hospital beds in certain countries. Table 1 lists primary health care clinics, hospital beds, pharmacies and diagnostic facilities in both public and private sectors in all countries of the Region.

Private versus public health expenditure and utilization

Private health expenditure, mainly in the form of patient out-of-pocket payment, is higher in low-income and lower-middle-income countries in the Region (Group 3) than high-income countries (Group 1). Higher income countries have higher levels of public spending on health and have lower spending by households (Fig. 1).

Table 1. Public and private: primary health care clinics/centres, hospital beds, pharmacies and diagnostic facilities

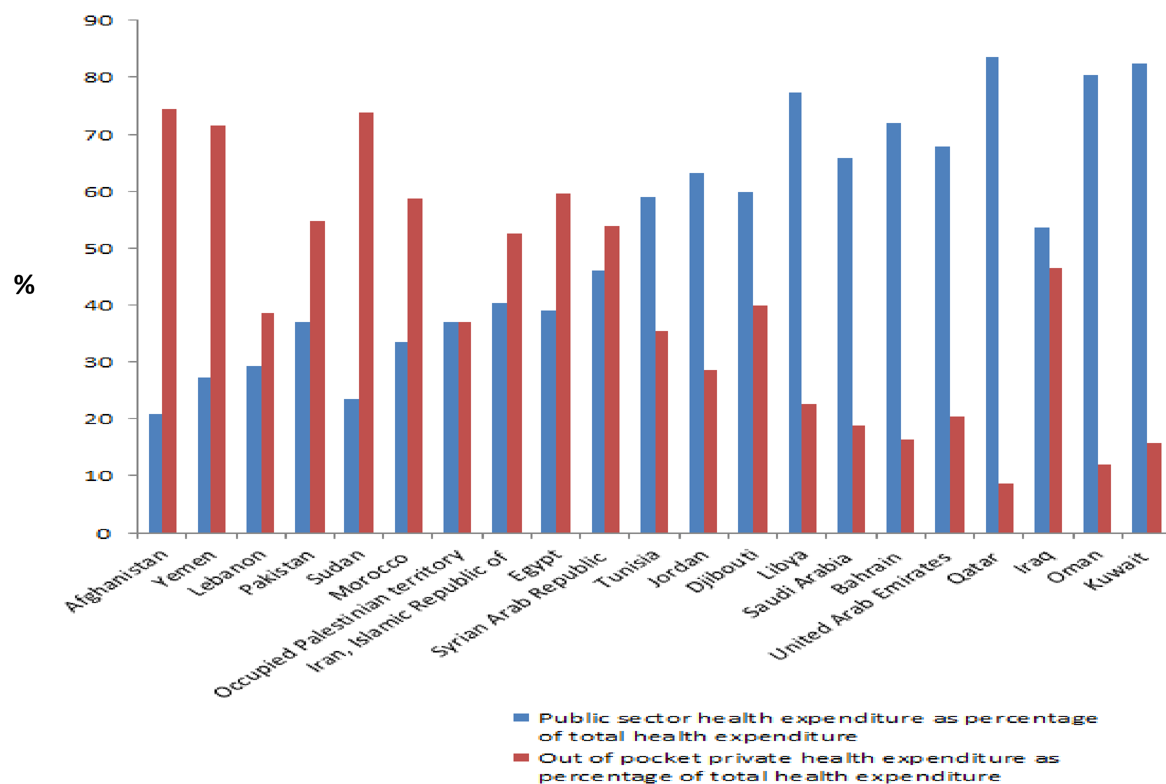
Countries		Primary health care clinics/centres		Hospital beds		Pharmacies		Diagnostic facilities	
		Private	Public	Private	Public	Private	Public	Private	Public
Group 1	Bahrain	179	24	384	1 702	101	29	22	29
	Kuwait	272	92	1 247	6 703	374	100	99	147
	Oman	922	232	360	5 499	422	287	ND	ND
	Qatar	ND	21	ND	1 694	ND	ND	ND	21
	Saudi Arabia	364	2 037	14 165	46 871	2 281	6 022	73	9
	United Arab Emirates	2 057	243	2 557	7 024	1 329	111	ND	ND
Group 2	Egypt	51 484	4 937	31 653	96 820	61 522	1 852	ND	ND
	Jordan	1 576	27 007	4 041	8 065	8 141	836	4 243	3 840
	Iran, Islamic Republic of	4 000	1 119	17 323	11 4232	2 090	1 111	365	ND
	Iraq	ND	2 441	2 886	40 182	ND	ND	ND	ND
	Lebanon	768	170	12 000	2 500	2 679	28	1 114	90
	Libya	415	1 372	2 088	20 689	1 934	1 372	311	ND
	Morocco	319	2 689	7 973	21 734	7 257	ND	ND	ND
	Occupied Palestinian territory	251	629	1 174	5 183	650	171	ND	282
	Syrian Arab Republic	107	1 791	8 962	22 858	ND	ND	ND	ND
	Tunisia	6 273	2 083	3 400	19 632	1 942	ND	214	ND
Group 3	Afghanistan	12 200	ND	ND	10 132	12 000	200	ND	ND
	Djibouti	13	56	105	364	13	46	5	18
	Pakistan	73 650	5 941	20 000	108 137	40 000	15 000	2 400	1 600
	Somalia	ND	ND	ND	ND	ND	ND	ND	ND
	Sudan	691	1 900	2 607	27 855	2 407	107	1 317	843
	Yemen	ND	1 440	ND	16 095	ND	ND	ND	ND

Source: Assessment of the private health sector in 12 countries. Cairo: WHO Regional Office for the Eastern Mediterranean; 2013 (unpublished).

ND: not determined.

[1]Assessment of the private health sector in 12 countries. Cairo: WHO Regional Office for the Eastern Mediterranean; 2013 (unpublished).

[2]Demographic health surveys for selected countries.



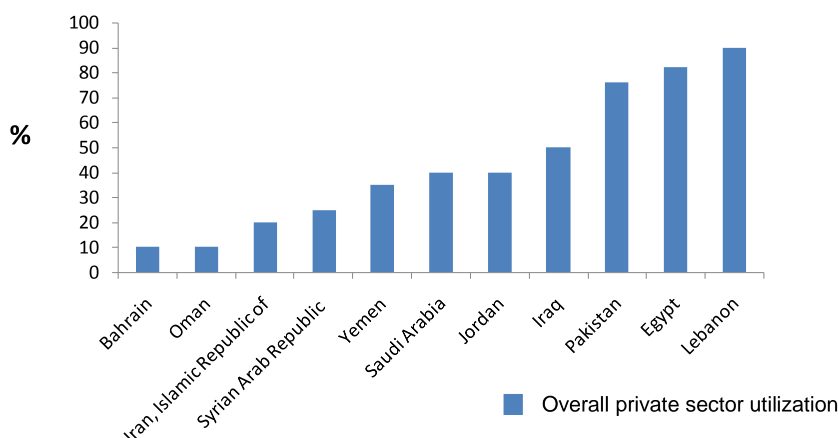
Note: data for Somalia not available

Fig. 1. Public sector versus out-of-pocket private sector health expenditure

Source: WHO Global Health Expenditure Online Database, 2013

It is evident that the private health care sector has shown tremendous growth in recent year in countries of the Region and, despite the lack of sufficient data on the effectiveness and quality of care and its overall impact on respective health systems, the private health sector is playing a significant role in these economies. In some countries, it is a boost to the economy and in many countries it is the major source of health care access and availability for a large proportion of the population. Private sector composition and contribution to health care delivery

Data from recent WHO surveys and reports and from other sources show the growing influence of the private health sector in the health systems and service delivery of countries of the Region. The private sector accounts for 10–90% of health service utilization in Member States, and as much as 50–90% in some low- and middle-income countries (Fig. 2).



Note: data for Sudan was not available

Fig. 2. Utilization of private sector outpatient clinics in countries of the Region

Source: Assessment of private health sector in 12 countries. Cairo: WHO Regional Office for the Eastern Mediterranean; 2013 (unpublished).

Quality of the private health sector

The perceived quality of the private health care services is generally considered to be high among the population. However, there have been contradicting reports in this aspect and there is also evidence suggesting that the "usual higher expenditures" in the private sector do not necessarily translate into high quality. By looking at quality of care in terms of medicines availability, patient records and satisfaction, quality and availability of infrastructure, staff capacity and skills, it can be seen that the private sector exhibits different characteristics in different countries.

Quality of outpatient services: diabetes mellitus care

A study of quality assessment and cost/pricing estimates of diabetes and C-section services in private health sector in five Eastern Mediterranean Region countries[3] showed that most private outpatient facilities had basic equipment for patient examination and maintained patient records. However, the only low-middle-income country assessed showed suboptimal levels of availability of essential medicines, patient record maintenance and availability of recommended tests. Common quality issues seen in the private sector in different countries included the provision of refresher courses to staff, presence of information, education and communication materials, patient feedback mechanisms, and availability of cost-effective test for screening of complications.

Overall, patients demonstrated satisfaction with the quality of care provided but in some countries they had reservations regarding staff attitude.

Likewise, the private sector in Saudia Arabia performs quite well in terms of staffing, including refresher training and courses for staff as well as availability of care and service delivery guidelines and patient follow-up. The private sector in these countries also demonstrates strength in other areas, such as availability of diagnostics tests, maintenance of patient records and providing patients with health education sessions. However, these countries require improvement in distribution of information and education material for patients and instituting feedback mechanisms for patient follow-up care. The Lebanese private health sector is a mediocre performer in most of the relevant quality domains, whereas the private sector of Pakistan fares the worst. Coordination mechanisms need to be established between the private health sector facilities and the Ministry of Health in all five countries (Table 2). There is little evidence across the board regarding sharing of data and statistics with the Ministry, thus inhibiting regulation and affecting quality of care.

Patient satisfaction levels with the quality of private health care services were generally high among the five countries studied. However, in Lebanon and Pakistan, a significant proportion of patients expressed their dissatisfaction with the staff's attitude.

[3] Quality assessment and cost/pricing estimates of diabetes and C-section services in private health sector in selected Eastern Mediterranean Region countries. Cairo: World Health Organization Regional Office for the Eastern Mediterranean; 2013 (unpublished).

Table 2. Quality indicators for diabetes mellitus management in outpatient settings of the private health sector in selected countries

Indicator	Saudi Arabia	Lebanon	Jordan	Morocco	Pakistan
Availability of infrastructure					
Physical examination room	100%	100%	100%	100%	46%
Urine dipstick for glucose test	100%	100%	100%	100%	69%
Basic equipment availability					
Examination table	100%	100%	100%	100%	77%
Functional glucometer	100%	100%	100%	100%	74%
Fundoscope	100%	75%	100%	7%	31%
Weight machine	100%	100%	100%	100%	93%
Availability of essential drugs					
Availability of WHO recommended oral hypoglycemic drugs	100%	70%	100%	100%	57%
Availability of WHO recommended insulin injections	100%	100%	100%	100%	57%
Availability of diagnostic tests					
Availability of fasting blood glucose	100%	92%	100%	100%	69%
Availability of HbA1C	100%	78%	100%	20%	-
Availability of guideline for performing test	100%	65%	100%	100%	78%
Health management information system					
Keeping records of diabetic patients	100%	100%	100%	100%	31%
Sharing data with ministry of health	100%	38%	0%	0%	0%
Staff strength					
Physicians attended refresher courses on diabetes	100%	80%	-	100%	50%
Facilities having service guidelines for diabetes mellitus	100%	100%	100%	100%	-
Process of care					
Counselling for diabetes patients					
Percentage of patients received health education on lifestyle and diet	100%	65%	100%	100%	100%
Percentage of patients received information on diabetes mellitus	67%	77%	44%	99%	96%
Patient follow-up					
Facilities send reminder for follow ups	100%	100%	100%	100%	-
facilities having feedback mechanism	100%	30%	50%	80%	-
Patient satisfaction					
Percentage of patients who are satisfied with care they received at facility	100%	80%	94%	97%	99%
Percentage of patient who are satisfied with staff attitude	98%	48%	90%	94%	64%

Source: Quality assessment and cost/pricing estimates of diabetes and C-section services in private health sector in selected Eastern Mediterranean Region countries. Cairo: World Health Organization Regional Office for the Eastern Mediterranean; 2013 (unpublished).

Quality of inpatient services: Caesarean section

The study also showed that quality of infrastructure, service availability, essential medicines and diagnostic services were generally satisfactory in the private sector of the reviewed countries in the Region (Table 3). However, the private sector in Pakistan had gaps in critical aspects of neonatal and maternity services delivery infrastructure, patient record-keeping, and the availability of guidelines for performing emergency Caesarean sections. Generally, the private sector performed better in terms of inpatient quality parameters compared with outpatient settings. Several countries showed high levels of elective emergency sections in the private sector, as high as 90% in Saudi Arabia. There was unevenness in terms of communication to patient on the reasons for Caesarean sections. A major weakness across all reviewed countries was the low sharing of data with the Ministry of Health.

Table 3. Quality indicator for C-section performed in private health sector in selected countries					
Indicator	**Saudi Arabia**	**Lebanon**	**Jordan**	**Morocco**	**Pakistan**
Availability of infrastructure					
Operation theater	100%	80%	100%	60%	100%
Maternity ward	100%	100%	100%	100%	100%
Nursery	100%	100%	100%	100%	60%
Availability of services					
Blood bank	100%	80%	100%	0%	100%
Neonatal intensive care unit	100%	80%	100%	60%	60%
Laboratory	100%	100%	100%	40%	100%
Availability of essential drugs and supplies					
WHO recommended antibiotics for C-section	100%	100%	100%	80%	100%
Calcium channel blockers	100%	100%	100%	100%	80%
Operating theatre supplies	100%	100%	100%	100%	100%
Availability of diagnostic tests					
Facilities performing anti HCV/HBV test	100%	100%	100%	20%	100%
Facilities performing CBC test	100%	90%	100%	20%	100%
Facilities performing ultrasound of pelvis	100%	100%	100%	100%	100%
Health management information system					
Keeping records of C-section patients	100%	100%	100%	100%	60%
Sharing data with Ministry of Health	100%	100%	0%	0%	20%
Staff strength					
Physicians attended refresher courses on normal delivery/C-section	100%	100%	100%	100%	40%
Facilities having service guidelines for performing C-section	100%	100%	100%	100%	0%
Process of care					
Percentage of emergency C-section performed	10%	54%	40%	22%	50%
Percentage of elective C-section performed	90%	32%	60%	78%	50%
Post-operative care of mothers					
Post-operative pain was successfully managed	100%	100%	100%	100%	100%
Percentage of patients suffered from post-partum haemorrhage	0%	0%	0%	2%	0%
Post-operative care of babies					
Percentage of babies whose APGAR score was recorded	100%	98%	100%	100%	-
Percentage of babies with ID bracelet was allotted	100%	60%	100%	80%	-
Patient follow-up and awareness					
Percentage of patients informed about their follow-up visits	100%	100%	100%	100%	-
Percentage of patients aware of C-section indication	3%	80%	99%	92%	80%
Patient satisfaction					
Percentage of patients satisfied with care they received at hospital	100%	100%	90%	94%	76%
Percentage of patients satisfied with staff attitude	100%	85%	76%	84%	58%

Source: Quality assessment and cost/pricing estimates of diabetes and C-section services in private health sector in selected Eastern Mediterranean Region countries. Cairo: World Health Organization Regional Office for the Eastern Mediterranean; 2013 (unpublished).

Private health sector: cost and pricing

There is considerable variation in the private health care sector in terms of the unit cost of hospitalization, as seen in the case of Caesarean sections assessed in selected countries in the Region. While allowing for purchasing power disparities, the range varies considerably, even within similar economic bracket countries, such as Jordan, Lebanon and Morocco, and this may be due to level of competition offered by the private sector market.

Expenditure on hospital care in the private health sector consumes a significant proportion of the annual household income in most of the reviewed countries in the Region. This ranges from 28.6% to 40.5%, which borders on catastrophic health expenditure for at least two of the countries reviewed. Only Lebanon, with an expansive private sector market, showed that rates had adjusted to meet patient incomes.

Financing and pricing for inpatient care

The financing mechanism for inpatient care in the private setting is predominantly prepaid cover in three of the countries of the Region reviewed. More than half of the users of inpatient services for Caesarean section are covered by any form of insurance in Jordan, Lebanon and Morocco. However, the major source of financing for inpatient services in Pakistan is out-of-pocket payment.

Less than half of users of Caesarean section services reported availability of pricing guidelines in private sector health facilities in Jordan, Lebanon and Pakistan. The situation is even worse in Morocco where such pricing guidelines are almost non-existent.

Summary

Private sector growth has taken place in all countries of the Region and the private sector is an important player in universal health coverage. Private sector utilization is particularly high in countries in the Region where public sector spending on health is low, and consequently shows private sector emergence as a result of insufficient or underperforming public sector services. Essential information on private sector composition, service coverage, quality and pricing continues to be patchy, although notable efforts have started out in many countries.

Data collected from outpatient departments for diabetes and from inpatient departments for Caesarean section show high scores on availability of appropriate infrastructure, equipment, medicines, staff, and patient satisfaction in the private sector of most countries in the Region. However, absence of a proper health management information system and a coordination mechanism with the Ministry of Health was lacking in most countries and had the potential to affect regulation and quality of care.

Out-of-pocket expenditure is higher in countries where there is greater utilization of the private sector. However, substantial variations are seen for inpatient care according to country context. In at least two of the four countries reviewed for out-of-pocket expenditure, spending was close to, or at, a catastrophic level. While the private sector cannot be overlooked in universal health coverage, strategies, plans, and implementation roll outs, countries must build in adequate safety nets when involving the private sector, and also data-sharing on health services and oversight on quality standards.

Regulation of the private health sector

What is regulation and why regulate?

The private health sector, although robust and expanding in most countries in the Region, is faced with issues related to uncertain quality, high pricing, skewed distribution in major urban centres, and dual links between public and private sector, as discussed in the previous section. The large and expanding size of the private sector and too few policy defining parameters for private sector growth have increasingly "marketized" the health sector *(9)*.

Regulation is one of the key mechanisms that can be used for addressing some of these areas and harnessing the private sector towards accessible and quality universal health coverage. Regulation occurs when governments control or deliberately try to influence the activities of individuals or institutions through manipulation of the quantity, quality, price, distribution and provision of certain services, such as public goods *(10,11)*.

A number of specific issues call for policy regulatory action.

- There is significant overlap of service provision between the public and private sectors, leading to unnecessary duplication of infrastructure in urban areas while gaps in access to services remain in rural areas. This is also causes cost inefficiencies, as limited resources are directed at providing the same service and a culture of competition rather than complementary provision prevails.
- The growing and uncontrolled private sector has led to supplier-induced demand for high-cost diagnostics, deviations in prescription from the national essential drug lists, and an unnecessary use of expensive services and procedures (12). Hence expansion of the private sector, while often meant to provide better access to health care, usually comes with an escalation in out-of-pocket expenditure.
- With the growth of the private sector there has been an expansion in private medical insurance which, while expanding access to services, has not always resulted in patients receiving the right balance of promotive and preventive care, with the balance tilting towards curative care, the role of which remains unestablished in the overall improvement in health indicators.

Regulatory approaches, control and implementation mechanisms

Fig. 3 elucidates the regulatory framework for the private health sector. As outlined in Table 4, four controls can be used to regulate health services or medical products. These can be used singly or in combination, and are quantity, distribution, quality and cost/pricing. Regulation in most countries is focused on quantity of providers/services, with less use of the other controls.

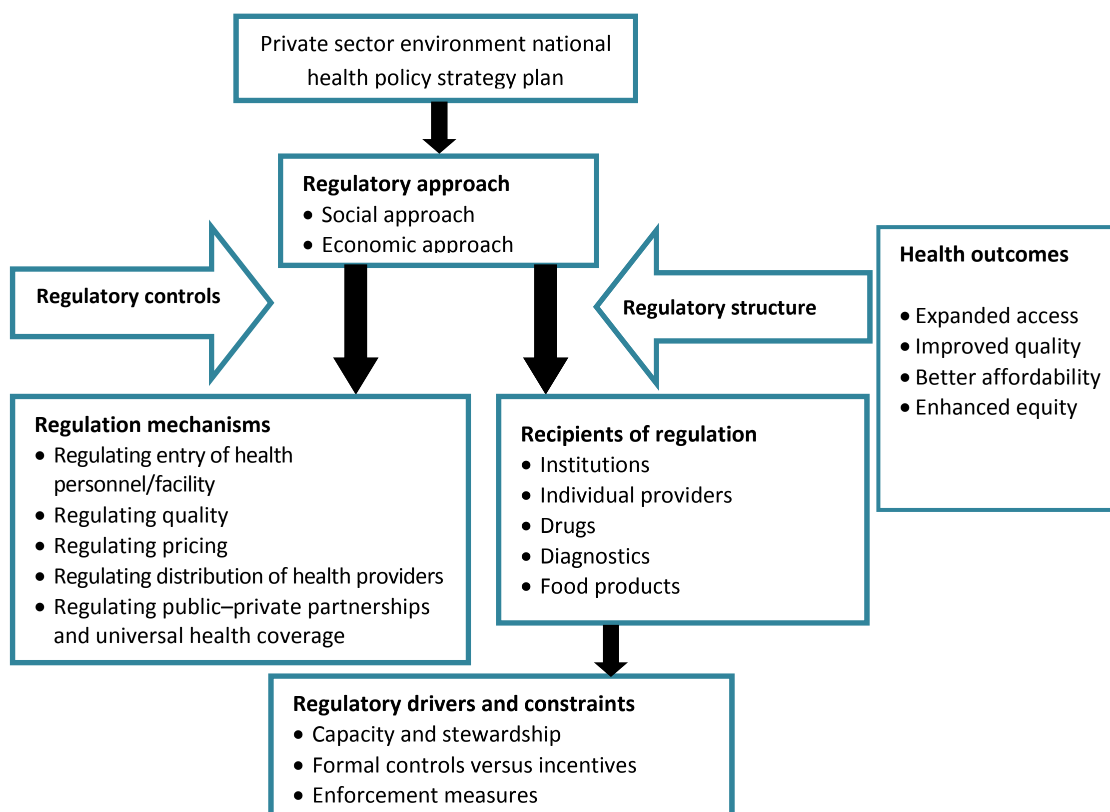


Fig. 3. Regulatory framework for the private health sector

Currently, there are two types of approaches underpinning choice of control. The "social approach", focusing on quality and patient safety, has been the more widely practised approach across most countries, with varying success *(10)*. The "economic approach" is more expansive and deals with the larger health market and issues of quantity of private sector providers/facilities, their distribution and the fee charged for services *(10)*.This has been less well practised in low- and middle-income countries but has been the focus of reform and innovations in more established economies. Countries embarking on private sector regulation need to decide upfront which type of approach, the "social" or "economic", they will adopt.

A number of measures, applied singly or in combination, can be used to implement regulatory control. Common measures applied in countries are:

- legal control
- policy guidelines/codes of practice
- financial incentives
- consumer information.

Table 4. Regulations, controls and mechanisms

What to regulate	Regulation controls	Regulatory mechanisms
Services: institutions and professionals	Quantity	Restricting entry of providers and purchase of specialty equipment; incentives for expansion of certain services/ providers
Goods: medicines, technologies and food	Distribution	Entry into market; relocation of professionals; competitive practices
	Quality	Standard-setting; changes to medical, dental, nursing, pharmacist and paramedic curricula; drugs control; food control
	Cost/pricing	Minimum salary levels; ceilings for fee-setting; cover to non-affording patients

Country experience of regulatory measures

In the Region, regulation has received insufficient attention in national policies and strategies. Regulatory frameworks are rarely updated and emphasis continues to be on initial entry rather than equitable distribution, complementary service packages, improved quality and affordable pricing. A widely unregulated private sector has left consumers unprotected. External assistance, in the low- and lower-middle income countries, has tended to focus more on quick gains through purchasing and less on long-term gains through strengthened regulations. There is little documentation of country experience with different forms of regulation and their effectiveness. The sections below highlight experiences from countries within the Region and in other regions.

Legal control of individual providers

Legislation is the most common form of regulation of private sector in most countries, and can carry sanctions or closure in case of non-compliance. This is practised in all countries and is commonly directed at licensing of providers but is vaguely applied to medical conduct and ethics. Professional councils or syndicates are usually responsible for licensing providers as well as medical and allied training institutes and universities. The modus operandi followed is that of self-regulation rather than state regulation. Experience from a number of countries, such as Egypt, Pakistan, United Republic of Tanzania, Yemen and Zambia has shown that even where detailed laws are present, their implementation is usually weak. Subjective interpretation, protection of members by the professional community and internal rivalries tend to blunt implementation.

Legal control of private facilities

A small number of countries have extended legislation from individual providers to the accreditation of clinics, hospitals and nursing homes. There is considerable variation in the functions that are regulated: quality is more commonly regulated with less instances of price control.

In Egypt and Yemen, as in most countries in the Region, private health facilities undergo mandatory licensing. Yemen's Private Health and Medical Institutions Law is precise in terms of procedures for licensing and periodic relicensing but specifications are more general in terms of quality of care, number, distribution and advertising.[4] Lack of clear specification, databases for monitoring and low awareness of laws are constraints in the public sector.

Bargaining by private health facilities is seen in Yemen, where a union of private hospitals has been formed.[4] This is primarily centred around the benefits of the owners but also coordinates referral among private hospitals and has started continuous medical education, which is at an early stage. The union involves the Ministry of Public Health in the implementation of regulations.

In Egypt, private health clinics and hospitals are controlled through mandatory registration with the Ministry of Trade and Foreign Industry and the Ministry of Investment, followed by licensing from the Ministry of Health. Health licensing aims to ensure a minimum uniform standard and involves fixed parameters of licensed staff, medical director's registration, and price list. It is unclear what quality standards are included as part of licensing and the extent

[4]Assessment of the private health sector in 12 countries. Cairo: WHO Regional Office for the Eastern Mediterranean; 2013 (unpublished).

to which these are enforced. Prices are also regulated and professional syndicates are required to set price ceilings for charging by professionals; however, rules are insufficient, vague and not implemented. Evaluation shows that implementation can be improved with stronger checks and governance, and by putting up a sufficient budget for enforcement.

Another parallel is provided from India where regulation can be enacted both at the federal and state levels. Small private hospitals of less than 25 beds in India are largely unregulated; however, two states (Maharashtra and Delhi) have enacted the Nursing Home Act for compulsory registration, undertaken by local municipality and with a strict board, with yearly inspection *(13)*. Despite the forward moving act, several nursing homes remain unregistered due to lack of inspectors, while those registered lack standard-setting and reporting systems. Similarly, in the case of the United Republic of Tanzania and Zimbabwe, while there is mandatory registration for clinics and hospitals, it is weakly enforced *(14)*.

Provision of policy guidelines and codes of practice

Light regulation is provided through the provision of policy guidelines and codes of practice but this is not backed by a legal act that may lead to sanctions. Regulation can be in the form of general guidelines or detailed prescriptions of quality parameters. Provision of accreditation certificates, trainings and re-accreditation through professional medical, nursing, dental or pharmacy councils has also been used as a "lighter touch" attempt towards regulation.

In certain countries, regulation has followed a more formal process and compliance agreements have been developed between private providers and accreditation bodies. For example, in the United States of America, enforcement of codes of practice is by self-regulation rather than state regulation, and large independent accreditation agencies such as the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and the National Committee for Quality Assurance (NCQA) undertake periodic accreditation of private hospitals based on established parameters of compliance *(15)*.

In Pakistan, the devolution of health from federal to provincial level has provided an important stewardship space that provinces have been quick to capture. Structures for standard-setting in both private and public sector facilities have been set up recently in two of the four provinces of Punjab and Khyber Pakhtunkhwa while the third province Sindh has recently passed supporting legislation for setting up a health commission along similar lines. The forums in these three provinces are intended to provide standard-setting and formal accreditation but stop short of punitive action. Accredited facilities will have an edge in government purchasing of private sector services that are simultaneously underway in the provinces. Much will depend on the extent of autonomy granted to regulatory structures, and the robustness of the monitoring and inspection systems in rolling out accreditation.

Financial incentives

Tax breaks and provision of subsidies are important strategic concessions to allow the expansion of the private sector into required areas of growth. Incentives can be targeted to fill geographical gaps in provision through incentives for private sector provision in rural areas. These can also be targeted to fill service-related gaps such as setting up of nursing and midwifery colleges in underserved rural locations. Conversely, removal of financial subsidies, such as the partial fee recovery in heavily subsidized public sector medical schools to restrict excessive production of doctors, can also act as a regulatory tool.

In Egypt, the private health sector has benefitted from incentives for general private sector growth provided by the Ministry of Trade and Foreign Industry and the Ministry of Investment[5]. Tax breaks and reduced customs duties on imported equipment have been provided through the Companies Corporate Law and the Investment Guarantees and Incentives Law for expansion of private sector investment in business and also health infrastructure. Additionally, contracts have been made with the private sector for infrastructure expansion. Private health facilities have been provided with a 10-year period of tax exemption in return for providing 10% of bed capacity free of charge, as per the investment law designed for encouraging private sector expansion. Incentives are considered by the private sector to be insufficient, and require careful reconsideration with private sector feedback. Consumer awareness has not been simultaneously addressed, and most consumers follow provider reputation rather than registration status.

Consumer protection and information

Consumer protection involves restricting and monitoring the advertising of private clinics, hospitals, diagnostic centres, medical and food products. This is in place for infant formulas, other related food products and sometimes for medical products, but rarely for health services. It also involves addressing information asymmetry in health care by providing patients with information about the clinical process of care, pricing and enhancing accountability through provision of grievance measures.

In India, the Consumer Protection Act was enacted for quick redress of patient grievances and, although resisted by medical professionals, its support by the Supreme Court resulted in widespread implementation *(13)*.The majority of doctors are aware of the Act and its implications, and there are calls for orientation of newly graduated doctors entering private practice. Furthermore, the level of information shared with consumers needs to be widened to include fee schedules and should incorporate penalties for those who file false cases.

Lawsuits on medical negligence have grown along with the increasing private sector and rise in patient information. This has produced a medico-legal fraternity in countries such as the United States of America *(9)*, which is also on the rise in countries such as Thailand. In some countries, such as Pakistan, medical negligence is increasingly being picked up through *suo motu* action by legal courts as a result of judicial activism. Although consumer information and empowerment must be addressed, litigation processes are not always in the best interest of patients and can lead to an escalated use of expensive technology by the private sector in an attempt to avoid litigation.

Regulatory structures

Professional councils

Professional councils, i.e. medical syndicates and associations, exist throughout the Region for mandatory licensing of providers at the time of entry into the health market, although the extent of their activity and independence varies. Their role has been principally targeted towards education registration as opposed to medical practice legislation.

Councils typically comprise professionals drawn from public and private colleges, and are usually based in the Ministry of Health and have only in rare cases been given an autonomous status for independent working. While medical, dental and nursing councils are

[5]Assessment of the private health sector in 12 countries. Cairo: WHO Regional Office for the Eastern Mediterranean; 2013 (unpublished).

commonly seen, councils of paramedics have largely been overlooked. This requires attention, given the extensive variation in the quality of paramedic training.

Professional councils in the Region are targeted towards a social approach to regulate patient safety and quality but their role is mostly limited to individual providers and does not extend to facilities. Functions found across most Member States include: standardization of medical dental, nursing and pharmacy curricula; inspection and licensing of teaching colleges, and registration; licensing of private health care providers after completion of training; and disciplining of individual providers based on professional codes of conduct.

Such associations are well developed in Lebanon, where they involve self-accreditation of professionals. In the Islamic Republic of Iran, the Medical Council's role also extends to accreditation of hospitals and medical facilities, licensing, pricing and quality control of medicines, laboratory materials and food products.[6] Registry rolls are not proactively maintained and many providers remain unregistered or do not renew licensing on a regular basis due to lack of inspection by councils and the Ministry on maintenance of active registration status, as well as the meagre budgets for registration.

Professional bodies are less effective than intended and in certain countries have become forums for medical self-protection. Politics, corruption and undesirable practices have been reported from India *(13)*; unchecked growth in medical colleges and universities without due teaching faculty and required teaching bed capacity has been reported from Pakistan *(16)*, and issues between the public and private sector in Yemen[7].

Regulatory authorities

Regulatory bodies are increasingly found in countries engaging in health reforms, both within and outside the Region. Their main function is health facility accreditation, including hospitals, clinics and nursing homes, across both public and private sectors. These functions range from standard-setting to accreditation and price control. Medical negligence and consumer information and protection remain grey areas that may fall across regulatory authorities or councils.

National health authorities have been established in Jordan and Bahrain to oversee health services, food and drugs *(17,18)*. Pakistan blood bank regulatory authorities have been in place over the past decade. Initially they provided training and protocols to the private sector and have now expanded to provide active inspections and sealing of blood banks, empowered by strong parliamentary regulation and field budget support. Several states are making efforts to strengthen drug regulatory authorities. The extent of autonomy varies, with some regulatory structures nested within the ministry and others existing as independent structures. In Tunisia for example, the regulation is within the Ministry of Public Health, and health professionals and services are highly regulated through defined accreditation norms that are carefully revised and updated. Tunisian regulation also extends to distribution, with the number of private pharmacies restricted and defined by the needs of the population. In contrast, the Jordanian and Saudi Food and Drug Administrations, are based on the structure of the United States of America and are independent of the ministries of health *(17,19)*, giving them strong leverage across the industry and providers.

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[6] Baksh AF, 2006, unpublished

[7] Assessment of the private health sector in 12 countries. Cairo: WHO Regional Office for the Eastern Mediterranean; 2013 (unpublished).

However, caution is needed in setting up regulatory bodies if political will and strong governance are lacking. While a regulatory body exists in Yemen, there are instances reported of subjective enforcement and use of informal payments to bypass health standards. Technical weaknesses also exist with limited data on beds, professionals and procedures collected during inspection visits. Such risks are also inherent in other developing economies that are about to embark on regulation reforms.

Regulation of insurance schemes

Regulatory requirements and ensuing policy recommendations depend on the stage of health insurance development in the country. A clear distinction between public and private sector roles is necessary to avoid escalation of health expenditure from and the unnecessary use of high technology services, service cost escalations and fraud. Additionally, up front target-setting is required to move towards desired health outcomes.

Coordination is key to successful implementation but can be problematic. Private health insurance in Jordan operates under a general insurance law but regulation of hospitals and facilities is undertaken by both the Ministry of Trade and Industry and the Ministry of Health, resulting in instances of coverage overlap and cost inefficiencies *(17,19)*. In Lebanon, each branch of the insurance industry is associated with a separate supervising ministry, making public oversight difficult *(20)*.Lack of an effective supply control system in Lebanon has led to cost and premium escalation in the health sector. It has also resulted in equity gaps, with low-income populations spending on average 20% of their income on health care as compared to 8% in the higher income groups *(20).*

Consumer protection bodies

While consumer protection is a nascent area in the Region, when practised in other developing economies it has usually relied on a multiplicity of arrangements, ranging from consumer judicial courts to consumer protection bodies and citizen-inclusive hospital boards. However, there is little evidence of the relative effectiveness of these bodies and forums.

India's Consumer Protection Act provides quick resolution of consumer complaints through quasi-judicial bodies at district level, avoiding lengthy litigation processes *(13)*. However, there is room for improvement in implementation of the Act. A lack of adequate staff and infrastructure results in delays in the consumer courts. The absence of doctors in consumer courts remains a contentious issue, with pressure from medical associations for inclusion, but while this will be beneficial in providing technical depth it can lead to defensive protection of negligence by fellow doctors.

Drug and food authorities

Product licensing through drug and food control authorities is a substantial function of the ministries of health in the Region. Functions include licensing of industrial drug manufacturing units; registration of drugs; price-setting; trade parameters for export and import of drugs; and market surveillance of quality of drugs. WHO has been active in supporting drug regulation in many countries. However, while drug acts are found, implementation continues to be weak. In certain countries drug regulatory authorities have been made semi-autonomous to remove political interference in drug licensing and surveillance.

While drug control structures are available across all countries, the presence of food regulatory authorities is rare. Usually this function is coordinated by the food and agriculture

ministries, which have an enforcement arm and can carry out checks on advertising, processing and distribution issues related to key food products that have direct health implications, such as infant milk formulas for reduction in diarrhoeal deaths, iodized salt for reducing iodine deficiency, and control of sugared and carbonated drinks.

Summary

Regulation of the health sector is a complex area driven by interconnected drivers. Fig. 3 provides a regulatory framework to achieving key health outcomes. It builds upon the policy scenario and regulatory approach as basic policy ingredients: the use of regulatory knobs and structures as design-related features that in turn are used to identify and select regulatory recipients and mechanisms for improving defined health outcomes such as quality, access, equity and affordability. Regulatory environment, capacity and stewardship and the use of informal and formal control controls act as drivers and constraints to regulatory control.

Regulatory environment

Regulation of health providers is influenced by the larger economic and public administration policy, building on important interconnections to introduce health regulatory reforms. Economic incentives to the private sector, as in Egypt and Yemen, encourage growth in infrastructure of the private sector. However, these incentives are insufficient and require further specific incentives within the health sector for effective implementation. There is often little formal policy in developing countries, which encourages unchecked growth of the private sector. Regulation also requires strong and mobilized stakeholders beyond the health sector, with a network of support from planning, finance and legal sectors, as well as executive leadership. The political economy of regulation has not been studied, except in the case of pharmaceutical reforms *(21)*, and this needs attention by policy researchers.

Stewardship and capacity for implementation

Capacity to undertake regulation is limited in developing economies. However, all countries in the Region practise some basic form of regulation and a number of less developed countries have an expanded set of regulations. Regulatory reforms of the private sector should not be shelved until capacity-building is undertaken. These can be small reforms involving sharpening of existing laws or can be large reforms introducing new structures and reform initiatives. Information for regulation, such as a database of private providers, monitoring and inspection systems, and guiding protocols are essential steps. A more fundamental issue is having a stewardship vision, with a broadening of focus from direct service delivery and harnessing of the private sector towards meeting health targets. Stewardship is a nascent notion in most Ministries of Health; hence regulation, sector wide target setting for private providers, and purchasing of private sector services are needed areas that get overlooked in favor of more programmatic disease focused activities. . Formal structures for stewardship need to be set up and separated from the usual business of service provision.

Incentives and formal controls

Regulation has often been regarded as a state prerogative, vertically implemented and driven by punitive action. However, there have been important changes to regulatory approaches within the evolving context of developing countries. Regulation in health is no longer a single stakeholder domain, but involves dealing with powerful groups of private medical providers, frontline health workers and the drug and food industry. Multi-stakeholder

consultations, bargaining, and negotiating with legitimate private sector groups are new regulatory approaches commonly practised in industrialized countries. The role and inclusivity of professional associations is of key importance because of significant leverage over both public and private sector providers. Use of incentives, and the right set of incentives emerging from fruitful discussions, may prove to be an increasingly powerful tool, rather than lengthy litigation.

Pricing control

Regulating prices in the private health sector through regulatory controls is a major challenge. Pricing regulations need to be carefully developed and enforced prior to expanding insurance-based schemes to avoid sharp escalation in health expenditure with little health status gain. Private hospitals and facilities are largely unregistered in the Region or are registered with the trade and investment sector whose goals of private sector encouragement and growth may be in conflict with the equitable coverage goals of the ministries of health. While quality standards have started to be developed in countries in the Region, pricing remains a challenge both in terms of who has legal authority, the capacity of ministries to produce costs estimates and the lack of databases for monitoring. There are also implications of substantial political resistance to price control due to an entrenched private sector and avenues for collusion.

Preventive and curative care

Regulation practices in countries have been largely targeted towards curative care to the detriment of important preventive and promotive care measures. While the underlying economics behind private sector expansion has been, and will, remain curative and diagnostic care, preventive care activities such as immunizations, DOTS treatment for tuberculosis and opportunistic screening for hypertension and diabetes can be introduced as important and compulsory conditions for private sector expansion.

Purchase of private sector health services

What is purchase of health services?

Purchase of health services by the state from the non-state sector is being increasingly practised in a number of countries in the Region, as well as countries in other regions, such as Bangladesh, Cambodia, Costa Rica, Guatemala, India, Nicaragua and Senegal *(22)*. The underlying objectives can be multiple and may include the rapid roll out of services to enhance access or involve better quality and cost efficiency of services. While there has been a tradition of purchasing private sector support services, such as for construction work, hospital food and laundry services, by the public sector, purchasing of primary care and hospital services provides a new modus operandi for government in moving towards universal health coverage *(23,24)*. Partnerships are being developed with the private medical sector for hospital services, diagnostics and clinical care at primary level in a range of countries in the Region. Within the area of public health and primary health care, there is now an increasing emphasis on partnering with non-profit development organizations over the private commercial sector, mainly driven by their perceived attributes of more transparent and client-oriented processes, ability to reach marginalized groups, and their emphasis on promotive care *(25)*.

Purchase of private health services is a new role for the public sector, with a shift from being a direct service provider to a strategic centre that commits funds for contracts, determines the service package, and selects and monitors providers as part of "buying results" *(23,26)*.This is a major departure from past policy practice whereby governments have traditionally directly provided and funded health services. Engendering competition between private providers and stipulation of performance targets are key areas promoted by the new public management approach for effective purchase of private sector services *(27)*.

Purchase of private sector services has five key elements:

- defining services and targets;
- choosing providers;
- identifying relative responsibilities for services and financing;
- setting up structures for fund flows and implementation;
- monitoring and oversight.

Types of purchasing

Purchase can take different forms, the differences being in service delivery and financing arrangements, as outlined below.

Contracting out

Contracting out involves purchasing private sector services by the public sector for a time-bound period based on a stipulated agreement and targets and using public sector financing. This has been fairly extensively applied in a number of countries in the Region. There are two types of contracting;

- management contracts involve the budget and managerial authority of a public sector facility being transferred to the private sector for more efficient management and increased utilization by patients.

- service delivery contracts involve public financing for provision of a defined service by the private sector, usually specialist services that are difficult for government or in geographical areas where government faces coverage gaps.

Vouchers

A voucher is a prepaid card or token provided to clients for obtaining a particular service or package of services from trained and accredited health service providers, either from the private sector or from both private and public sectors *(28)*. Vouchers are redeemed by the health care provider in lieu of services provided, with funds provided by the state. Vouchers engender competition among providers and are thereby expected to increase the quality of services. The difference from contracting out is that vouchers are distributed to clients at the community level and payments provided to health providers on redemption, while contracting is a single-point process, involving a contract and its payment to a single health provider. Vouchers have rarely been used in countries in the Region; however, a snapshot of global experience has been provided.

National health insurance

National health insurance programmes are funded by the state through services purchased from public and private health providers. More and more, private health providers are becoming an important source for expanding insurance coverage to uncovered population through state spending. It involves risk pooling across the entire or a large segment of the population to ensure coverage for a package of health services.

Community-based health insurance

This is a risk-pooling mechanism for the rural poor and those working in the informal sectors that are less likely to be covered by formal insurance. It involves voluntary contributions by households and management of funds by an organized and registered community organization that in turn purchases services through formal contractual agreements from private and public hospitals and primary facilities. Community-based health insurance schemes provide a niche for larger state-funded insurance schemes, as seen in sub-Saharan Africa where they have rapidly expanded and been converted into national health insurance schemes with supplementation of state support.

Experiences with purchasing private sector services in the Eastern Mediterranean Region

Afghanistan

Afghanistan’s health system in the post-conflict period has been based on extensive purchasing of nongovernmental organizations for service delivery at both frontline facilities and district hospitals. The decision to involve the private sector emerged from almost three decades of conflict, which left behind a devastated health infrastructure. The Ministry of Public Health, with strong technical support from international donor agencies, rapidly rolled out services to the population by pulling in the nongovernment organization sector to deliver district-level services and outreach. In 2003, the Ministry developed a Basic Package of Health Services (primary care level) and an Essential Package of Health Services (secondary care level), which define a set of cost-effective interventions with particular focus on women and children, and delivered at health posts staffed by community health workers, basic health centres, comprehensive health centres and district hospitals. The estimated cost of delivering the Basic Package of Health Services is about US$4 per person per year; this excludes

contracting and management costs as well as vertical programmes such as immunization and tuberculosis control. The coverage of the Basic Package of Health Services included 34 provinces, 355 health facilities, 4000 health posts and 77% of the country population *(29)*. It is mainly financed by international development partners and co-financed by the Ministry, while the rest of the facilities are directly managed by the Ministry through internal contracts *(30)*.

Bahrain

In Bahrain, experimentation with purchasing private sector services started with the purchasing of international private sector services for management of newly constructed hospitals in 2010. Given the increasing maturity of the private sector, there is developing policy thinking on contracting of demarcated clinical services such as maternal delivery or beds for chronic care services but these are yet to be formalized and implemented *(18)*.

Egypt

In Egypt, the basic benefits package of curative and preventive primary health care is purchased from public and private providers *(31)*. The basic package is designated for all the population and designed to cover child care, maternal care, primary care for all groups and laboratory services. Contracting takes place under a framework of recognized quality standards, facilitating competition and availability. Contracting is managed by the Family Health Fund, which contracts directly with individual providers in public facilities, nongovernment organizations and private facilities, as well as through the district provider organization.

Jordan

The Jordanian Ministry of Health has extensive experience in hospital contracting in both public and private sectors. Since 1970, there has been a steady expansion in private for-profit hospitals while Ministry of Health hospitals have been underfunded and less developed *(17)*. However, Ministry of Health facilities form the backbone of affordable Jordanian hospital services, providing a highly subsidized (80–85%) service for the uninsured, free of charge services for the insured and the poor, and have relatively high occupancy rates. As a result of overburdening of public sector hospitals and capacity constraints to offer tertiary specialized services, the Ministry has been extensively contracting with the private sector and other autonomous public sectors over the past three decades to meet the health needs of its beneficiaries and uninsured poor. Private sector services are purchased for the insured population, to complement public sector delivery. The Ministry has at least eight formal contracts or agreements for purchasing health services, five with private hospitals and three with autonomous public providers. In addition to these formal contracts, the Ministry has informal contracts with private hospitals to admit insured patients in case of emergency. Purchasing of services is considered to have multiple objectives that include enhanced equity by expanding service coverage levels for the poor, cost curtailment of outing expensive infrastructure through using underutilized beds in the private sector, and provision of incentives to the private sector to stay in business and attract patients from other countries *(17).*

Lebanon

In Lebanon, the Ministry of Public Health purchases private sector medical services in order to supplement the public sector which was damaged and weakened during conflict. Services are purchased for citizens that do not receive coverage from any other financing agencies (Saudi Arabia). Ministry contracting was initiated in 1968 and there has been a steady

expansion in the number of hospitals contracted. In 2000–2001, 140 out of a total of 167 private hospitals were contracted by the Ministry, while the number of beds amounted to 2026 out of 11 533 *(32, 33).* The Ministry's contractual relationship with the private sector is not only limited to hospitals but also include partnership with nongovernmental organizations for the provision of primary health care services. The Ministry provides nongovernmental organizations with drugs, equipment, supplies and staff training, while nongovernmental organizations in turn report on patient volumes and quality of care. Additionally, the Ministry has contracts for design and delivery of larger public health services such as chronic disease control, blood bank services and emergency transportation.

Occupied Palestinian territory

The Ministry of Health purchases tertiary care from private providers. A greater role of the private sector is seen in the post-Oslo period of relative political stability and economic security of the providing opportunity for private sector growth and complementary service delivery arrangements with the Ministry *(34)*.

Pakistan

In Pakistan, there are several indigenous examples of purchasing health services from the private sector that have rapidly sprung up in the last decade. The major initiatives have been introduced by the state as part of health systems strengthening. The most extensive initiative is the President's Primary Health Care Initiative, which is in place nationally across all four provinces and through which the frontline government basic health units have been contracted to a government-sponsored nongovernmental organization. Through this initiative, the management of government basic health units has been contracted out across all four provinces, Azad Jammu and Kashmir, and Gilgit-Baltistan to a national nongovernmental organization that manages 48% of all first level primary health care facilities *(35)*. Additionally, from 2003 to 2008, extensive contracting out of HIV control services was undertaken in Pakistan, with government purchasing services from nongovernment organizations through performance-based contracts *(36).*

Additionally, since devolution of heath and other social sector matters to the provinces in 2011, there has been a spurt in public–private partnerships as part of health sector policy and reforms in the provinces, and there are contextual variations shaped according to the particular provincial needs. The main objective has been to fill coverage gaps in remote locations or to improve the functionality of existing services across the province.

In Khyber Pakhtunkhwa, out-sourcing of district health delivery to national and international nongovernment organizations is underway in six underserved districts whereby the selected nongovernment organizations would be responsible for entire district health systems from district hospitals to primary facilities and outreach programmes. Additionally, in previous years two selected public sector hospitals in two districts and focal primary care facilities were formally contracted to four local nongovernment organizations and one international nongovernment organization.

In Sindh, as part of the reforms programme, tenders have been advertised for nongovernment organization management of poorly functioning rural health centres and secondary care Taluka hospitals in nine districts, in an attempt to expand access to the underserved *(37)*. The contracts are intended to implement an Essential Package of Health Services at facility and outreach level, and will be financed through government funds. In recent years, maternal and child health vouchers and contracting were implemented in two

districts in Sindh through the Norwegian Pakistan Partnership Initiative, involving private sector harnessing to expand quick coverage.

In Punjab, also as part of the reforms programme, there is policy thinking on introduction of a voucher scheme for maternal and child care services financed by government and international donors; however, design and implementation are still to take place *(38)*. Currently, a Sehat Sahoulat voucher card scheme targeting both private and public providers is being implemented in two districts for emergency maternal care services by a national nongovernmental organization but this lacks funding support from the state *(28)*.

Baluchistan has three major public–private partnership initiatives to expand access to services whereby large international nongovernmental organizations, namely Mercy Corps, Médicins Sans Frontières and Save the Children have entered into formal agreements with the government to strengthen health care facilities, including 90 basic health units, four district hospitals and the establishment of birthing stations *(39)*. Unlike Khyber Pakhtunkhwa and Sindh, the financing is provided by the nongovernmental organization rather the state. However, a public–private partnership policy is under development.

Saudi Arabia

With the increase in the number of hospitals and the simultaneous population demand for specialized services In Saudi Arabia, there was increasing pressure on the Ministry of Health to effectively manage new public sector hospitals *(19)*. Purchasing of private sector services was carried out for effective management of hospitals so as to supplement ministry capacity, with management contracts given to international management companies and later to local companies working alone or in partnership with foreign companies. However, the increase in expenditure after contracting and poor performance of some of the management companies pushed the Government to return to direct management of hospitals, replacing contracting with autonomy and the greater flexibility provided to public sector management.

Tunisia

Tunisia also has considerable experience with purchasing private sector services to complement hospital services. Purchasing of private services began with haemodialysis services, for which the public sector had limited capacity, and is expected to expand to other services *(23)*.

Yemen

In Yemen, there are instances of limited purchasing of individual private providers to perform specialized services but as yet no larger contracting framework and policies. However, under the upcoming law, both the private and public sector would compete to provide the health care services and the Health Insurance Authority will act as the regulating body to the contracting, insurance and quality control services.

Experiences with purchasing private sector services outside the Region

National health insurance

A number of countries outside the Region have national health insurance schemes *(28)*. National health insurance schemes in countries of the Americas and Western Pacific regions were introduced in the 1990s and adopted by a few African countries in the 2000s. Most of

these schemes are supported by the state, but some, such as in Argentina and Nigeria are partially supported by international donor funds. Schemes managed by public funds are centrally managed while those involving premium payments or local committees are managed by reimbursements for services. The population covered has been large, for example 95% in Mauritania and 70% in China, while other countries had coverage of 40–70%. Purchasing from the private sector was particularly seen in Ghana, Kenya and the Philippines. Specific targeting towards the poorest population groups was seen in Argentina, Peru and Thailand. Premiums were either voluntarily contributed or deducted from salaries of the employed sector. Schemes were also supported by taxation.

Health vouchers

Health voucher schemes involving purchasing of private sector services have been implemented in at least nine countries, including three in the South-East Asia Region (Bangladesh, India, Indonesia), three in Africa (Kenya, Sierra Leone, Uganda) and one country each from the Americas (Bolivia), Western Pacific (Cambodia) and Eastern Mediterranean (Pakistan) regions. Five of the countries of implementation are low-income countries (Bangladesh, Cambodia, Kenya, Sierra Leone, Uganda) while the remaining four may be grouped as low middle-income countries (Bolivia, India, Indonesia, Pakistan).

Voucher programmes are supported by ministries of health in six of the nine countries and are financed by large nongovernmental organizations in three countries through donor support. Technical assistance in all countries is provided by international donor agencies including United Nation agencies (Bangladesh, Pakistan), World Bank (Bangladesh, Indonesia), United States Agency for International Development (India, Pakistan) German Development Bank (Kenya, Uganda), Belgian Government (Cambodia) and Norwegian Government (Pakistan).

Private sector purchasing through prepaid vouchers has been exclusively for basic and comprehensive maternal care in four countries, including Bangladesh, Bolivia, Cambodia and Uganda, while in other countries, such as India, Indonesia, Kenya, Pakistan and Sierra Leone, there were also added components of family planning and reproductive tract infections. Five out of nine schemes provided support for caesarean sections while all the schemes provided vouchers to avail antenatal, delivery and postnatal care services.

Most of the implementing countries are in the pilot stage with a limited client base. The largest interventions with vouchers for basic and comprehensive maternal care have been in Kenya and Uganda, with voucher distribution to 38 595–60 581 clients. Other countries have much lower distribution levels, ranging from a few hundred to a few thousand clients. Schemes in Bangladesh and India have reached out to approximately 7000 clients. The lowest distribution has been reported from Sierra Leone (290 clients), Indonesia (565–1164 clients), Pakistan (2000 clients) and Cambodia (2725 clients). Many of these countries are in the process of scaling up services. Voucher redemption has been high, with 75.6% of distributed vouchers redeemed in Cambodia and 98.4% in Pakistan.

Community-based health insurance

Community-based health insurance schemes have been implemented in at least 11 countries, including China, India and several African countries. Of these, seven are low-income countries (Burkina Faso, Congo, Guinea, Mali, Rwanda, Sierra Leone, Togo), three are lower middle-income countries (Ghana, India, Senegal), and one is an upper middle-income country (China).

Community-based mutual health organizations were used in most African countries to manage community-based health insurance and were essentially owned, designed and managed by their community members, providing voluntary health insurance coverage to members and contracting with health facilities to reimburse providers. In Congo and Ghana, the insurance scheme started out as a provider-managed hospital-based insurance and subsequently included community in its management. In India, varying arrangements for voluntary community-based schemes were found with some managed by community-based organization or nongovernmental organizations on behalf of the community and in others managed by an insurance agency. In China, the new rural cooperative was designed by the state but managed by the community, with supplementary contributions provided by local and national government.

Highest population coverage of community-based mutual health insurance is seen in China, covering up to 86% of the population, followed by Rwanda at 73% population coverage by 2006. High levels of coverage are also expected for Ghana, which moved to community-based mutual health insurance coverage in all districts; however, exact population estimates are not available. In other countries, although there was proliferation in number of community-based mutual health insurance schemes, population coverage estimates, where available, indicate less than 1% coverage of the population. In most countries, health centres act as gate-keepers for emergency obstetric care referrals and consequently community-based mutual health insurance contracts were with health centres. In certain settings, such as Ghana, contracts were only with the district hospital and not with lower levels of care provision.

Community-based health largely relies on household payments while individual payments are seen in Burkina Faso and India. Annual fixed low-cost payments ranging from US$1 to US$21.6 were charged in most countries and often timed and collected around crop harvesting in rural communities. In most schemes there was a lack of differential charging for the poor, with all members being charged at a flat rate. The exceptions included Rwanda, where the poor were exempted from payments, and Burkina Faso where the poorest 20% of households paid half the premium. Little information is available about how decisions were taken on exemption of premium and/or copayment.

Implementation arrangements for purchasing

Afghanistan

A dedicated unit within the Ministry of Public Health is responsible for managing the contracts In Afghanistan. Purchasing in Afghanistan includes three different models. Large province-wide lump sum contracts, sub-provincial contracts covering a cluster of districts, or a mix of both are provided. Contracted organizations were mostly international nongovernment organizations at the outset but now local nongovernment organizations also implementing contracts, showing an evolving internal market. Nongovernment organizations are supplemented with extensive capacity-building support and are also closely monitored both technically and financially, mostly using a system of monthly reimbursements based on a line item budget. Nongovernment organizations are mostly reimbursed through line item reimbursement, most of which is given in advance, and performance bonuses are also provided. In one instance at least, a nongovernment organization’s contract was terminated on nonperformance. Monitoring and support are provided through an international nonprofit organization that manages service delivery contracts. Performance bonuses are linked to monitoring of health services performed by an independent group. Nongovernment organizations are directly accountable to the donor that funds these contracts, and the in-

country donor mission monitors their performance. However, the Ministry has taken a more central role in recent years with respect to nongovernment organization monitoring.

Egypt

Favourable policies by the Ministry of Health and Population and ministerial decrees to emphasize the role of the contracting entity (Family Health Fund) have facilitated the purchasing of private sector services. Successive decrees over the years have supported opening a bank account named the “Family Health Fund of the Health Sector Reform Program”, constitution of the governing bodies of the Fund, laying the basis for management of this account and its responsibilities, and determining the organizational structure of the Family Health Fund on the central and peripheral levels, sources of revenues and expenditures, and legal support for contracting. Tendering processes are well developed and private providers have to pass through several steps for selection.

Jordan

Jordan is one of the few countries in the Region with extensive experience with contracting. Private providers are reimbursed on a fee-for-service system; however, this can at times create incentive for unnecessary procedures and overbilling by providers. The Ministry of Health has introduced new payment mechanisms, such as leasing private hospital beds for a fixed payment per bed or a defined payment per episode. There have been recent efforts to undertake cost and price analysis prior to negotiations for new contracts but these have been constrained by the lack of a comprehensive and advanced computerized information system. Controlling the quality of private sector contracted services is an area that requires future attention. Presently, there is a lack of treatment protocols and guidelines to control and monitor the quality of services. Even in the presence of these protocols, several private hospitals state are unwilling to participate in health insurance. There are also reported delays in payment due to centralized bureaucratic procedures or budgetary deficits, leading to poor satisfaction of contractees with the Health Insurance Directorate. Mutual trust and confidence gaps have also been reported in the relationship between the Ministry and the private sector.

Lebanon

The purchasing of private sector services is supported by a nationwide 1993 policy to support primary health care and there is a network of nongovernmental health centres working towards this objective. The Ministry of Public Health’s contractual relationship with the nongovernment organization sector has been reported to be more successful than the Ministry’s contractual relationship with the private hospitals in the country. Examples of contracted nongovernment organizations include: the Young Men's Christian Association for a chronic disease drug management programme; the Red Cross for the national blood bank and emergency transportation; the Chronic Care Centre for the treatment of thalassemia and juvenile diabetes; and the United Nations Children’s Fund. Purchasing private sector hospital services is a more established practice governed by a decree under which private sector hospitals have to classify for purchasing by meeting specific standards and conditions. The specifications have evolved over time and are governed by a Hospital Classification Committee.

Pakistan

At present, Pakistan has a variation in contracts and contract management for private sector purchase. The newer initiatives in the post-devolution period are evolving and are supported

by formal reform strategies; while older the initiative of basic health unit contracting is supported by legal frameworks but does not link up with health policies and strategic plans. Traditional experience has been in purchasing one-off services through sole source contracting, and dedicated structures for health services purchasing, and required monitoring and oversight systems, are presently lacking *(40)*. Donor assistance has recently supported price estimation studies for implementing and contracting the Essential Package of Health Services, cost and quality guidelines for purchasing, and assisted in oversight provision on tendering process. Vouchers schemes have been newly introduced in Pakistan and emerging evidence indicates the readiness of the private commercial sector to participate, using the existing network of community-based lady health workers in implementation with support and supervision from the implementing nongovernmental organizations. Pakistan has both local nongovernmental organizations and international nongovernmental organizations for undertaking public–private partnerships. Although performance evaluations are lacking, public–private partnerships have succeeded in providing staff and support for health facilities in remote locations *(39)*. However, nongovernmental organizations prefer contracting with intermediaries such as United Nations agencies or contract management agencies, rather than the government, as centralized procedures, instances of rent-seeking and apprehensions on timely release of funds are key nongovernmental organization concerns in entering into contracts with government *(28)*.

Saudi Arabia

There has been an evolving experience in Saudi Arabia regarding the purchase of private sector services. Purchasing of services started with hospital housekeeping services, then general maintenance and catering, followed by hospital management *(19)*. Problems initially arose due to unclear demarcation between the responsibilities of private companies and the Ministry of Health and these affected the efficiency and quality of services provided. Lengthy procedures of obtaining clearance from the Ministry of Finance and the Civil Service Bureau delayed the execution of contracts, leading to the full range of hospital services being contracted to one single company. The increase in expenditure and poor performance of some of the management companies later resulted in the Government reverting to direct management of hospitals.

Tunisia

The Tunisian experience with haemodialysis services purchased from private institutions shows that private providers have to accept a flat rate determined by the Ministry of Health and cannot charge copayments. There is little information on private sector comfort and compliance with this arrangement.

Summary

Purchasing of health services requires more than well-developed technical contracts for success. It is affected by the nature of health service being purchased, the market readiness, and policy positioning for public private partnerships. Fig. 4 provides a framework of purchasing health services connecting preparatory mechanisms, purchasing of services, impinging cross-cutting background factors and health outcomes.

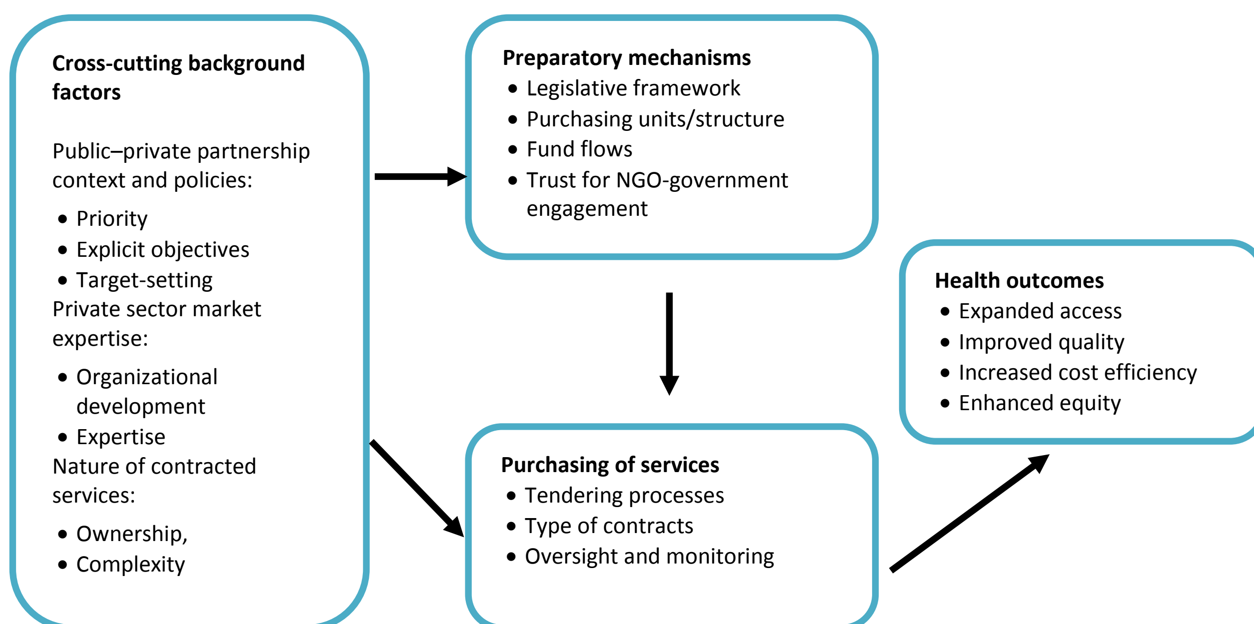

Fig. 4. Purchasing framework for the private health sector

Policy commitment

Strong political support by governments for national health insurance schemes and support and scaling up of community-based health insurance schemes has been seen across the Region. However, contracting out of services in the absence of insurance schemes, particularly when involving leasing out of management control to the private sector, has faced issues of low buying and tight control over administrative and financial powers.

There are also concerns about the lack of commitment in low-income countries such as Afghanistan to purchase private sector services when donor funds run out. While state funds have been allocated in Pakistan for purchasing private sector health services to manage government facilities, there is resistance from government health staff and frontline managers. Middle-income countries such as Egypt and Jordan have supportive policies but little policy is seen in other countries in the Region. In Gulf Cooperation Council countries, where public sector systems are well equipped and functioning, it is less of an imperative to purchase private services; however, purchasing needs to be given due attention to address coverage gaps for the uninsured population and to harness unchecked growth of the private sector.

Nature of service

Purchasing of focal services from the private sector, such as support services for hospital kitchens and laundries, or subspecialized services such as haemodialysis, diagnostics or chronic care beds, has an established tradition in countries the Region. There is less practice of more radical initiatives such as those involving large-scale strategic purchasing of private medical services for insurance, vouchers for expanding access, or contracting out management of hospitals and clinics to the private sector to improve utilization and efficiency. As yet, there are few large-scale initiatives whereby the private sector is harnessed is to meet policy goals and this needs to be endorsed by policy shifts.

Private sector market

Most countries have a reasonable private sector provision of hospital services. Urban and semi-urban areas can supplement public sector beds with private beds, which may be a

more cost-effective option than investing in new specialist infrastructure. There are a limited number of providers in rural areas, which may be a constraint when purchasing services in areas most in need. However, both the recent Afghanistan and Pakistan experience with nongovernmental organizations shows that nongovernmental organizations can be pulled in to underserved areas if adequate incentives and financing are provided, with contracting used to create new health markets.

Preparatory arrangements

The legal and administrative framework for contracting out health services needs to be updated in many countries. Experience with contracting over a number of years has helped develop changes in the bureaucratic process to avoid delays, issues with the flow of funds and necessary accountability. The politics of contracting out have been less well reported; however, there have been instances of parties with vested interests gaining control over the contracting process. Independent purchasing structures and third party supervision of the contracting process needs to be incorporated as government health ministries and departments are reorganized for purchasing of services. Independent structures, as opposed to those embedded within the usual running of health ministries, are also important to avoid cash flow problems for purchased services. Most countries in the Region lack a dedicated unit for purchasing services. Transaction cost estimations required for implementation and monitoring of purchasing are not usually carried out.

Capacity gaps in implementation

There is a limited capacity in the public sector to design, negotiate and award health services contracts, undertake a cost, price and volume analysis, optimize payment methods and effectively monitor performance *(23)*. With the exception of Afghanistan and Egypt, performance indicators are rarely included in contract design. Management information systems in most counties were inadequate to monitor the performance of private providers. Third-party evaluation of purchased services was rare and only seen in Afghanistan and in one instance in Pakistan, with both of these instances supported by donor funding.

Financial protection

There is considerable variation in terms of financial protection offered to the poor by private sector purchasing initiatives. Some national health insurance schemes have exempted the poorest from premium payment; however, there is a lack of standardization in terms of financial protection. Voucher schemes in Pakistan and other countries provide free cover for promotive health care visits, and more than half also cover the cost of complicated deliveries, including Caesarean sections. Community-based health insurance schemes involve premiums from community enrolees and copayment in the range of 10–20%, with the poor being exempted from copayment in some instances. However, insufficiency of funds has remained a major concern, with experience from Nigeria suggesting that funds provided under HIPC agreement were limited and could cover only a fraction of the target population of pregnant women *(41)*. Similar concerns have also been reported from Argentina, where financial sustainability and a limited package of services are a question mark *(42)*.

Targeting the underserved

Vouchers and national health insurance schemes invariably involve some targeting mechanism to reach the poor and underserved. However, these have administrative cost implications and there is little reporting on the proportion of funds spent on implementing the

system versus actual service. Moreover, there have been instances when lack of dissemination of information to the eligible population has deprived the poorest women from making use of the voucher schemes. Although having a pro-poor focus, national health insurance schemes have a less vigorous means of verification. Most contracting out initiatives across different countries have lacked a pro-poor focus; however, recently primary care in other regions, particularly in South-East Asia, has focused on contracting initiatives targeting the poor using systematic methods.

Performance outcomes of public–private partnerships

Performance of public–private partnerships in the Region

While public–private partnerships are well established in several countries, and have been started in others, a question arises as to their effectiveness in expanding access, and in increasing quality and efficiency. Some of these knowledge gaps are addressed in this section by highlighting performance outcomes achieved and the comparative strengths of contracting out, community-based health insurance, vouchers and national health insurance. As data from countries in the Region are limited, evidence is presented from other countries.

An increasing number of public–private partnerships have been implemented in the Region. However, there is a lack of collated evidence on public–private partnership performance to help choose between competing public–private partnership models. Despite many international publications on public–private partnerships, there is a need for high-quality evidence on which to base recommendations and this is provide through a systematic review of the evidence.

Afghanistan

Purchasing of services from local and international nongovernmental organizations (contracting out) and from Ministry of Population Health facilities (contracting in) provides a Basic Package of Health Services and hospital-based services in the post conflict period. A recent balanced score card assessment demonstrated some improvement in health services. Nationally, the benefits of the Basic Package of Health Services reach out to the poor and to women, making it more equitable. However, there are deficiencies, particularly in counselling patients, providing delivery care during childbirth, monitoring tuberculosis treatment, placing staff and equipment, and establishing functional village health councils *(43)*.

Egypt

The Family Health Fund is permitted to contract with a wide range of public and private providers. The main role of the Fund is to purchase curative and preventive primary health care, to be extended to secondary care in the future. Some facilities show an interest in joining the programme but need major renovations such as equipment and furniture to meet the quality standards; however, they are not willing to account for such expenses and changes.

Islamic Republic of Iran

Like Pakistan, the Islamic Republic of Iran also purchases primary health care services from small-scale cooperatives. The Ministry of Health and Medical Education has pilot purchasing of primary care services in several provinces of the Islamic Republic of Iran. Although no comprehensive evaluation has been conducted, early evidence suggests that purchasing primary health care services from the private sector has helped improve certain aspects of access and quality, and decreased the cost of services *(23)*.

Maternal health care indices are also better in community health centres in nearly in all areas, indicating that community health centres perform better than primary health care centres. Contrary to other preventive health care services, maternal health care is widely provided in private clinics in the Islamic Republic of Iran but the difference is that services delivered in primary health care centres are free of charge and focused on essential health care aimed to increase equity of people receiving these services. Using cooperatives, many problems of

primary health care centres, such as low availability, lower quality and lower client satisfaction, can be overcome while preserving the advantages of public service delivery. Furthermore, the public–private partnership study in the Islamic Republic of Iran reveals that a subsidizing payment system is different from a fixed subsidization, and per capita payment can differ depending on the quality of services as evaluated periodically by provincial health departments. Health cooperatives can be effective for two reasons: they are small scale and have a small number of personnel; and all personnel in a health cooperative are responsible for their practice and improving the quality of their service directly affects their income.

Jordan, Lebanon and Tunisia

Jordan, Lebanon and Tunisia have extended experience with contracting out hospital services. In Lebanon, the public sector outsources a wide range of services in over 100 hospitals to cover its uninsured population. Limitations are the fragmentation of the contracting process between different agencies, limited leverage of the public sector over the private sector, the inability to contain escalating health care costs, and the lack of public sector capacity to monitor performance *(23)*. In Jordan, most purchasing arrangements with the private sector have a positive impact and result in improved access, efficiency, sustainability, promoted public health goals, and create an environment conductive to public–private collaboration *(23)*.

Occupied Palestinian territory

The Ministry of Health contracts out tertiary care from private providers. The 2005 Palestinian health care provider and beneficiary survey, which assessed beneficiaries' perceived satisfaction of quality of health care services in both public and private sectors, showed that the majority of patients were more satisfied with the care quality and availability of care provided by the private sector compared with the care provided by public and nongovernmental organization sectors.

Pakistan

There are an increasing number of initiatives whereby the public sector fully or partially finances nongovernmental organizations for primary health care service provision, usually through contracting out and voucher schemes. The President's Primary Health Care Initiative, which started in 2005, comprises the largest contracting out initiative; however, other smaller contracting out schemes have also emerged. Third party evaluation of the Initiative revealed an increase in basic health unit utilization and improvement in some aspects of quality *(35)*. Outpatient attendance increased by 20% on average in the Initiative districts. Use of antenatal care, postnatal visits and facility-based births also increased compared with districts managed by health departments. Customer satisfaction was better, mainly due to the improved quality of services *(35)*. Table A.1 shows the impact of contracting out on service utilization and quality improvement. Another initiative involving the purchasing maternal and neonatal services from the private sector in rural health centres showed a higher utilization of antenatal care, facility-based births, postnatal and newborn care in contracted out centres compared with non-contracted out. However, it was insufficient to improve overall coverage of maternal and newborn services at the population level *(44)*.

Three voucher schemes have been implemented for maternal and neonatal health services in Pakistan. However, evaluation is available from only one of the schemes. Results of the evaluation showed an increase in antenatal care (21.6%), postnatal care (31.2%) and facility-based births (19.2%) among beneficiaries of voucher scheme after 1 year of implementation *(45)*.

Saudi Arabia

In order to close the gaps in skills necessary to run hospitals in Saudi Arabia, government agencies contracted with management companies to either fully or partially manage the hospitals. A few years ago most of the hospitals were either fully or partially managed by a private company. However, the increase in expenditure and the poor performance of some of the management companies convinced the Government to return to direct operation using a programme format.

Performance of global public–private partnerships

The data presented are restricted to high-quality studies and the example of maternal and newborn care has been used to study the effect on primary care *(39)*. Similar data on curative care were not available.

Contracting out with the private sector for primary health care

A review of the evidence suggests that information on the performance of contracting out schemes addressing maternal care mainly relates to service coverage and some reporting on quality of care indicators. There is less information about equitable utilization, out-of-pocket reduction and health outcomes. The studies had a minimum intervention period of 1 year and a maximum intervention period of 5 years.

Service utilization: Contracting out has a positive impact on reproductive health service utilization (Table A.1). An increase in utilization of antenatal care is reported in Bangladesh *(46)*, Bangladesh urban primary health care *(47)*, Cambodia *(48)* India *(49)* and a smaller suggestive increase in Pakistan *(44)*. Similarly, contracting out health services with the private sector has shown an increase in facility-based births (institutional delivery) in Cambodia *(48)*, India *(49,50)*, Bangladesh *(47)*, Bolivia *(51)*, and Pakistan *(44)*. There is inconclusive evidence for the impact of contracting on service utilization for Caesarean section, complicated deliveries and postnatal care. There has been no improvement in immunization coverage with contracting out, due to incomplete transfer of outreach facilities and responsibilities. There has been very little assessment of the impact of contracting out on care-seeking in childhood illnesses. The few available evaluations of contracting out have also shown a reduction in malnutrition *(52,53)*.

Quality of care: Available studies have documented improvement in only a few aspects of quality of care and there is no information about the process of care *(28)*. The President's Primary Health Care Initiative in Pakistan showed improvement in infrastructure, availability of drugs, staff and supplies, and patient satisfaction *(35,54)*. Evidence from Bangladesh urban primary health care shows significantly higher satisfaction among female clients of contracted out basic health care units over non-contracted out basic health units but no information about infrastructure and process *(47)*. Contrary to that, the Indian Chiranjevee scheme reports no significant increase in patient satisfaction as a result of contracting to private providers *(50)*.

Equity: Few studies have reported the effect of contracting out on equity. However, no significant benefit can be seen for the disadvantaged population as a result of contracting out services in Cambodia *(48,55)*, Guatemala *(56)*, and Pakistan *(44)*.

Community-based health insurance schemes

The available evidence on the performance of community-based health insurance schemes relates mainly to health care utilization, out-of-pocket expenditure reduction, enrolment characteristics of insured members and assessment of equitable utilization of service coverage. There is less information about quality of care.

Service utilization: There has been an increase in Caesarean section rates in China *(57)*, Rwanda *(58)* and Zaire *(59)* after introduction of community-based health insurance schemes. Similarly, facility-based births (institutional deliveries) increased in China *(57)*, Rwanda *(60)* Senegal *(61),* Ghana and Mali *(62)*. There has also been an increase in four or more antenatal care visits in Mali *(62)* and China *(57)* while suggestive increase is seen in first trimester antenatal care visits in Senegal *(61)* and some sites in Rwanda but not in other sites *(60)* (TableA.2). Community-based health insurance schemes mostly have not assessed neonatal and child health service utilization.

Out-of-pocket expenditure: Reduction in out-of-pocket expenditure is seen across community-based health insurance schemes in all six countries *(28)*. Specific reduction in delivery-related expenditure reported from Senegal and Mali shows a 12–13 times higher likelihood of reduced expenditure in insured women for delivery compared with non-insured *(61,62)*. Statistics suggest an out-of-pocket expenditure reduction of a third in Rwanda *(60)* and a halving of serious hospitalizations in India *(63)*.

Equity: Enrolment-related evidence from Ghana, Mali, Rwanda and Senegal is highly indicative of adverse selection. Enrolment, utilization and out-of-pocket expenditure reduction are significantly associated with higher income, higher education, those residing closer to health facilities and urban areas *(28*). Although community-based health insurance is implemented in disadvantaged communities, exemption mechanism for those who cannot afford it are missing in most schemes and this may be the underlying reason for regressive findings. Interestingly, evidence from India focusing on catastrophic rather than general out-of-pocket reduction is suggestive of greatest the decrease in the lowest income tercile *(63)*.

Voucher schemes

A review of the evidence shows that information on the performance of maternal voucher schemes is confined to two countries and is mainly related to service coverage, with some information on targeting. There is no information about the quality of services or the impact on health outcomes. The studies had a minimum intervention period of 1 year and a maximum intervention period of 2 years.

Service utilization: Studies from Pakistan *(64)* and Bangladesh *(65)* report positive results in treatment of complicated deliveries (Table A.3). Beneficiaries of voucher schemes in both countries were highly likely to use pre- and postnatal care and deliver in health facilities. Neonatal and child health service utilization has not been assessed with voucher schemes.

Quality of care: There are reports of significant improvement in various qualities of care parameters, including antenatal check-ups, behaviour and counselling practices, due to voucher schemes. The findings also show a reduction in pregnancy complications and less delay in service provision *(28)*.

Equity: There are few equity-related data on maternal voucher schemes, which is a major gap given the considerable effort these programme are investing in systematic targeting of beneficiaries *(39)*, although Agha *(64)* shows that the majority of the vouchers were

distributed to the poor with 54% to the most underprivileged quintile and 24% to the second most underprivileged quintile. Overall utilization of services remained higher in the upper socioeconomic strata but the lower two strata showed a higher improvement in utilization in the 1-year period after interventions as compared with the control, despite overall utilization rate remaining lower. Similarly, those living closer to health facilities and those with higher education levels reported greater utilization.

Ahmed et al. *(65)* also showed lower overall utilization for the poorest quintiles in Bangladesh; however, there was no control for confounding effects. Hence, findings from both Bangladesh and Pakistan are indicative that even when voucher distribution is progressive with greater penetration to the poorer groups, their redemption will still be regressive with poorer groups making lesser use of services but at least showing visible improvement in utilization over previous rates.

National health insurance

Information on the performance of national health insurance schemes relates mainly to health care utilization and assessment of equitable utilization of service coverage. Enrolment characteristics of insured members are provided in only one study. There is no information about quality of care and out-of-pocket expenditure reduction. The studies had a minimum intervention period of 1 year.

Service utilization: A significant increase in the Caesarean section rate is reported from China, mixed results are seen in Ghana, and there is incomplete reporting from other schemes. However, only one scheme showed a significant increase in institutional delivery. In Peru, insured beneficiaries were twice as likely to deliver in health facility compared with uninsured *(66)*.

Antenatal care utilization is reported by nearly all studies except one, where there is significant increase in four or more antenatal care visits *(67)*, there has not been any improvement reported in other schemes (Table A.4). Negligible information is available on neonatal and child health service utilization with national health insurance schemes.

Equity: The study from Ghana shows that enrolment is positively related to higher income and education status, while there is no significant difference in terms of urban/rural residence *(68,69)*. Largely inequitable results are seen for utilization of maternal services. There is more likelihood of health facility utilization for Caesarean section among higher income terciles and more educated in China *(70)*. Significant positive correlation of institutional deliveries with income and education is seen in Vietnam as well as for those residing in urban areas in the Philippines *(71,72)*. Similar results are seen for antenatal care utilization, with higher likelihood linked to income, education and urban areas *(28)*.

Summary

Global evidence provides encouraging and significant evidence of the overall impact of public–private partnerships in increasing the use of primary health care services but there is uneven increase across different services and much depends on the design of the public–private partnership. Within the primary health care area, the most consistent increase is seen in institutional delivery, followed by antenatal care. There are mixed results for postnatal care and nutrition, and little impact on immunization. Evidence is inconclusive for emergency obstetric care and neonatal health services. Among the different public–private partnerships, vouchers have the best performance, at least for safe motherhood, followed by

community-based health insurance and national health insurance schemes. However, such have generally not reached the poorest segments of the population. Although there is reaching out to the poor, the benefits are to those who reside closer to health facilities, and have higher levels of education and income than the more marginalized groups in the community.

There is inconclusive evidence as to whether public–private partnerships can bring about a reduction in patient out-of-pocket expenditure. Few instances of reduction in client expenditure have been reported for community-based health insurance and national health insurance schemes but there are data gaps for contracting out and voucher schemes. Also there is less information available as to whether such partnerships can induce higher quality of services from the private sector. Generally, purchasing has resulted in improvement of infrastructure and availability of drugs, staff and supplies, while information on the technical process of care remains thin. There have also been instances of staff demotivation as a result of increased patient volume from insurance schemes.

Conclusion

Overview of policy drivers and constraints

Attainment of universal health coverage is a progressive realization for countries in the Region and can be accomplished by expanding the breadth and depth of services, and expanding financial risk protection. The private sector has grown exponentially in most countries, and remains an untapped key partner for moving towards universal health coverage. Regulation, information provision and purchasing of services remain important tools for harnessing the private sector towards achieving strategic universal health coverage goals.

Private sector potential and pitfalls

Private sector growth in the Region has taken place with too little policy to guide it. Private sector utilization is particularly high in countries where public sector spending on health is low and this shows that the private sector emergence is a result of insufficient or underperforming public sector services. Essential information on private sector composition, service coverage, quality and pricing continues to be patchy, although notable efforts have started out in many countries.

Private sector contribution varies according to the context of particular countries, and hence demands locally responsive strategies for harnessing value added services. While a certain overlap between private and public sector is healthy for quality of services, much depends on the development of informed state policies for channelling the growth and distribution of the private sector for access to universal health coverage. In some countries, government partnerships with private sector have focused on specialty hospital services to complement gaps in government services. In others these have been targeted towards private sector management of hospital and diagnostic facilities, while in yet other countries the private health sector has established itself in providing primary care services in urban centres and also expanding to rural areas.

The latest evidence shows that, despite apprehensions, the quality of private sector services is satisfactory in Gulf Cooperation Council countries and middle-income countries, although further improvements are needed in refresher training for staff, health communication to patients and reporting of data to ministries. However, in low-income countries the private sector faces serious quality gaps and caution is needed capacity-building and stewardship of the private sector before involvement in universal health coverage schemes.

Charging for health services by the private sector goes largely unregulated, except in certain countries that have attempted to cover the cost through state purchasing of private sector services. Recent evidence shows that charges for routine inpatient admission such as caesarean sections can be catastrophic in some countries, requiring strong regulation, while in others the private sector market offers competitive, affordable prices. Prepaid cover for health services is found in middle-income countries but this needs to be extended. It is low in lower-income countries, placing patients at risk of debt or service denial. Consumer accountability is generally weak, with poor availability of pricing guidelines across most countries.

Can public–private partnerships deliver?

Global evidence provides encouraging and significant evidence of the overall impact of public–private partnerships on increasing the use of primary care services, but there is an uneven increase across different services and much depends on the public–private partnership design. There is inconclusive evidence as to whether public–private partnerships can bring about a reduction in patient out-of-pocket expenditure. Few instances of reduction in client expenditure have been reported for community-based health insurance and national health insurance schemes but there are data gaps for contracting out and voucher schemes.

Regulation and information provision

Regulation of health providers is practised in some form in all countries in the Region. However, this is the area where the least innovations have been practised and regulation has been confined to entry of individual practitioners in into the market, drug licensing and trade. Regulatory approaches have typically relied on professional syndicates, enactment of punitive laws (recourse to which involves lengthy litigations) and insufficient budget and personnel for field implementation.

Regulation of health services in the private sector remains an overlooked area in most countries in the Region and is urgently required to harness the expanding private sector towards universal health coverage. Existing regulation, where present, is targeted towards curative care and overlooks the involvement of the private sector in preventive, promotive and rehabilitative services. While some middle-income countries have taken initial steps in this direction, countries with higher private sector utilization are yet to be mobilized and the area so far remains in its infancy. Regulation will need to involve oversight of service packages, distribution, quality and pricing; however, any of these can be an important entry point for modifications to the others.

For enactment of regulations, policy coordination is required between larger economic private sector growth policies and those enacted by the health sector. Are these in synchronization for uncontrolled growth, confined growth or exertion of controls? Regulation of insurance can be particularly complex with coordination of multiple entities required for different tasks.

Implementation of health services regulation in private hospitals, nursing homes and clinics will remain a key challenge. The notion of stewardship is only beginning to be realized in ministries of health and it needs to be backed up by formal, dedicated structures for regulation, either within or outside the ministry. While technical aspects of regulation implementation, such as databases for private sector mapping, accreditation tools and checks, have been highlighted before, the essential approach to regulation remains undecided and uncertain in most countries. New approaches for governments to consider include multi-stakeholder regulation that includes the private sector as an entity, as opposed to government-led regulation only, use of incentives and self-accreditation options, as opposed to punitive action, and bargaining and negotiation rather than imposition.

Provision of consumer information from minimal to more comprehensive levels has been routinely practised for drugs and food products across all countries. However, extension of consumer information for health services as a tool for patient safety and on pricing of private health services for financial access has been less well practised. Consumer information and protection relies on a multiplicity of arrangements across legal ministries, health ministries, consumer bodies and private health providers, and if hastily introduced can lead to delays in

redress, unnecessary litigation and the growth of expensive medical technology as a defensive mechanism by the medical sector.

Purchasing health services

Purchase of private health services has been more widely practised than regulation in developing economies and also has a growing body of evidence on its effectiveness. Purchasing provides formal controls over cost, quality and service package offered by the private sector. Purchasing of private sector services for health in the Region initially began in the area of support services for hospitals, expanded to hospital beds and specialty services, and more recently has involved purchasing primary and preventive care services from nongovernmental organizations.

Purchasing by the state in the Region has usually been through evolving national health insurance schemes, contracting out the management of government health facilities, contracting out the private sector for specific service delivery schemes, and in a few instances through health vouchers and community health insurance. In most countries in the Region, the agenda has been to complement public sector services and fill gaps, and only in rare instances has radical purchasing by the private sector been practiced as the main universal health coverage response.

Policy support has been higher for insurance schemes that involve purchase of limited private sector services alongside public sector services. There has been lukewarm support and even active resistance for contracting out management of government facilities to private health sector or commissioning to supplement services, as these are seen at the local level as diversion of the state budget and control to the private sector. Support for health vouchers is donor driven, confined mainly to Pakistan, and there is absence of state funding for upscaling, while community health insurance schemes have not taken off due to low levels of community organization as well as weak organizational support by the state. The politics of purchasing is also complicated by private sector–government relations, with private sector concerns of government as a reliable payer and state concerns on profit-making by the private sector. Slow, cautious expansion of purchasing over time has resulted in better trust and harmony between public and private sectors, with issues resolved through relational rather than punitive modes.

Two other factors are pertinent when purchasing private sector services. Technical prerequisites for private sector purchasing include demarcated structures for purchasing services in ministries of health, building capacities for open competitive tendering to avoid single organization monopolies, prior estimation of unit costs, writing contracts with service delivery targets, and independent monitoring. There are often concerns as to whether there is a sufficiently developed private sector market in the Region to contract with, and in particular a sufficient number of organizations with programmatic and financial absorptive capacity rather than individual providers. Contracting experience has shown that the private sector grows and adapts in response to purchasing.

The cost of purchasing private sector services can vary with the extent of sophistication, can be high and needs to be built into state budgets prior to embarking on public–private partnerships. Systematic means of targeting in order to reach the poorest as part of insurance or voucher schemes can be particularly high cost. Measures to reduce this high cost include piggy-backing these on social protection schemes' databases. On the supply side, global budgets and per capita payments are less costly financing measures for private provider payments than volume- and service-based repayments, but involve an inherent

level of flexibility transferred to the private provider. Delays in the release of fund as a result of layers of bureaucracy is an overarching issue across several public–private partnerships, and call for speedier fund flow mechanisms with some level of institutional reorganization as part of rolling out implementation.

Lastly, while the policy push for public–private partnerships has usually come from international donors, there needs to be caution in the use of donor funding for embarking on public–private partnerships for universal health coverage as this can lead to fragile programmes. International partner involvement may instead be best for short- and medium-term technical assistance in harnessing the private sector for universal health coverage.

Emerging priorities for WHO in the Region

- Strengthening health systems towards universal health coverage by enhancing engagement with the private health sector.
- Fostering dialogue with ministries of health at regional and country level to include private sector harnessing for universal health coverage as an intrinsic health agenda.
- Providing catalytic support for regional and country level coordination among partners to harmonize positions on private sector harnessing, for supporting country governments.
- Facilitating dialogue and communication between ministries of health, line ministries, the private sector and international development partners through setting up policy roundtables for developing inclusive, realistic and context-specific country priorities for the private sector.
- Providing platforms for the synthesis and presentation of evidence on public–private partnership innovations from other regions and countries, to allow cross-country learning and policy diffusion.
- Supporting governments in the development of stewardship forums and governance bodies for harnessing the private sector's potential towards universal health coverage; such bodies can take the form of regulatory authorities, health commissions, public–private partnerships or contracting out.
- Providing tools and technical assistance for undertaking mapping surveys of the private sector in Member States, with a focus on composition of the private sector, geographical concentration and extent of activity across services.
- Providing and mobilizing technical support in designing and undertaking public–private partnerships, providing attention to contracting out, insurance schemes, regulation, etc.
- Collating, synthesizing and disseminating a list of "best buys" for public–private partnerships, based on experiences from within and outside the Region, for sharing with governments.
- Developing comprehensive and elastic frameworks and tools for evaluating public–private partnerships for use by Member States, incorporating the measurement of hard data as well as capturing design and health-systems related influencing factors.

Proposed framework of action for engaging the private sector in moving towards universal health coverage

Commitments	Actions for countries	WHO support
Building platforms for dialogue	Setting up taskforces for communication and dialogue between state and private sector Inclusion of private sector in setting national health policies, strategies and health sector reform process Joint setting up of targets for PPPs and process of measurements	Assist Member States to develop roadmap on engaging the private health sector for accelerating progress towards universal health coverage Organize capacity-building workshops for national focal points on "Strategies for private sector engagement in service provision and public private partnership" Develop measurable indicators for measurement of PPP
Policy and stewardship	Building coherence of PPPs in health as part of larger public sector economic and reform measures, through joint forums involving related line departments of finance, planning and legal Development of strategy to shift public health sector responsibilities from direct service provision to a strategic oversight involving both public and private health providers	Support research activities at the country level to build evidences on strengthening role of the private sector relevant policies
Mapping private sectors	Identification of licensed and unlicensed providers, and geographical distribution Differentiation of "pure private sector" from those in dual practice Assessment of basic organizational capacity, individual practitioners versus institutions Identification of services (preventive, screening, curative and rehabilitate) provided, areas of overlap and complementarity with public sector	Technical support in mapping private health care providers and facilities to document and disseminate good practices related to utilization, quality, pricing and financing
Regulation and governance	Development of regulatory framework for private and public providers Enactment of laws for entry, distribution, quality and price control of health providers Setting up regulatory bodies, within or outside the ministry of health, with budgetary and human resource support Undertaking accreditation and providing capacity building through trainings and protocols Piloting of self-regulation innovations, backed by incentives	Develop and share instruments for assessing private health sector regulations
Purchasing and financing private sector services	Identify package of health services for purchasing from private sector, geographical areas for purchasing and target recipients Determine unit costs of services, identify performance targets, and contractual safeguards Set up purchasing bodies in ministries of health, distinct from supplies procurement Establish speedy funds flow systems for timely disbursements and working out of payment modalities (volume based/ capitation/ block grant	Develop guidelines for cost assessment of health services deliver by the private sector Building capacity in contracting mechanisms and facilitate exchange of experiences
Leveraging quality and access	Set standards for quality of care, recording and reporting mechanism by the private care providers Periodic surveys of private and public sector on health care utilization, differentials in utilization by socio-economic groups, and quality of care, using independent monitors where possible Establishment of separate monitoring and evaluation cells within Ministry of Health for execution, collation and synthesis of in-house monitoring and independent surveys	Develop quality standards for service delivery (inpatient and outpatient) Assist Member States to assess and improve quality of care at all levels
Patient information, engagement and satisfaction	Introducing checks on unrestricted advertisement of health services and medical products Public dissemination of information on accredited providers Setting up of client feedback mechanisms for hospitals Review and redress of laws for medical negligence Periodic assessment surveys of client satisfaction for public and private sectors	Technical support to develop national accreditation bodies. Develop tools and standards to assess community satisfaction

PPP: public-private partnership

Annex 1. Tables on performance impact of public private partnership schemes

Table A.1. Impact of contracting schemes on service utilization

Country/Study design	Service coverage	Tests of significance
Eastern Mediterranean		
Pakistan PPHI national evaluation Martinez 2010 *(35)* Endline assessment with a control 1 year intervention	**ANC at BHU:** Positive difference of 31% points for ANC seeking in population served by contracted BHU over non-contracted BHUs **ANC 1+:** Difference of 9% points **Institutional delivery:** Difference of 19.4% points	N/A N/A N/A
Loevinsohn 2009 PPHI pilot *(73)* Endline assessment with a control 1 year intervention	**ANC coverage:** Difference of2% points **Skilled birth attendance:** Difference of 4% points	N/A N/A
Bangladesh Urban PHC Program ADB 2007 *(47)* Before and after study 5 year intervention	**ANC visit 1+:** Difference of 79% points in contracted over non-contracted **Institutional delivery:** Difference of 26% points **PNC Visit 1+:** Difference of 68% points	N/A N/A N/A
Bangladesh Integrated Nutrition Project (BINP): *(46)* Before and after with a control 5 years of intervention	**Vitamin A supplementation:** Difference of 2.7 % points, in intervention areas over non-contracted. **Iron supplementation:** Difference of 47% points in contracted over non-contracted. **ANC 1+ visit:** Difference of 27% points **Mean no. of ANC visits:** Difference of 1.4	N/S P<0.05 P<0.05 P<0.05
Bangladesh Rural community nutrition services Karim R. 2003 *(53)* Before and after study with six experimental and two control sub-districts 6 years of intervention	**Malnutrition** rates declined 18% points compared with 13%points in controls (5% double difference) **Vitamin A:** Double difference for vitamin A was 27% points	N/A N/A
India Chiranjeevi Scheme Bhat 2009 *(50)* Endline assessment with control 2 year intervention	**Institutional delivery**: Difference of 7% points in beneficiaries over non beneficiaries of contracting **PNC Visits:** Decrease by 2% points	T=0.63 P<0.05 N/S
India Integrated Nutrition and Health Program Baqui 2008 *(49)* Before and after with control 2 year intervention	**ANC 1+:** Difference of 32% points **Institutional delivery:** Difference of 6% points **Household practices for birth preparation:** Positive increase seen in contracted over non-contracted. **Household practices for emergency preparation:** Larger positive increase seen in contracted over non-contracted.	P<0.001. Change in Conc Index: 0.15. 95% CI (0.18, 0.12) Change in Conc Index 0.09. 95% CI (0.12, 0.06). Change in Conc Index: 0.09. 95% CI (0.14, 0.04) Change in CI: 0.15. 95% CI (0.18, 0.12)
Americas		
Guatemala Danel and La Forgia 2005 *(56)* Endline assessment with control	**ANC 1+ visit:** Difference of 11% points in management contracts (MC), 3% points change in service delivery contacts (SC) over control **ANC in first trimester:** Marginal increase of 3% point in MC and decrease in SC Institutional deliveries not reported. After adjustment for distance to health facility, the performance of SC improves to similar as that of control Significant reduction in neonatal immunization rates	OR of 1.69 for management contract, p<0.05; NS for service delivery contract OR 0.94 [0.92, 0.96]

Table A.1. Impact of contracting schemes on service utilization

Country/Study design	Service coverage	Tests of significance
Schwartz 2004 *(74)*	After 2.5 years of intervention substantial increase in the proportion of children who were fully immunized	N/A
Bolivia Lavadenz 2001 *(51)* Before and after with control 1 year intervention	**Institutional deliveries:** Increase by 41% points in hospital; only 4% points in health facility **Hospital stay:** Increase in average length of stay by 8.3% points but little change in bed occupancy	N/A
Western Pacific		
Cambodia Bloom 2005 *(48)* Randomized cluster trial 5 year intervention	**Antenatal care:** Difference of 14% points in contracted over non-contracted **Institutional delivery:** Difference of 18% points in contracting in and 30% points in contracting out	P<0.01 ITT: 0.28 SE:0.08 P<0.01 SE: 0.07 ITT contracting in: 0.09. ITT contracting out:0.04
Cambodia Bhushan et al, 2002, *(55)* Cluster randomized controlled trial 2 and a half year intervention	**ANC visits 2+:** increased by 73% points in contracting in and 241% point in contracting out **Institutional delivery:** Increase by 225% in contracting in and 142% points in contracting out	N/A N/A
Africa		
Madagascar and Senegal Community Marek T 1999 *(52)*	**Malnutrition:** Severe and moderate malnutrition declined 6% points and 4% points respectively	N/A

Source: *(28,39)*

Table A.2. Impact of community-based health insurance schemes on service utilization

Country/Study design	Service utilization
Senegal, Mali and Ghana Smith 2008; *(62)* Endline assessment with control Intrv period: 2001-04	**ANC visit in 1st trimester:** Senegal: 7% points increase, Mali 25 pp increase; Ghana: N/A **4+ antenatal visits:** Senegal: 2 pp increase, Mali 36 pp increase **Institutional delivery:** Senegal; 22 pp increase, Mali: 30 pp increase, Ghana: 10 pp increase.
Diop 2006; *(75)* Endline assessment with control Intervention period: 2001-04	**Institutional delivery:** Increased utilization in Ghana, OR of 1.98, p<0.01; Senegal & Mali NS
Senegal Smith 2006 *(61)* Endline assessment with control 2001-2004 Juttings 2004 *(76)* Endline assessment Intervention period: 1990-2000	**ANC visit in 1st trimester:** Difference of 39% point over control, **4+ ANC visits:** no increase **Institutional delivery:** 24% point increase **Skilled delivery at home:** 26% point decrease **PNC:** decrease of 10% point **Hospital utilization:** Difference of 27% points in insured over noninsured **Hospital utilization in females:** higher utilization in females
Mali Franco 2008 *(77)* End-line assessment with control Intervention period: 2003-2004	**ANC4+:** higher utilization in insured over noninsured, OR of 2, p<0.1
Rwanda Soeters 2006; *(60)* Before and after study Intervention period: 2003-2005	**Institutional deliveries:** Increased by 36% point from 25% (CI: 15-35) to 61% (CI:49-71)
Schneider & Diop 2001 *(78)* Endline assessment with control Intervention period: 1998-2001	**ANC 3+ visit:** Difference of 9.6% point in insured over noninsured. **Skilled birth attendance:** Difference of 16%point in insured over noninsured
Schneider et al; 2001. *(58)* Before and after with control Intervention period: 1998-2001	**Total number of antenatal care in health centres:** Increase of 47% 4% 5% pp from baseline in insured districts compared to 20% -6% in control areas **Total deliveries in health centres:** Increase of 49%, 43%, 14% in insured districts compared to -12%, 14% in noninsured areas Total deliveries in hospitals: Increase of 17 and 28% point in two insured districts and decrease of -28% in one insured district compared to 65 and 23% point increase in noninsured districts. **C section ratio as proportion of all hospital deliveries:** Increase of 20% 26% 34% point increase in insured districts compared to 21% 26% in noninsured districts
Congo Criel et al 1999 *(59)* Case control; retrospective analysis of claims Intervention period: 1993-1994	**Hospitalized referrals for EmOC:** Difference of 9.4% point in insured over noninsured, with 11% hospitalization rate in insured versus 1.6% in noninsured **C-section to delivery ratio:** 1,97% in insured population vs 0.74 % in noninsured, 1.23% point difference
China Long 2010; *(57)* Endline assessment with control (Control are those where ANC is excluded from insurance package) Intervention period: 2002 -2007 Long 2010; *(79)* Endline Assessment with control Intervention period: 2002-2007	**ANC visits 5+:** increase by 6-11 % point over the 2 control sites. P<0.01 **Process of ANC care:** Advice on nutrition: 6-14% point increase over control sites, p<0.01 Hemoglobin tested: Decrease in recommended number of Hb testing by 10-12% point, p<0.01 Urine testing: Decrease in recommended number of urine tests by 33-36% point, P<0.01 US screening: 5-9% point increase over control, p<0.01 **ANC visits 5+:** Increased by 10.5 %point (95% CI :+4.7, +13.6 **ANC visits <12 gestation weeks:** Increase by 20% point (35% to 55%) 95% CI: (+14.6, +24.0) **Delivery at township health facility**: Increased by 14% point (95% CI:+9.6, +18.1) **Skilled birth attendance:** unskilled birth attendance at home decreased by 18% point (95% CI :-14.1 to 21.8) **Assisted delivery**: no change **Caesarean section**: Increased by 11% point (95% CI : +7.6, +13.9)

Source: *(28,39)*

Table A.3. Impact of voucher schemes on service utilization

Country/Study	Service utilization and quality of care	Test of significance
Pakistan Suhail A 2011 *(45)* Before and after comparison based of household surveys before intervention in 2008 (*n* = 681) and after intervention in 2009 (*n* = 741).	**ANC utilization:** Increase by 21.6% points in voucher beneficiaries one year after intervention Odds of 4.98 as compared to before intervention **Institutional delivery:** Increase by 19.2% points in voucher beneficiaries one year after intervention Odds of 4.04 as compared to before intervention	p=<0.001
Pakistan Suhail A et al 2011 *(45)* Before and after study with control based on household surveys	**Postnatal care utilization:** Increase by 31.2% points in voucher beneficiaries one year after intervention Odds of 5.8 as compared to before intervention **Complicated delivery:** Odds of 1.5 as compared to before intervention	p=<0.01 p=<0.001 p=<0.01
Bangladesh Ahmed S 2011 *(65)* Endline assessment of Intervention and control area Household surveys of one intervention (*n* = 600) and 5 control sub-districts (*n* = 3000)	**ANC utilization:** Odds of 1.91 (SE = 0.294) as compared to control **Postnatal care utilization:** Odds of 2.78 (SE = 0.298) as compared to control **Institutional delivery:** Odds of 2.53 (SE = 0.182) as compared to control **Skilled birth attendant guided delivery:** Odds of 3.5 (SE = 0.14) as compared to control **Treatment for obstetric complications:** Odds of 1.53 as compared to control	p=<0.001 p=<0.001 p=<0.001 p=<0.001 p=<0.001
Hat et al 2014. *(80)* Endline assessment of Intervention and control area Household surveys of 21 intervention and 21 control sub-districts	**ANC utilization:** Positive difference of 16% points as compared to control **Postnatal care utilization:** Positive difference of 11% points as compared to control **Institutional delivery:** Positive difference of 25% points as compared to control **Caesarean section:** Positive difference of 1% points as compared to control **Skilled birth attendant assisted delivery:** Positive difference of 41% points as compared to control	N/A
Rob et al 2010 *(81)* Before and after study without control: Household surveys of the intervention sub-districts	**ANC utilization:** Increase by 33.2% points in voucher beneficiaries after intervention **Postnatal care utilization:** Increase by 14.9% points in voucher beneficiaries after intervention **Institutional delivery:** Increase by 16% points in voucher beneficiaries after intervention **Skilled birth attendant guided delivery:** Increase by 16% points in voucher beneficiaries after intervention	P=<0.01 P=<0.01 P=<0.01 P=<0.01

Source: *(28, 39)*

Table A.4. Impact of national health insurance on service utilization

Country/study design	Service coverage	Test of significance
Ghana Chankova S et al 2010 *(69)* Before and after study with control 2004-2007	ANC utilization (4-5): Insignificant Increase of 2% points after intervention. Significant negative difference of -6% points as against noninsured Institutional delivery : Insignificant Increase of 1% points after intervention. Significant negative difference of -11% points as against noninsured C-section deliveries: Insignificant change of -1% points after intervention. Significant positive difference of 11% points as against noninsured Delivery by untrained birth attendant Insignificant Increase of 9% points after intervention. Significant negative difference of -25% points as against noninsured	p= 0.53 p= 0.002 p=0.08 p=0.004 p=0.82 p=0.004 p=0.13 p=0.005
Taiwan Chen LM 2001 *(67)* Before and after study without control 1989 and 1996	ANC utilization (4-5): Significant increase of 14.8% points after intervention C-section deliveries: Insignificant change of 6.7% points after intervention. Quality of care Significant improvements in laboratory and radiological investigations	P=<0.01 P=<0.001 P=<0.01
Taiwan Liu TC et al 2007 *(82)* Before and after study without control 1989-2003	C-section deliveries: Impact of NHI on Caesarean section was statistically insignificant with OR=1.05 Institutional delivery Hospital delivery increased from 49.6% in 1989 to 54.4% in 1996 (p-value is not available)	N/A
China Wen-Wei 1998 *(70)* Interrupted time series 1960 – 1993	C-section deliveries: Increase from 4.7% (1960-79) to 9.3% (1980 to 1987) and 22.5% (1988 to 1993). Women who had C-section for most recent birth was 45.2% in women with government insurance compared to 40.5% for labour insurance 10.8% in cooperative insurance and 10.3% with partial insurance (or=5.8)	95%CI=2.72-12.24) (cooperative insurance as reference), P<0.001
Philippines Kozhimannil KB et al. 2009 *(72)* Before and after study without control 1998-2003	ANC utilization Insignificant increase of 6% points after intervention Institutional delivery Insignificant increase of 3% points after intervention	N/A
Peru McQuestion 2006 *(66)* Endline assessment with control of 29 treatment and 29 control facilities	Institutional delivery Insurance beneficiaries twice more likely to deliver in health facility	OR=2.01 SE = 0.25 P=<0.05

Source: *(28,39)*

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