PRIMARY HEALTH CARE SYSTEMS (PRIMASYS)

Case study from Pakistan

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Abbreviations

DHIS	District Health Information System
DOTS	directly observed treatment, short course
GDP	gross domestic product
MIS	Management Information System
NCD	noncommunicable disease
NGO	nongovernmental organization
PC1	Planning Commission form 1
PHC	primary health care
PPHI	People's Primary Healthcare Initiative
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Background to PRIMASYS case studies

Health systems around the globe still fall short of providing accessible, good-quality, comprehensive and integrated care. As the global health community is setting ambitious goals of universal health coverage and health equity in line with the 2030 Agenda for Sustainable Development, there is increasing interest in access to and utilization of primary health care in low- and middle-income countries. A wide array of stakeholders, including development agencies, global health funders, policy planners and health system decision-makers, require a better understanding of primary health care systems in order to plan and support complex health system interventions. There is thus a need to fill the knowledge gaps concerning strategic information on front-line primary health care systems at national and subnational levels in low- and middle-income settings.

The Alliance for Health Policy and Systems Research, in collaboration with the Bill & Melinda Gates Foundation, is developing a set of 20 case studies of primary health care systems in selected low- and middle-income countries as part of an initiative entitled Primary Care Systems Profiles and Performance (PRIMASYS). PRIMASYS aims to advance the science of primary health care in low- and middle-income countries in order to support efforts to strengthen primary health care systems and improve the implementation, effectiveness and efficiency of primary health care interventions worldwide. The PRIMASYS case studies cover key aspects of primary health care systems, including policy development and implementation, financing, integration of primary health care into comprehensive health systems, scope, quality and coverage of care, governance and organization, and monitoring and evaluation of system performance.

The Alliance has developed full and abridged versions of the 20 PRIMASYS case studies. The abridged version provides an overview of the primary health care system, tailored to a primary audience of policy-makers and global health stakeholders interested in understanding the key entry points to strengthen primary health care systems. The comprehensive case study provides an in-depth assessment of the system for an audience of researchers and stakeholders who wish to gain deeper insight into the determinants and performance of primary health care systems in selected low- and middle-income countries. Furthermore, the case studies will serve as the basis for a multicountry analysis of primary health care systems, focusing on the implementation of policies and programmes, and the barriers to and facilitators of primary health care system reform. Evidence from the case studies and the multi-country analysis will in turn provide strategic evidence to enhance the performance and responsiveness of primary health care systems in low- and middle-income countries.

1. Background to Pakistan case study

1.1 Primary health care in Pakistan

The primary health care (PHC) system is the cornerstone to any health system for providing accessible, good-quality, responsive, equitable and integrated care. The importance of PHC has been recognized in the past few decades, and recently there has been increasing interest in primary care to achieve the goal of universal health coverage across both developed and developing economies.

Research has mostly addressed PHC-related health outcomes, including coverage, quality and equity aspects. Less work has been done on analysing complex mechanisms of planning, governing and regulating the PHC subsector within health. A deeper understanding is also needed to identify and record pathways of success and failure for PHC in a systematic way, particularly in low- and middle-income countries.

This study aims to capture the dimensions of the PHC sector in Pakistan in terms of its structures and processes, and the tangible as well as the less tangible outcomes. It also picks up four pathways of recent change within the PHC system, and looks at interconnections between the PHC structure, processes and outcomes in shaping success, as well as the related constraints.

The study aims to bridge the gap in front-line health care delivery systems at national and subnational levels; to provide insight into how PHC systems operate in a low- and middle-income country settings; and to identify what can be learned from the PHC experience.

1.2 Objectives of the case study

Objectives of this case study are twofold:

- to develop a descriptive case study summarizing primary care systems at country level;
- to contribute to cross-cutting lessons across countries to inform the performance of primary care systems.

The report first maps the PHC architecture in Pakistan, and the underlying dynamics of policy and implementation that shape its delivery, in the following areas:

- primary care structure: service organization, governance, financing, and human resources;
- processes affecting primary care: planning and implementation, regulation of PHC, and Management Information System (MIS);
- outcomes: discussion of coverage, equitable access, quality and responsiveness of care, and quality and safety of services.

The principles of relevance, trustworthiness and coherence ere cross-cutting principles across the three strands.

The report then goes on to draw lessons from reform initiatives in Pakistan and outlines the specific pathways of success and failure in the area of PHC in the country.

2. Methodology

A case study design was used to describe and analyse various aspects of the PHC system in Pakistan, following the PRIMASYS framework, methodology and template, as described in the background to PRIMASYS case studies above.

Methods included documentary review, key informant interviews, and focus group discussions. Documentary evidence included published surveys, independent assessment of reform initiatives, peer-reviewed articles, and policy strategy and planning documents. The documentation was first gathered and reviewed, and then important fixed and flexible elements of inquiry were identified for further probing through the interviews. Key informant interviews were conducted with 15 stakeholders, including vertical programme managers, district health officers, representatives of provincial health departments and ministry officials. Preference was given to stakeholders that had either been part of the process of the particular pathways or had an oversight of the historical background during the period. The focus group discussions were carried out in association with national round-table policy discussions under way to develop the national policy vision, and aimed to capture successes of and barriers to recent reforms in order to learn lessons on the implications for governance and service delivery at the primary care level. The round tables had a diverse representation of stakeholders from nongovernmental organizations (NGOs), expert groups, government and international development partners. Questions on pathways were introduced to explore progress, success and barriers. Also, care was taken to ensure that the selection of stakeholders was diverse, representing a spread of different tiers and different levels of the health system (ensuring maximum variability). Stakeholder discussions were focused on fact-finding to address specific information requirements, and also on eliciting different perspectives of relevant processes, and interpretation and contextualization of available quantitative findings.

Triangulation of findings from all sources was done for synthesis and report writing. A narrative synthesis and collation approach was used for descriptive sections and thematic synthesis for identifying pathways of success and failure.

The study received approval from Ethics Review Committee of Aga khan University, Karachi. Informed consent was obtained from all participants of the study.

3. Pakistan: country profile

Pakistan is the sixth most populous country of the world, with a total population estimated at 184.35 million *(1)*. The male–female ratio is 102:100 (50.8% males and 49.2% females *(2)*, and the population density is 231 people per square kilometre, with 61.4% of the population living in rural areas and 38.6% in urban areas. The average growth rate is 2%, while the literacy rate is 43.4% *(2)*. The gross domestic product (GDP) per capita is US$ 1317 and the GDP growth is 4.7%, and Pakistan is ranked as a lower middle-income country *(3)*. Around 33% of its population lives below the poverty line, with clear disparities in poverty status between and within the provinces *(4)*. In addition, 8.5% of the population do not have access to safe drinking water, while 17% do not have access to proper sanitation facilities *(5)*.

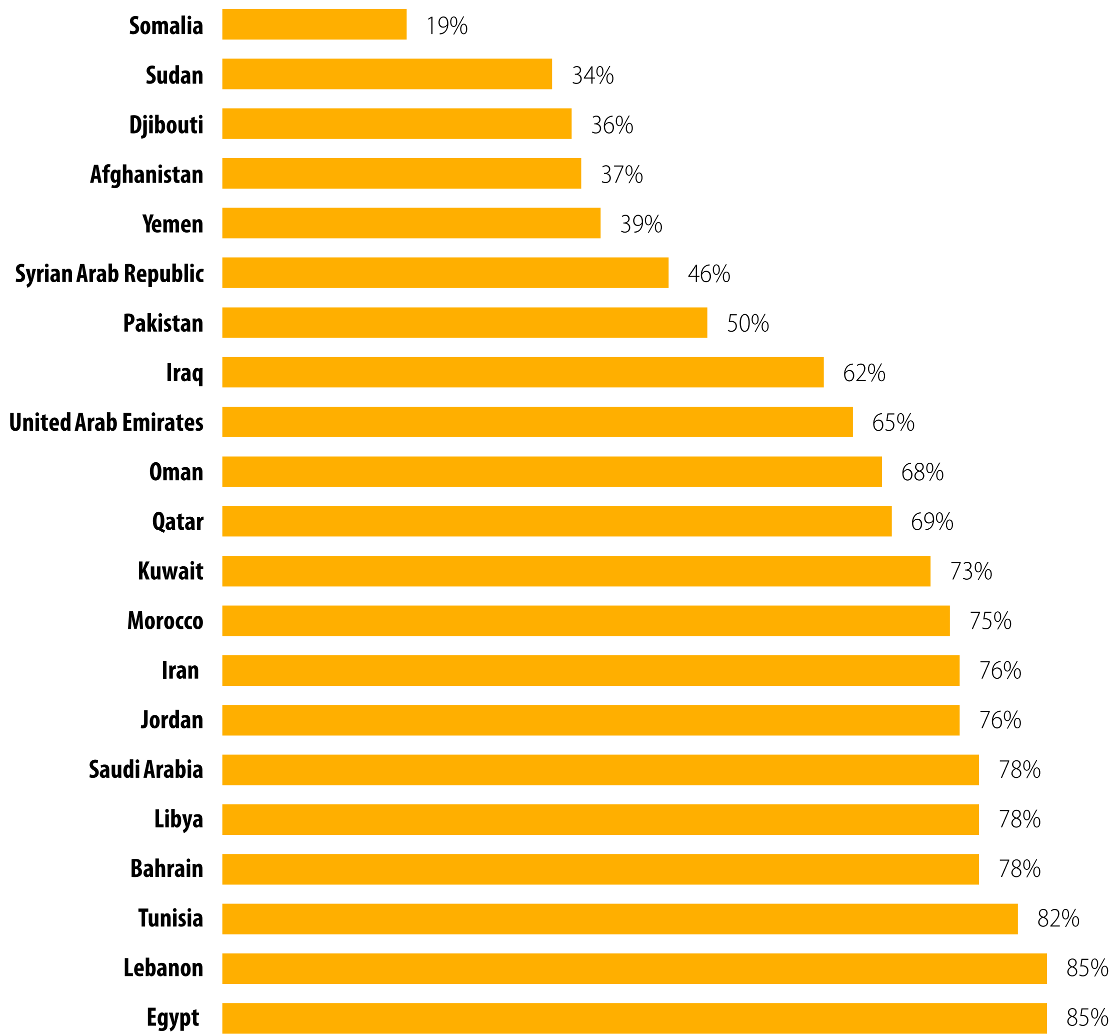
Pakistan's key health indicators are not promising, and did not attain the Millennium Development Goal 2015 targets. Neonatal mortality is 55 per 1000 live births, an indicator that has remained stagnant over the last 20 years. However, the infant mortality rate has decreased by 19%, while under-5 mortality has decreased by 24% over the same period. Currently the total fertility rate is 3.8 births per woman, declining from 5.4 in 1990 *(2)*, but little change is seen in rural areas. Undernutrition is a chronic, long-standing issue in all provinces, as seen by high levels of stunting and with little evidence of decrease (and in some cases, a deterioration) over the past decade *(6)*. Table 1 summarizes the key health indicators for Pakistan. The overall health scenario in Pakistan indicates the potential for increased investment in health in order to achieve major gains, especially in the area of maternal and child health outcomes.

There is a rising trend of noncommunicable diseases (NCDs), which now account for 50% of total deaths *(8)*. There has also been a significant burden of injuries and mental health problems, aside from other chronic NCD conditions (Figure 1, next page).

Table 1. Key health indicators of Pakistan

Key indicators	Figures	Source of information
Neonatal mortality rate	55/1000	PDHS 2012–13 *(2)*
Infant mortality rate	74/1000	PDHS 2012–13
Under-5 mortality rate	89/1000	PDHS 2012–13
Maternal mortality ratio	274/100 000	PDHS 2006–07 *(7)*
Total fertility rate	3.8 births per woman	PDHS 2012–13
Underweight: children	31.5%	NNS 2011 *(6)*
Stunting: children	43.7%	NNS 2011
Wasting: children	15.1%	NNS 2011
Anaemia: children	62.0%	NNS 2011
Anaemia: pregnant mothers	51.0%	NNS 2011

Figure 1. Country data on noncommunicable diseases, Eastern Mediterranean region 2014



Source: World Health Organization *(8)*.

4. Introduction to primary health care in Pakistan

Pakistan, since its creation in 1947, has had mixed success in establishing its health portfolio during the ensuing decades. Significant crests and troughs have been experienced, characterized by inequity, urban–rural disparities, inadequate resource allocation, an imbalance in the number and skills mix of health workers, and deficient access to quality health care for all segments of the population.

During the 1960s and 1970s, much emphasis was given to strengthening the infrastructure of the health care system and establishment of rural health centres in order to bring health services closer to the community. The 1970s and 1980s can be considered as the decades of PHC, when the international public health movement was given considerable stimulus by the Alma-Ata Declaration on Primary Health Care in September 1978. The initiatives in Pakistan included the eradication of smallpox in 1974, and the national Expanded Programme of Immunization targeting vaccine-preventable childhood diseases, launched in 1978. Diarrhoea control through oral rehydration solutions and training of traditional birth attendants on safe and clean delivery were also introduced, aiming to reduce both infant and maternal mortality. In late 1993 the Lady Health Worker Programme was instigated to ensure home delivery of such health services as antenatal and postnatal care, childhood disease prevention and family planning. Provision of directly observed treatment, short course (DOTS) to the population suffering from tuberculosis was started in 2001, and the Roll Back Malaria initiative was launched in 1998. Efforts to combat undernutrition through infant and young child feeding, malnutrition treatment and food fortification were launched in 2015.

5. Governance architecture for primary health care

5.1 Health planning: power and authority in the pre- and post-devolution context

Pakistan is a federation with three levels of government – federal, provincial and district. The Capital Territory of Islamabad, the Federally Administered Tribal Areas and the Federally Administered Northern Areas come under the jurisdiction of the federal government, whereas Azad Jammu and Kashmir is an autonomous region with its own government.

The provision of health services – including planning, management and oversight, financing, implementation, medical education and training, monitoring and supervision, and regulation – has been the provincial governments' primary responsibility under the 1973 Constitution of Pakistan, while the federal government's primary responsibility has been stewardship, including policy development and strategy outlining, monitoring and evaluation, health communication, advocacy and information, formulation of technical values and guidelines, and the prevention of communicable diseases. However, the federal ministry's role grew beyond oversight with increasing involvement in the funding and management of vertical preventive programmes, as well as construction of large hospitals and medical colleges at the provincial level, while the role of provincial governments became operational delivery of public health programmes and clinical services.

This system continued until the local devolution initiative in 2000, which was put in place under the military regime of General Musharraf as part of an apolitical series of reforms to achieve the agenda of enlightened moderation. The Local Government Ordinance of 2001 devolved the planning, administrative, supervision and financial powers for 13 sectors, including health, from the provincial to the district level. The aim was to enhance local accountability and improve service delivery. In health, devolution did not change the role of the federal government, but rather the division of responsibilities between the provinces and the districts. The Local Government Ordinance was repealed a few years later after facing a number of blurred administrative responsibilities, low technical capacity, and lack of visible improvement, with some reversals, in service delivery.

In 2011, the 18th Amendment to the Constitution of Pakistan, unanimously passed by all political parties, devolved 21 sectors (including health) to the provinces and set up a Council of Common Interest headed by the Prime Minister and provincial chief ministers to settle major interprovincial issues. Policy, legislation, programming, implementation, budgeting and monitoring were devolved to the provinces. The fiscal space of provinces was also increased to allow for greater contribution to devolved subjects, while the federal fiscal space was reduced. The exclusive federal roles remained international agreements, trade, and medical surveillance of ports and borders, while roles in consultation with provinces included regulation of professions, services and insurance, health planning coordination with provinces, health information coordination with provinces, research, and coordination on interprovincial matters. The Federal Ministry of Health was initially abolished, with federal functions assigned to other federal entities (for example the Planning Commission and the Bureau of Statistics); however, it was later reconstituted as the Ministry of National Health Service Coordination and Regulation, bringing together the dispersed federal health functions into a single entity. Following the 2011 devolution, the federal government (until 2016) still remains responsible for partial budget support to a series of mainly preventive national programmes.

5.2 Integration of services and programmes

Pakistan has a long history of implementing vertical programmes, most of which originated as a result of similar global initiatives. In the context of Pakistan's development system, some were termed "umbrella projects" (Expanded Programme on Immunization and Lady Health Worker Programme), and some were implemented as comprehensive projects – separate provincial PC1 forms (Planning Commission form 1), with national PC1 forms for federal functions (for example HIV/AIDS). Vertical programmes have been criticized in Pakistan for duplication of services, resulting in inefficiency of human resources, finances, monitoring systems, time and logistics. Moreover, uniformity of services is not ensured, as different vertical programmes are in different phases of implementation and focus on different geographical areas and target populations. Erosion of district-level accountability has also been witnessed – few decisions were left with district health offices as programming, human resources management and logistics supply for key areas were centralized into the vertical programmes.

Polio eradication campaigns have also constrained the delivery of integrated routine immunization services and have interrupted the continued delivery of services at health facilities and in outreach circumstances. These campaigns, started in 1994 as special door-to-door campaigns to administer polio drops, initially involved a week's campaign every quarter and have now been stepped up to one or two campaigns every month. Each campaign involves outreach lady health workers, vaccinators, staff of first-level care facilities and district health offices, district administration staff and even the law enforcement agencies in high-risk areas. Tight programming involves national, provincial and district levels and is vertically accountable beyond the provincial and national health ministries to the civil administration and the executive leadership.

Special polio campaigns capture the time and resources of the health leadership, local government and the media, resulting in little time for attention to routine immunization, which has failed to meet national targets. Moreover, primary care services at health facilities are affected due to staff duties on Polio Day. Similarly, the Lady Health Worker Programme, which is the largest community health worker programme in the region, has been criticized for diverging from its main role of awareness raising on birth spacing and mother and child health, with monthly visits of health workers mainly tied to Polio Day administration.

5.3 Integration of health and other service sectors

Health and population control had been organized apart under two distinct ministries and separate provincial departments. Following devolution there is now a single federal ministry dealing with health and population, though both continue to have separate ministries in the provinces. The population welfare sector has its own network of reproductive health facilities providing long-acting and short-acting contraceptive devices, and also has separate cadres of village-based population workers for client motivation and distribution of contraceptives. Having separate structures has led to duplication of services and lack of an effective strategy.

Nutrition has greater integration with health and other sectors. Nutrition is institutionalized as a cross-sectoral matter in the National Planning Commission and the provincial planning and development departments, and an Intersectoral Nutrition Strategy is in place for mainstreaming into different ministries. Provincial health ministries have recently started a programme for nutrition-specific interventions as part of the Intersectoral Nutrition Strategy. Health sector delivery is focused at the primary care level, involving infant and young child feeding practices, micronutrient supplementation, fortification, and treatment of malnourished children. These elements are integrated into the service package of health facilities and the Lady Health Worker Programme. Other ministries dealing with water, sanitation and hygiene, agriculture, food, and education are

programming nutrition-sensitive interventions as part of the implementation of the Intersectoral Nutrition Strategy.

Pakistan has one of the world's largest cash transfer programmes – the Benazir Income Support Programme, which aims to alleviate poverty and food insecurity. The programme has a detailed poverty scorecard-based targeting system to identify and provide cash transfers to low-income women. However, the cash transfer is unconditional and presently is not linked to health conditionalities such as immunization or antenatal care. It has been used to promote primary school enrolment and adult skill-building initiatives but has yet to be leveraged towards PHC. A microinsurance scheme aimed at hospital care was started for beneficiaries of the Benazir Income Support Programme in a few districts, but was concluded without a formal evaluation.

6. Health financing and fund flows

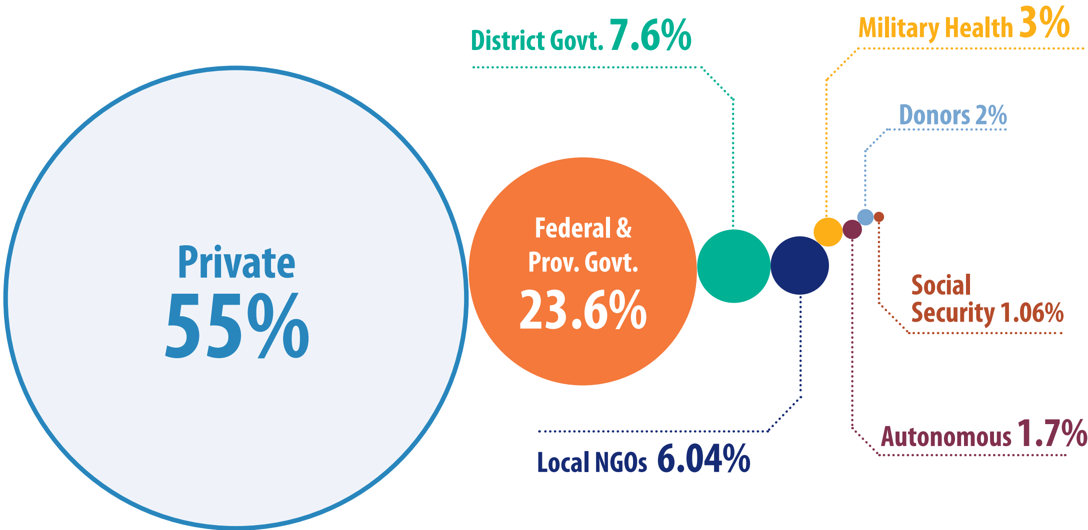
6.1 Financing sources and spending

Pakistan spends 2.8% of GDP on health, while the total government health expenditure as a proportion of GDP is 0.8% *(9)*. The major funding source for government spending is from centrally collected taxes. Earmarking of taxes, such as revenues from tobacco excise tax, locally generated taxes, and corporate sector tax for social contribution, has as yet not been tapped for health spending. For household spending, out-of-pocket payments are the major source of household spending, with minimal coverage of private voluntary insurance. The Zakat religious charity tax as well as philanthropic contributions from private corporations and citizens are the main source of funds for the local NGO sector.

Government spending as a proportion of total health expenditure is 36.8% inclusive of federal, provincial and district government, armed forces and parastatal agencies. Household spending as a share of total expenditure on health is 55% *(3)*; local NGO spending is 6%, social security is 3%, and the donor contribution is 2% (Figure 2).

The largest share of out-of-pocket spending has been on medicines (67%), followed by consultation (23%) and transport (10%). Within government spending the largest proportion is consumed by general hospital services, followed by administration and planning, then medical colleges and lastly preventive health programmes (Table 2).

Figure 2. Health expenditures by financing agents



Source: National Health Accounts 2011–12 *(9)*.

Table 2. Government health expenditure by category

Category	2012/2013 basic expenditure
Provincial executive	7
Planning (general public service)	17 703
Construction and transport	7 544
Therapeutic appliances and equipment	–
Drug control	685
Specialized medical services	–
General hospital services	148 072
District headquarters hospital	157
Tehsil headquarters hospital	123
Basic health units/dispensaries/clinics	317
Special hospital services	566
Mother and child health	216
Nursing and convalescent home services	532
Antimalarial	551
Nutrition and other hygiene programmes	–
Tuberculosis	53
Chemical examiner and laboratories	439
Expanded Programme of Immunization	131
Other (health facilities and preventive measures)	5 340
Other categories	
Administration	21 912
Professional/technical universities/colleges/ institutes	9 043
Secretariat/policy/curriculum	254
Social welfare measures	3 902
Total	**217 813**

6.2 Financing mechanisms

The government has traditionally operated as both the financier and provider of care in the public sector. However, since the 2000s there has been a proliferation of both large- and small-scale purchasing agreements with semigovernmental agencies and the private sector. Contracting-out arrangements have been put in place whereby the government has outsourced the management of basic health units to the NGO sector while continuing to provide the budget for health services. The government still has to move to expanding its coverage through purchasing services provided by private sector institutions.

Over the last two decades there have been a number of hybrid public-private partnership initiatives in Pakistan, in which the government is not the financier of services but actually the recipient of financial and technical support provided by NGOs to poorly functioning government primary health centres. There have also been instances of voucher schemes involving the public and private sector primary care providers. The largest scheme has been for family planning vouchers from private providers, while more small-scale schemes for maternal and newborn health services have also been implemented involving both public and private providers.

Social protection schemes are fragmented and not leveraged to the PHC services. Social security services exist but are confined to formal government sector employees with little coverage of the total population, and are predominantly aimed at curative hospital services. The Benazir Income Support Programme is one of the world's largest cash transfer programmes and has a scientific targeting system for poor households. However, PHC schemes, including use of soft conditionalities for immunization or antenatal care, have not been introduced so far. Most recently, the government has launched the Prime Minister's Programme for National Health Insurance. This involves social protection for hospital-based tertiary and secondary care services, but it is not linked to gatekeeping at the primary care level. However, the programme is fully subsidized by the government and there is no premium pooling; hence, the basis for this serving as an alternative mode of financing is questionable.

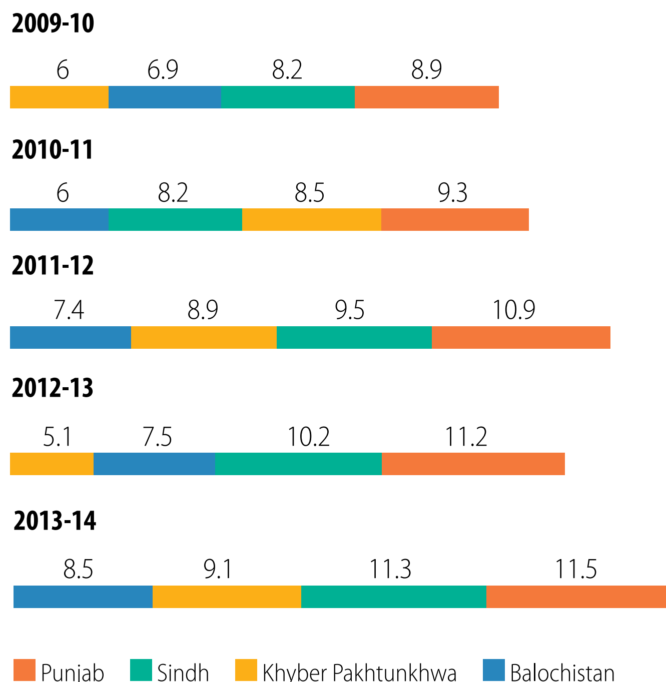
6.3 Fiscal flows to support primary health care

In Pakistan a single-line budgetary transfer is made to the provinces from the federal divisible pool of tax revenues. Decisions about allocations to the health sector and other competing sectors, such as education, food, irrigation, agriculture and social protection, are made by the provinces themselves. Following devolution, the percentage share of the provincial budget spent on health has risen in all the provinces, accompanied by greater policy ownership for health (Figure 3).

Additionally, the federal government has been contributing partial support to public health preventive programmes, construction and operational running support to certain tertiary health care facilities in the provinces, and drugs, contraceptives and vaccines, which amounts to 15% of total government health spending. Following devolution federal government support is being phased out, with provinces required to take support for preventive programmes into their own budgets. Delayed releases of federal support and inadequate release of funds have been chronic issues and have worsened after devolution, contributing to underachievement of preventive health care targets in vertical programmes. Similarly, delays in release of lady health worker salaries at the federal level have resulted in frequent strikes by lady health workers.

District governments are important financial intermediaries, as 60% of the total health expenditure is accounted for in district budgets. The funding flow comes from the provinces, with salaries directly arriving into employees' accounts. Vaccines for the Expanded Programme on Immunization, kits for the Lady Health Worker Programme, and supplies for other preventive programmes are directly supplied to the districts, while medicines are partly purchased by the provinces and partly by the district, based on preapproved tenders. Hence, while the district is the largest consumer of the budget, it only partially manages its budget, while the rest is controlled by the province.

Figure 3. Government health expenditure as % of provincial government expenditure



Source: Provincial civil accounts.

6.4 Integration of financing decisions with primary care decisions

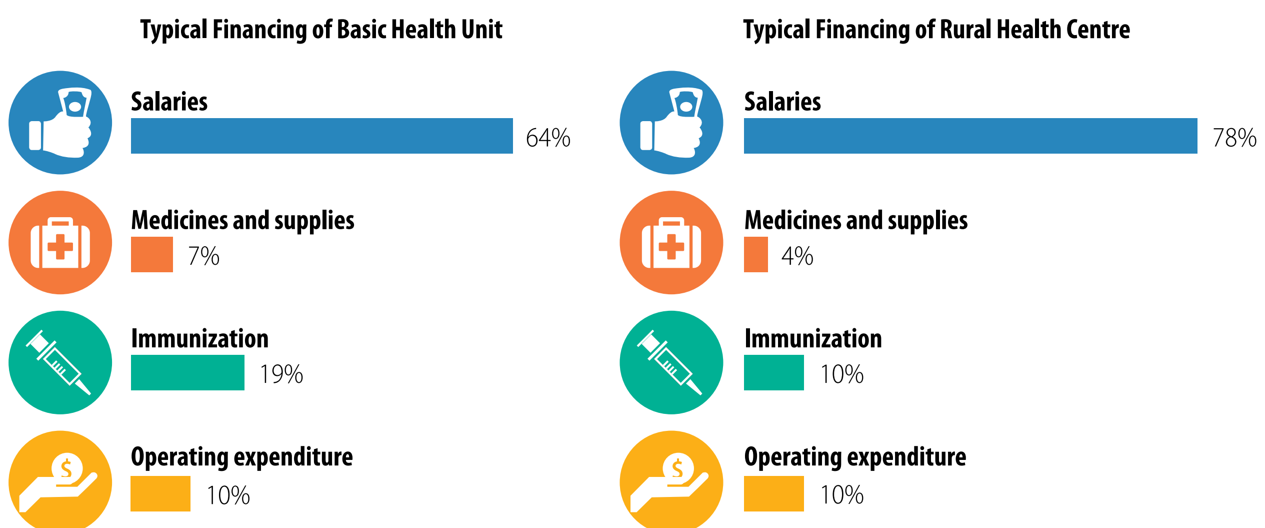
Pakistan has two segments for allocating budgets and hence two set-ups for annual budgetary planning. The recurrent budget is allocated to operational expenses of the health system and, since it is part of the regular budget, its continuity is ensured with inflation-adjusted increments added routinely every year. The development budget is used for new health care initiatives and funding is therefore time bound and short lived. Operational and development budgets are formulated and approved by the provinces, while on a parallel basis the federal government formulates its development and recurrent budget for federal support to the federal administration regions – Islamabad, Azad Jammu and Kashmir, Gilgit-Baltistan, and the Federally Administered Tribal Areas – and for limited support to the provinces.

Planning for the recurrent and developmental activities has been on an ad hoc basis, and has not been aligned with signed international health treaties, national policies and planning for primary and preventive health care. Development funding is mainly allotted to visible infrastructure schemes, such as establishment of medical colleges, tertiary hospitals or specialty care centres, such as burns or cardiac centres. Allocation to primary care is low and is mainly targeted towards construction of more health care facilities rather than demarcation of funding for outreach activities, behavioural change, monitoring, or governance initiatives.

Vertical programmes – even those started in the 1970s – have continued to exist, and are extended on development budgets rather than being incorporated into the recurrent budget. The recurrent budgets principally comprise salaries (76%), while the remaining share is for items such as medicines, supplies, and supervision (Figure 4). Meagre amounts are allocated at the provincial level for planning, governance, training, monitoring and support systems, and at the district level for outreach support, behavioural change, and field supervision. Following devolution, the provincial budgets are being restructured in line with the provincial health sector strategies, which provide support for more effective and primary care-oriented systems. However, budgets have only been partially adjusted in two provinces, while in two others the budgets are yet to catch up with provincial planning.

International development partners continue to play a significant role in Pakistan's health context, particularly for PHC, population control and undernutrition. Their main contribution has been in influencing policy and programming, rather than the actual value of foreign aid, which averages 2%. Development partners have been the major advocates of Pakistan's signing of international health agreements, and have provided support for technically assisted and funded vertical programmes on polio eradication, maternal, newborn and child health, population control, HIV/AIDS, undernutrition, and more recently routine immunization, as well as large donor-funded projects on PHC and service delivery innovations. United Nations agencies have particularly played a role in standard setting and in supporting the Essential Medicines Programme.

Figure 4. Recurrent expenditure: Basic health units and rural health centres in Pakistan



Source: Technical Resource Facility, Minimum health services delivery package, 2012 *(10)*.

While donors have been the most powerful supporters of primary care in Pakistan, they have also been criticized for verticalization of primary care activities as opposed to taking an integrative approach. The type of support has often involved short-term interventions such as provision of vaccines and contraceptives or service delivery through international NGOs, which has wrapped up at the conclusion of projects with little investment in policy or advisory support, technical assistance, or capacity-building for structural reforms and institutional strengthening of PHC. Regulation of PHC, including the private sector, human resources planning and management, financial efficiency, availability and quality of essential medicines, and independent monitoring and evaluation, continues to be critically underfunded. Donor support in Pakistan has been mainly routed to projects on the development budgets, with donors typically bearing up to 80% of expenditure with much smaller amounts provided by the government. Financing modalities have therefore mostly involved project-based approaches rather than use of aid conditionalities, sectorwide arrangements and performance-based budgetary support to major ongoing government programmes. In the post-devolution context, donor support has expanded towards technical assistance of provincial governments for primary care reforms in addition to funding of separate service delivery projects.

Table 3 presents information on health spending according to a range of indicators.

Table 3. Health spending and utilization

Indicator	Figures	Sources of information
Total health expenditure as proportion of GDP	2.8%	Pakistan National Health Accounts 2011–12 *(9)*
Government health expenditure as proportion of GDP	1%	Pakistan National Health Accounts 2011–12
Public expenditure on health as proportion of total health expenditure	36.8%	Pakistan National Health Accounts 2011–12
Out-of-pocket payments as proportion of total health expenditure	54.9%	Pakistan National Health Accounts 2011–12
Voluntary health insurance as proportion of total health expenditure	0.2%	World Bank *(11)*
Proportion of households experiencing catastrophic health expenditure	5%	Household Integrated Economic Survey 2011–12 *(12)*
Proportion of population consulting specific sectors for general health consultations:		Pakistan Social and Living Standards Measurement Survey 2008–09 *(13)*
Private sector	71%	
Public sector	21%	
Homeopathy/hakeems	4%	

7. Service organization

7.1 Governmental and semi-governmental PHC provision

The governmental system provides the largest network of primary care services in Pakistan, including both curative and preventive care, offered through a network of first-level care facilities and outreach health workers. Since the 1970s there has been a dedicated expansion in the government network of primary care facilities in the rural areas of Pakistan, with one basic health unit per 10 000 population and one rural health centre per 20 000 population. Despite an expansive system in rural areas, the government PHC system has struggled in terms of functionality and utilization. Low population density and the scattered location of villages in the rural areas of at least three of the four provinces – Balochistan, Khyber Pakhtunkhwa and Sindh – have also contributed to low utilization. Paradoxically the urban areas are extremely thin in terms of primary care facilities, with a ratio of one first-level care facility to 82 000 population in Karachi *(14)*. Consequently, the tertiary hospitals deal with the primary care needs of the population, resulting in overcrowding and lengthy waiting periods.

The PHC tier in the government system comprises the following:

- **Preventive and curative services through government first-level health care facilities.** These include civil dispensaries, maternal and child health centres, sub-health centres, basic health units and rural health centres (Table 4). Referral support is provided by secondary care centres such as tehsil headquarters hospitals, civil hospitals, and district headquarters hospitals, and further by teaching hospitals located in major urban centres.
- **Outreach-based Community Health Worker Programme.** This includes services provided by lady health workers and community midwives.

Table 4. Health facilities by type

Province/region	Number of health facilities by type				
	District headquarters hospitals	Tehsil headquarters/ civil hospitals	Rural health centres	Basic health units	Total
Azad Jammu and Kashmir	6	12	34	208	260
Balochistan	27	10	82	549	668
Federally Administered Tribal Areas	4	14	9	174	201
Gilgit-Baltistan	5	27	2	15	49
Khyber Pakhtunkhwa	21	77	90	822	1010
Punjab	34	84	291	2454	2863
Sindh	11	56	130	774	970
Total	108	280	638	4996	6021

Source: Health facility assessment *(15)*.

- **Vertical preventive programmes for specific public health concerns.** These currently comprise the following vertical programmes:
  - Expanded Programme on Immunization
  - Prime Minister's Programme for Prevention and Control of Hepatitis
  - Roll Back Malaria
  - National Programme for Family Planning and Primary Health Care
  - Lady Health Worker Programme
  - Enhanced HIV/AIDS Control Programme
  - National Tuberculosis Control Programme (supported by Strengthening National Tuberculosis Control Programme by Ensuring Uninterrupted Drug Supplies)
  - National Programme for Prevention and Control of Avian and Pandemic Influenza
  - Maternal, Neonatal and Child Health Programme
  - National Programme for Prevention and Control of Blindness
  - Improvement of Nutrition through Primary Health Care.

Parastatal institutions also make an important contribution to service provision. The armed forces of Pakistan have a network of primary and secondary health care services in the remotest parts of Pakistan. These units serve the civilian sections of the population on a fee-for-service basis, while providing free-of-cost services to the armed forces, and are among the most utilized service providers in areas where they are based. There are also semigovernmental and corporate sector health care units provide PHC services to their employees, mostly through services provided at outpatient departments of either self-owned hospitals or the employees' social security network of facilities, or through purchase from the private sector.

7.2 Private sector

The Pakistani private health sector is believed to provide services to almost 71% of the population *(16)*. The private sector dominates provision of primary and secondary care services, while the public sector, despite its large primary care network, is the main source of tertiary care for the poor. The private sector at the PHC level includes general practitioners ranging from doctors, hakeems (3%), homeopathy practitioners (1%) and ayurvedic clinics to maternity homes and traditional birth attendants. The private health sector mainly comprises general practitioners with individual practices, and has largely emerged and grown in capacity during the last three decades. There are also hospitals, private clinics, maternity homes, laboratories, homeopathic clinics and ayurvedic medicine outlets. Many of the private practices are operated by unlicensed providers. Table 5 provides data on sources of care in Pakistan, and Figure 5 compares private health sector utilization in Pakistan with that of other countries in the Eastern Mediterranean Region.

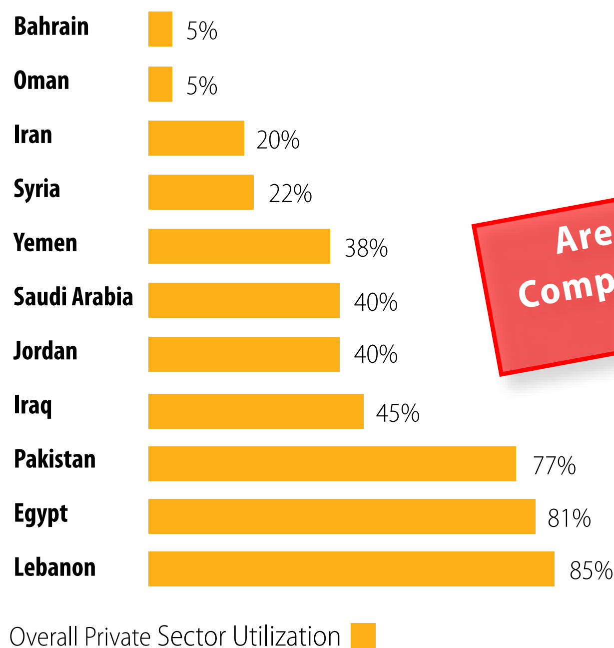
Table 5. Sources of care in Pakistan (%)

Indicator	Source of care	%
Antenatal care	Government hospital/clinic	30
	Private hospital/clinic	51
	Traditional care providers	19
Delivery (birth care)	Government hospital/clinic	12
	Private hospital/clinic	29
	Home	59
	Private doctor	–
	Traditional care provider	–
	No care	–
General health consultation (all age groups)	Public health care providers	22
	Private health care providers	71
	Traditional health care providers	3
	Chemist/pharmacy	4

Source: Pakistan Social and Living Standards Measurement Survey 2010–11 *(16)*.

In addition, Pakistan has a vibrant and rapidly expanding non-profit sector funded primarily through Zakat contributions and philanthropic funds from citizens and corporate organizations. Most of these have traditionally invested in large charity hospitals in urban areas, and are heavily utilized by the poor for PHC provided through hospital-based services. However, there has been a recent expansion in PHC clinics by non-profit organizations mainly through public-private partnerships, whereby non-profit organizations have adopted government clinics for services strengthening in both urban and rural areas. There has been a growth in provision by NGOs of humanitarian assistance in disaster areas, including for those affected by the earthquake of 2005 and the floods of 2010 and 2011. A number of large international NGOs funded by development partners are active in primary care service delivery, and are mainly involved in providing technical support to government or in providing services through the existing government network of health facilities.

Figure 5. Comparison of private health sector utilization in Eastern Mediterranean Region countries



Are these values correct? Compare to chart in Word doc, ie Bahrain is 10%?

Source: Hafeez A *(17)*.

8. Human resources for health

Pakistan has an estimated 0.82 physicians, 0.57 nurses and midwives, and 0.06 community health workers per 1000 population (Figure 6). There are 160 289 registered doctors, 12 544 dentists, 82 119 nurses and around 100 000 community health workers in Pakistan (Table 6). Pakistan is also producing certified family physicians, though these are mostly in private practice in urban areas, as the government as yet has not established a cadre of family physicians absorbed within its primary care systems.

The doctor–nurse ratio continues to be greater than 1, with fewer nurses produced than doctors, and reportedly high outmigration of nurses. There is also a shortage of allied health professionals; for example, there is 0.9 pharmacists per 100 000 population in Pakistan, far below the recommended ratio of 1 pharmacist per 2000 population. However, policy emphasis has largely been on expansion of the number of medical colleges, which has grown exponentially from two in 1947 to 88 in 2012 *(18)*.

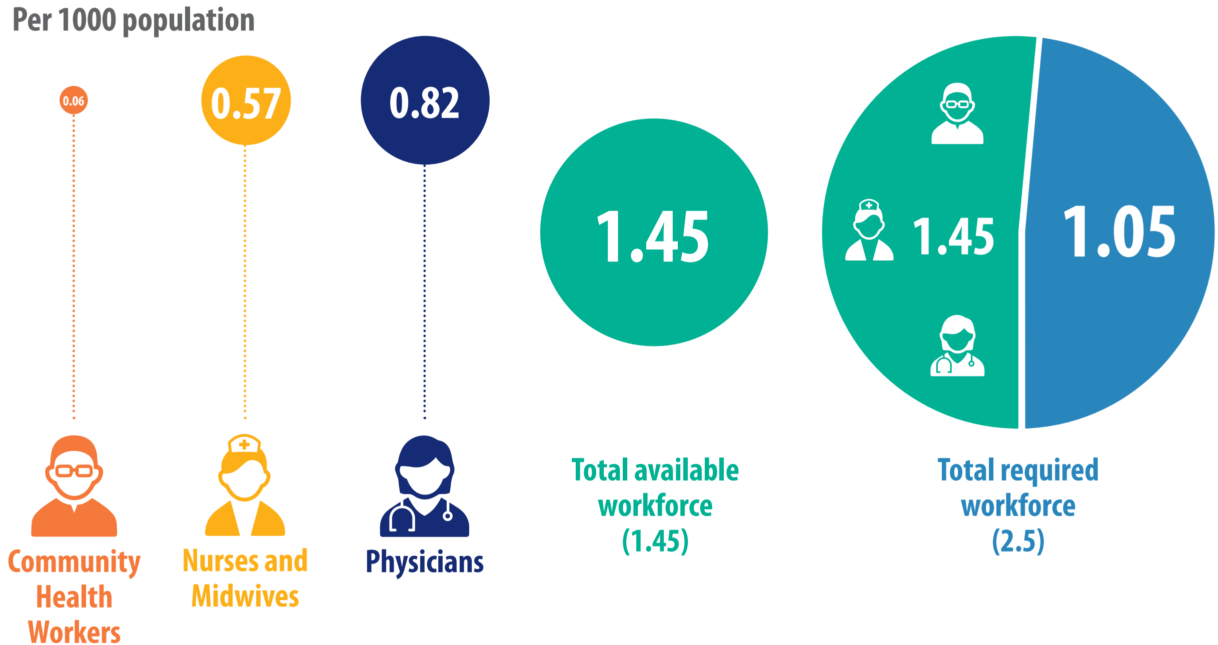
There is skewing of the health workforce, particularly doctors and nurses, towards urban areas, with both the private and government health sector in rural areas facing shortages of licensed practitioners. These urban–rural discrepancies are particularly high for doctors, with 14.5 physicians per 10 000 population in urban areas, compared to 7.6 in rural areas. The open merit policy of medical colleges, introduced during the 2000s, has exacerbated shortages of

Table 6. Human resources for health in Pakistan: numbers in selected cadres

Human resource cadre	Registered
Doctors	160 289
Dentists	12 544
Nurses	82 119
Pharmacists	32 511
Lady health visitors	13 678
Registered midwives	29 000
Community health workers	100 000

Sources: WHO Global Code of Practice implementation strategy report *(19)*; Pakistan Economic Survey 2013–14 *(20)*.

Figure 6. Human resources for health in Pakistan: ratio of workforce to population



doctors in rural areas, as female graduates do not enter service or avoid rural postings. There is less discrepancy in the distribution of midwives, but again there is a higher urban concentration, with 3.6 midwives to 10 000 population in urban areas compared to 2.9 in rural areas (Figure 7).

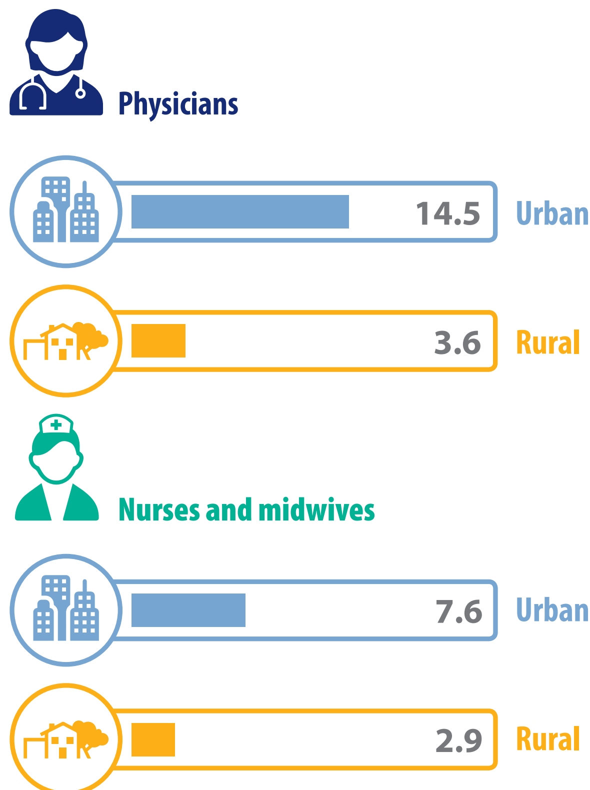
The workforce at government first-level care facilities comprises a male or female medical officer (medical doctor), lady health visitor, dispenser, Expanded Programme on Immunization technician, senior or junior PHC technician, female and male medical technician, and, at some service points, malaria technician in addition to auxiliary staff. Outreach services that are attached to basic health units are provided through the lady health workers, community midwives and vaccinators. Dual practice is allowed by government rules, and most doctors and paramedics maintain private practices in addition to government jobs, which has affected attendance of patients at government primary health centres.

The lady health workers are female outreach workers from within the community who have up to middle school education. They are assigned to cover a population of 1000 to 1500. Total lady health worker coverage is less than 50% of the target population, with the more remote and disadvantaged areas reaming uncovered due to the lack of eligible community-based females. They were initially community representatives paid through a stipend, but they have now been regularized as government health workers by the Supreme Court of Pakistan.

Community-based midwives having 18 months of training have recently been deployed to cover a population of 5000 for skilled birth attendance. They operate on a private practice model with a monthly stipend and birthing stations to support their practice. The community-based midwives are intended as a gradual replacement for traditional birth attendants.

Pakistan has a pluralistic provision of health care. The private sector comprises 35% of all physicians and 17% of hospital beds in the country. General practitioner clinics are the main source of PHC. The private sector workforce in urban areas comprises both purely private practitioners and those having dual employment, including government health staff engaged in dual practice, while in the rural areas the workforce predominantly comprises government health staff. There are reportedly high levels of "quackery" with dispensers, lady health visitors and midwives operating as licensed doctors in both urban low-income areas and rural remote areas.

Figure 7. Urban–rural distribution of human resources for health, Pakistan



Source: World Health Organization

Homeopathy and hikmat are legally allowed to operate as alternative care practices. These mostly take the form of individual practices rather than dedicated hospitals. However, general consultation from traditional care providers is only 3% of total care *(16)*, and most clients utilize these providers in addition to allopathic care. There are as yet no policies or plans to integrate alternative care into mainstream health care provision.

9. Planning and implementation for PHC

9.1 Stewardship

Pakistan, in its 68-year history, has experienced one approved National Health Policy passed through Parliament (1990), two National Health Policies announced and approved by the ministerial Cabinet (1997, 2001) and one draft policy of 2010. None of the policies was translated into operational planning, targets were overambitious and direction tended to be vague. In recent years a National Strategic Framework on Maternal and Neonatal Health has been developed, along with a National Nutrition Strategy and National Action Plan for Noncommunicable Diseases, but these have not been integrated into combined action plans. Parallel to the sporadic health policies has been a parallel process of five-year development plans across all sectors, including health. This has been a more regular process as it is linked to annual development budgets and approval of projects for different sectors.

The PHC sector has lacked a policy strategic direction, and PHC planning has usually followed a project mode, shaped by the project documents of different vertical programmes, government-funded primary care projects, and donor-funded primary care projects. Key government-initiated PHC projects have included the Population Welfare Programme, Rural Health Centre Scheme, School Health Services Programme, Expanded Programme on Immunization and Lady Health Worker Programme, and these have successfully been transitioned from the project mode of development budgets to sustained financing in the recurrent budget. Donors have been important instigators and funders of PHC projects, and key initiatives have included the Social Action Programme (1990s), Family Health Project (1990s), HIV/AIDS project (2003), Pakistan Initiative for Mothers and Newborns (2004), Maternal, Neonatal and Child Health Programme (2008-ongoing), and Nutrition Project (2015-ongoing). However, these have struggled for government ownership and continuity beyond project life.

Following devolution, provinces have been faced with increased responsibilities and the need for a sectorwide strategic direction, and have consequently developed respective provincial health sector strategies. Development partners assisted with linking the strategies to the respective evidence base of each province, and consequently large sections of the strategies are devoted to primary care. All provinces have approved strategies in place and in three provinces have been translated into costed, medium-term operational plans. These have been partially implemented, with varying pace in different provinces.

The provincial ministries have also undergone some level of restructuring to respond to new planning and oversight needs, though institutional capacity is uneven. Health sector reform units are in place for strategy implementation in at least three of the four provinces to assist with sector strategies, plans and reform initiatives. Public-private partnership nodes have also been established in two provinces to undertake contracting-out reforms. Regulatory commissions have been established in at least two provinces and notified in the third to regulate quality of health services across the public and private sectors. A health management cadre has been constituted in one province to fill programmatic and managerial posts at provincial and district levels, while in another province a wide-scale management training initiative has started for those holding posts at middle to senior levels.

Table 7 summarizes key policy and programmatic developments in Pakistan related to PHC.

Table 7. Policy and programmatic initiatives for PHC in Pakistan

Year	Initiative
1961	Rural Health Centres Scheme
1976	School Health Services Programme
1982	Expanded Programme of Immunization
1990	Social Action Programme (primary care targets)
1993	Family Health Project (management and capacity building)
1994	Lady Health Workers Programme
1998	Roll Back Malaria Partnership
2000	Tuberculosis Treatment Programme
2003	Enhanced HIV Programme
2005	Peoples Primary Health Care Initiative (contracting out basic health units)
2008	Community Midwifery Programme
2014	Nutrition Programme

9.2 Challenges

The frequent turnover of leadership staff at provincial and district levels has affected ownership and continuity of PHC initiatives, especially in the post-devolution period. Moreover, with loosening of the tight federal verticality, planning and implementation in the provinces has become vulnerable to political interference in terms of preference for visible infrastructure projects, as well as with regard to staff postings, with greater vulnerability in some provinces than in others. Another ongoing challenge is adjustment of budgets – historically dominated by tertiary schemes – in line with the PHC strategic direction of the sector strategies. Despite a visible growth in provincial spending going to health, provinces are yet to significantly increase recurrent budgets for the PHC network of facilities, such as for medicines, supplies, communication, and field supervision. Similarly, there has not been a move to provide financing for the preventive health programmes, and due to low ownership of these programmes there is dependency on federal government or donor support.

9.3 Recent innovations for PHC

There have been recent planning innovations in the last decade to improve utilization of PHC facilities, staff attendance, and service delivery integration. These are summarized in the following subsections.

9.3.1 Human resources management

While the government has the largest network of PHC facilities, it is constrained by several issues affecting human resources management. There are staff vacancies in rural areas as well as frequent absenteeism, and political patronage over appointments and postings has adversely affected staff attendance. Administrative control over staff appointments, postings and suspension is largely centralized at province level, while district health offices, though responsible for staff monitoring, have less space for disciplinary action. The career pathway is based on seniority rather than performance-oriented structural mechanisms, and promotions are slow moving and centralized. These factors also constrain motivation for sustained good performance.

There have been some recent innovations to improve staff attendance and performance. Outsourcing the management of basic health units in all four provinces as part of the People's Primary Healthcare Initiative (PPHI) has resulted in visible improvement in staff attendance. One province (Khyber Pakhtunkhwa) has recently imitated a system of salary remuneration based on remote postings and performance to support staff availability in remote rural areas. Another province (Punjab) has started real-time monitoring of staff attendance through mobile phones used by third-party monitors and feeding of data into a district balance scorecard. However, these are fragmented initiatives and lack a sustained staff administration strategy.

9.3.2 Public-private partnership

In Pakistan, an extensive contracting-out initiative – the PPHI – was started in the mid-2000s, whereby the management of 2490 basic health units – 569

in Khyber Pakhtunkhwa, 554 in Balochistan, 844 in Punjab, and 553 in Sindh province – have been contracted out to a non-governmental organization *(21)*. This is one of the world's largest contracting-out initiatives. The underlying purpose is to improve health facility utilization and the quality of primary care facilities through stronger management and accountability. A management contract has been in effect transferring the budget and administrative control from the provincial health departments to a government-funded NGO comprising retired civil servants.

The results of this have been mixed, with a significant increase in outpatient volume but little improvement in preventive health care targets. More recently, following devolution, contracting out has been extended to rural health centres and secondary hospitals in remote disadvantaged areas in at least two of the provinces but has followed a competitive bidding process drawing in different NGOs and with introduction of performance targets.

9.3.3 Service integration

Following devolution there have been attempts to decrease the fragmentation of preventive health services. Two the provinces have integrated the vertical programmes to improve financial and programmatic efficiency. However, the other two provinces, while having approved integration in their provincial health sector strategies, are yet to make a move towards integration.

Another planning reform has been the development and approval of essential packages of health services and minimum service delivery standards in all provinces. These provide the set of services and accompanying technologies and medicines to be available at PHC level across the public and private health sectors. However, these are yet to be linked with public sector budgets, contracting-out arrangements and private sector regulatory mechanisms.

10. Health information systems

Government primary and secondary facilities have a well-established District Health Information System (DHIS) designed with multidonor support and reporting every month on a standardized set of indicators. These include 78 indicators inclusive of service utilization targets and statistics, stock-out, capital assets and priority disease cases. It is now established in more than 125 districts out of the 140 districts in the country (Table 8). Monthly reporting is computerized at the district level and transmitted online to performance dashboards set up at the provincial and federal health ministries.

Outreach community-based information is provided through the Lady Health Worker Programme, including reporting for households registered for contraceptive use, antenatal care, growth monitoring, health education and facility referrals. In addition there are the MIS of the main vertical programmes (section 7.1), including HIV/AIDS, tuberculosis, Expanded Programme on Immunization, malaria, dengue, and maternal, newborn and child health. There is also the MIS of a separate verticalized polio eradication programme. Furthermore, there is the MIS of the Department of Population and Welfare reporting on contraceptive use at health facilities controlled by the department and through the separate cadre of workers that it employs. Comprehensive disease surveillance is only limited to polio, while an early warning system for priority communicable diseases, which was earlier put in place with support from the World Health Organization (WHO), has not been taken over with government support.

The presence of a multiple vertical programme MIS, in addition to the DHIS, has resulted in duplicative efforts. This proliferation of multiple MIS systems has reduced the use of the DHIS for decision-making and strategic planning. Another issue is the variable quality and reliability of the data of the main DHIS, further reducing its usefulness for decision-makers.

There have recently been innovations to improve data quality. Independent m-health-based monitoring has been initiated by the government in one province for providing verifiable data on service statistics, medicines and human resources availability. Additionally, a computerized logistics management system has been initiated for vaccines and contraceptives in several districts of Pakistan, though this has not as yet been extended to essential medicines. Performance management dashboards, recently set up in all four provinces and the federal capital, are now providing to decision-makers quick

Table 8. Health information system: national implementation

Provinces	Total districts	DHIS implementation (no.)	Districts with DHIS reporting (Dec. 2015)
Punjab	36	36	36
Sindh	23	23	23
Khyber Pakhtunkhwa	24	24	24
Balochistan	30	27	27
Azad Jammu and Kashmir	10	10	10
Federally Administered Tribal Areas, Gilgit-Baltistan, Islamabad Capital Territory	17	8	8
Total	140	128	128

online feeds of the DHIS, vertical programme MIS, Lady Health Worker Programme MIS, and surveys. While health statistics are being increasingly reviewed by policy-makers, the fragmentation of data remains an issue.

There are also further areas for enhancement and extension of the primary care MIS. The MIS of primary care facilities has yet to integrate some of the public health issues confronting Pakistan, such as undernutrition, NCDs and mental health. There has also been little work to link the MIS of health facilities with Pakistan's computerized vital registration system, and 70% of births and 90% of deaths are not registered in the country. Moving beyond facility-based MIS, there is still no MIS for human resources and for procurement within the government health system to assist in making programming decisions for primary care services. Moreover, there is no reporting system for Pakistan's wide and entrenched private sector. Regulatory commissions have started working in two of the four provinces, but minimal reporting indicators for inputs and services are yet to be worked out for the private sector. There is some reporting by the private sector for a few priority diseases but, due to the absence of a comprehensive disease surveillance system and registries for NCD cases, reporting is sporadic and limited to a few providers.

11. Regulation

11.1 Drugs and essential technologies

Pakistan has a National Essential Medicines List and fairly well developed policy measures and operative guidelines for regulation of essential medicines. However, gaps exist between policies and health system practices. The concept of essential technology, despite its relevance to PHC, is as yet in the initial stages.

There is a federal Drug Regulatory Authority of Pakistan for drug industry licensing, drug registration and pricing, and a comprehensive Drug Act, 1976, regulates the pharmaceutical sector. However, the profusion in the number of licensed drug products raises questions about the tightness of quality controls and very few companies are WHO certified.

Retail stores and pharmacies are the main outlets for medicines in the private sector, and due to frequent stock-out at government facilities they are also a frequent source for public sector patients. Market surveillance is conducted by the provincial departments of health and involves sampling of drugs on the market. There is presently poor capacity in terms of laboratory support and drug inspectors to detect counterfeit drugs and to monitor drug prices and availability. Surveillance is restricted to drug product sampling, and overlooks availability and pricing of essential medicines, drug storage, and drug-dispensing practices. PHC services are affected by frequent shortages of essential low-priced generic drugs on the market due to low profit returns for the industry and weak regulatory control by the government *(22)*.

An Essential Drugs List for primary care facilities governs health service providers in the public sector. The Essential Drugs List is not followed in the private sector or in the recent contracting-out arrangements of the government for its first-level care facilities. Both public and private sectors have weak practices for drug transportation, storage and dispensing, and are inadequately regulated *(17)*.

11.2 Human resources production and training

Human resources production decisions are taken at the national level, with the consensus of the provinces. The professional councils – the Pakistan Medical and Dental Council for doctors and dentists, and the Pakistan Nursing Council for nurses and midwives – are responsible for licensing the health professionals produced. They are also responsible for licensing and regulating the medical and nursing schools and regulating medical education. A council for allied health professionals is yet to be established. There is no council for alternative medicines, for example homeopathy and hikmat. Production continues in the absence of defined human resources targets. Furthermore, existing databases for human resources registration are not frequently updated, and it is not known how many health professionals produced are actually in the country and in active practice.

Across the public and private sectors, human resources capacity is weak for responding to existing and emerging primary care needs. Recent policy initiatives also require strengthening of capacity. For example, the recent provincial health sector strategies specify task shifting to overcome staff shortages in rural areas. These also endorse the concept of essential health service packages to be provided across the public and private sectors. However, the required revisions to medical, nursing and paramedic curricula for building skills for essential health services and additionally for task shifting have not as yet been worked upon by the professional councils. This will also require the promotion of community-based PHC learning in teaching curricula, which is currently weak.

Continuing medical education, including in PHC-relevant areas, is now offered by a growing number of urban-based professional institutes, but is still not a requirement for relicensing. The provincial

governments have provincial health service development centres for ongoing provision of in-service training to primary care staff but lack a pre-service and in-service training plan and provision of necessary resources. Training related to vertical preventive programmes is offered on an ad hoc basis, subject to availability of donor support. Following devolution, only one province has started pre-service and in-service training, but it is confined to the primary doctors and still needs to be extended to nursing and allied health staff. There are no systems in place to provide training and accreditation to the private sector.

11.3 Health services

Health service delivery, including PHC, is unregulated in Pakistan. While this has reportedly given rise to extensive "quackery", the licensed health providers also do not need to register with health ministries for opening up a practice. There has been some piecemeal regulation of the primary care sector through different programmatic initiatives, such as declaring hospitals as "baby friendly" based on breastfeeding promotion, and instigating blood safety initiatives through blood transfusion authorities.

In the post-devolution period, health regulatory commissions have been established in two of the provinces to regulate health services across the public and private sectors, while another province has complete the legislative work to set up a regulatory commission. The work is mainly centred on licensing of government health facilities and is yet to be scaled up to private sector regulation, which is expected to be a more complex task. There is also a need for linkage with the essential health service packages developed by all the provinces and some movement towards minimum standard setting across all the provinces. As yet there is no plan to regulate pricing of health services.

11.4 Other areas

Accreditation for primary services has been practised through voucher schemes in Pakistan. These have involved both public and private sector accreditation for maternal vouchers through various donor-supported projects, including the Norway-Pakistan Partnership Initiative and the Pakistan Initiative for Mothers and Newborns. Both were confined to a few districts and came to an end with project closures. More recently family planning vouchers have been introduced for private providers in all four provinces, but there is no nationally extensive coverage.

There are two recent much larger initiatives also involving the purchases of private sector services – the contracting-out scheme started by different provinces and the Prime Minister's Programme for National Health Insurance. Regulatory mechanisms for insurance and public-private partnerships are yet to be defined and integrated.

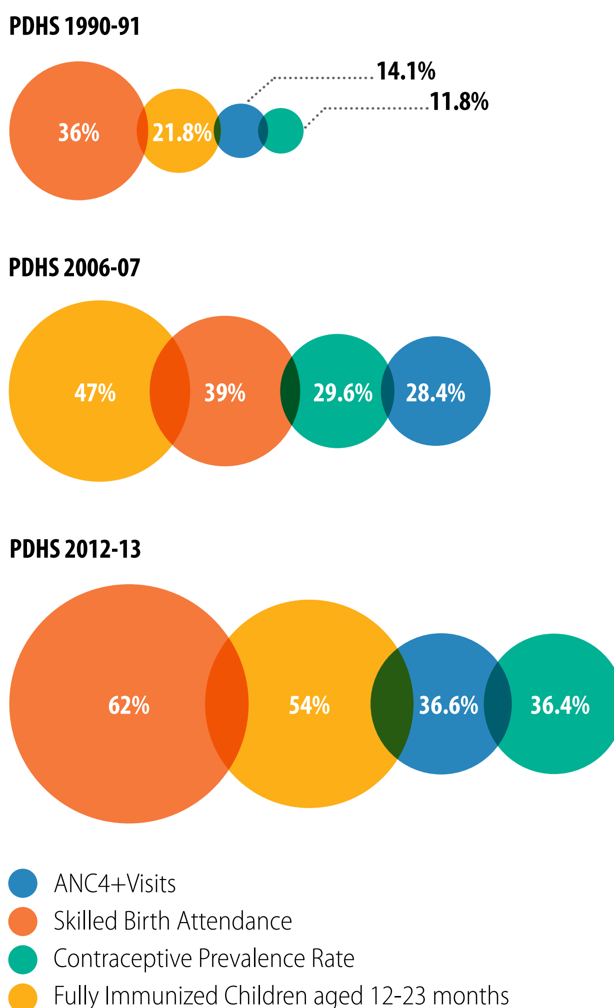
12. Outcomes: coverage of and access to essential services

12.1 Coverage

Pakistan's coverage of primary care services has been suboptimal and has seen slow progress over the years. Only one third of pregnant women make four or more visits for antenatal care, and almost half of births take place without skilled birth attendance (Figure 8). There has been a sluggish increase in the use of contraception over the last two decades with the current contraceptive prevalence rate at only 35%, and use of modern methods is even lower at 26%. Unmet need is high at 20%, signalling lack of access to contraceptive services. Immunization coverage in Pakistan has seen a slow pace of increase and only 54% of children are fully immunized (Figure 8). The deficits in immunization coverage are reflected in the continued incidence of endemic polio transmission and the recent measles and diphtheria outbreaks.

Preventive health interventions for nutrition have included vitamin A supplementation to children, along with polio immunization, iron and folate provision to mothers through the Lady Health Worker Programme, and deworming and routine counselling on infant and young child feeding at health facilities. Other activities, such as community-based management of acute malnutrition, breastfeeding campaigns, and community advocacy, have had patchy coverage confined to specific projects. Vitamin A supplementation has achieved better results across all provinces compared to other health activities (Table 9), due largely to effective horizontal coordination with the federally run polio immunization programme.

Figure 8. Trends in coverage for key health services



Key: PDHS = Pakistan Demographic and Health Survey.

Table 9. Mother and child care: micronutrient supplementation, feeding practices, and undernutrition management

Interventions	Punjab (%)	Sindh (%)	Khyber Pakhtunkhwa (%)	Balochistan (%)	Pakistan (%)
Exclusive breastfeeding up to 6 months	18.0	10.0	47.0	27.0	13.0
Complementary feeding 6–8 months	49.6	63.2	36.1	48.6	51.8
Handwashing with soap	57.8	56.2	62.3	52.3	57.6
Iron supplement intake	26.3	26.1	19.3	11.4	–
Folic acid intake	22.5	31.3	28.0	17.4	–
Vitamin A supplementation	81.3–91.6	83.7	77.8	72.6	79.1
Deworming	78.1	71.6	87.9	56.5	77.1
Reported use of iodized salt	36.1	39.2	49.0	45.4	39.8

Sources: National Nutrition Survey, Pakistan Demographic and Health Survey, Vitamin A Supplementation Survey, Aga Khan University and Micronutrient Initiative.

12.2 Uneven service coverage

Significant inequity exists in health spending and service utilization. There remain wide urban–rural and interprovincial disparities. For example, coverage of four or more antenatal care visits is only by 12.3% in Balochistan, compared to 38.5% in Punjab *(2)*. Similarly, within Punjab there is much lower utilization in the disadvantaged districts of southern Punjab compared to urban centres. Immunization coverage has actually declined over the years in Sindh and Punjab, while there has been a steady increase in Punjab and Khyber Pakhtunkhwa due to better vertical accountability.

12.3 Income differentials in service access

Health and nutrition coverage, when stratified by income quintiles, is clearly lower in the poorest income quintiles compared to the richest quintiles in all four provinces. For example, maternal folate supplementation is only 7.7% in the lowest income group in Khyber Pakhtunkhwa compared to 19.3% in the highest income quintile. Similarly, more resourced provinces have better indicators. Table 10 provides coverage data for all provinces.

12.4 Spending on health by income groups

Although in Pakistan the share of total health expenditure contributed by households is 54% – lower than that of some other low- and middle-income countries – the household spending is regressively distributed. The lowest income quintile spends 6.6% on health, compared to 1.3% by the highest income quintile (Figure 9).

Figure 9. Proportion of health expenditure from total income (%)

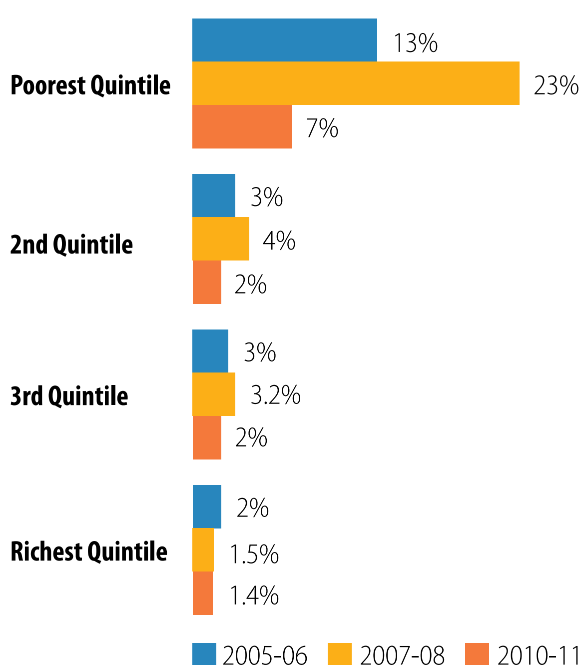


Table 10. Health and nutrition intervention coverage among wealth quintiles in the four provinces of Pakistan

Intervention	Wealth quintile (% population in quintile covered)					Overall
	Poorest	Poor	Middle	Rich	Richest	
Punjab						
Antenatal care by skilled health worker (last delivery)	44.6	54.8	65.8	75.9	88.2	56.9
Maternal iron/folate supplements	16.8	19.3	23.5	30.1	39.1	26.3
Exclusive breastfeeding up to 6 months	2.3	5.2	7.2	10.4	12.2	7.6
BCG (card)	19.4	30.2	41.9	45.8	49.6	38.2
Measles vaccination (card)	12.4	19.8	29.8	33.2	37.1	27.0
Vitamin A supplementation	76.4	80.1	81.8	81.9	80.8	80.4
Khyber Pakhtunkhwa						
Antenatal care by skilled health worker (last delivery)	31.2	41.0	59.6	73.5	87.6	47.7
Maternal iron/folate supplements	7.7	14.9	17.4	26.0	35.8	19.3
Exclusive breastfeeding up to 6 months	40.2	42.3	52.7	47.0	49.6	47.1
BCG vaccination (card)	26.1	29.8	34.4	45.0	50.8	35.4
Measles vaccination (card)	28.8	29.4	28.5	35.7	39.6	31.2
Vitamin A supplementation	55.9	75.0	80.0	81.8	78.0	75.2
Sindh						
Antenatal care by skilled health worker (last delivery)	35.0	53.1	72.1	86.2	96.3	56.6
Maternal iron/folate supplements	11.2	20.4	29.3	39.3	45.5	26.1
Exclusive breastfeeding up to 6 months	12.4	9.0	4.8	6.2	9.6	9.4
BCG vaccination (card)	2.9	8.1	21.7	35.3	51.2	19.0
Measles vaccination (card)	2.1	5.1	15.5	26.7	41.0	14.3
Vitamin A supplementation	62.7	71.6	72.2	68.1	71.7	67.4
Balochistan						
Antenatal care by skilled health worker (last delivery)	30.5	40.4	64.4	79.9	84.0	39.8
Maternal iron/folate supplements	5.6	7.4	17.3	23.2	28.1	11.4
Exclusive breastfeeding up to 6 months	29.7	24.8	23.9	27.8	22.3	26.7
BCG vaccination (card)	12.9	17.4	26.1	38.7	36.0	20.3
Measles vaccination (card)	9.5	13.4	18.2	24.9	27.0	14.5
Vitamin A supplementation	68.1	62.3	63.6	69.3	54.8	65.0

Source: National Nutrition Survey *(6)*.

12.5 Utilization of government PHC facilities by income groups

There have been some attempts to improve access for the poor through recent reforms. Contracting out of basic health units across all four provinces of Pakistan has drawn in a higher percentage of poor consumers to government primary care facilities as compared to those basic health units still managed by the government health departments (Table 11). While in both arrangements free services are provided, it is possible that, with the existence of more functional health services, the poor who were not accessing care are now using government health facilities.

12.6 Barriers to access

Disadvantages areas, particularly remote rural areas in Pakistan, have seen little or slow change in access to key elements of health coverage. Poorly functional health facilities, formidable distances (especially in Balochistan, Khyber Pakhtunkhwa and Sindh), and low awareness of preventive services are the main barriers reported by different studies, while cultural and religious restrictions are less reported *(23, 24)*. Private sector establishments, while reported to be more functional than government health centres, involve expense, hence use is limited mainly to acute conditions in both low-income urban and rural populations. In rural areas the scarcity of health centres involves the additional expense of transport to reach private clinics located in district centres, or transiting to more affluent districts that have private health providers *(25)*.

The transportation barrier has generally been overlooked in health sector planning. Clients in remote districts prefer child birth at home due to high transport costs and the inconvenience of travel. The cost of transportation is highly variable across districts, with a range of 3000–6000 Pakistani rupees for availing obstetric care in Sindh's more disadvantaged districts *(26)*.

Table 11. Basic health unit consumers by income/wealth quintile

Quintile	PPHI: basic health unit, consumers (%)	District department of health: basic health unit, consumers (%)
Lowest	27.6	12.4
2	23.5	18.9
3	20.0	19.9
4	15.9	23.9
Highest	13.1	25.0
Total	100.0	100.0

12.7 Efficiency

There have been recent efforts to improve the efficiency of Pakistan's PHC system. Efforts at vertical programme integration and development of essential health service packages have attempted to improve the technical efficiency of service delivery by putting in place a single administrative, reporting structure and pooling budgetary resources. Similarly, the contracting-out arrangements set up during the last decade are driven by the underlying purpose of increasing health facility utilization, hence improving the cost-efficiency of the government primary care facility network.

Health worker efficiency can be further improved. The provincial health departments and population welfare departments, which are responsible for family planning, continue to operate in isolation, with both maintaining a tier of primary care health facilities, village-based workers and management staff. Most of the budgets of these departments go on salaries of staff. Departmental integration, or at least integration at the level of health workers, can both reduce costs and provide a wider platform for delivery of family planning services. Within the health departments there are also different outreach staff that provide services to villages, including the lady health workers, community midwives and vaccinators, whose work and reporting is often in parallel and does not feed into a single plan for the union councils.

There are larger efficiency issues that need to be targeted through health sector reforms. Overlaps between the public and private sectors exist, particularly for PHC. Contracting of the private sector for management agreements is now an established norm in Pakistan. Purchasing of private sector services to extend and supplement government gaps in service delivery has as yet not been tried out, and is an important channel for reducing unnecessary duplication as well as for harnessing the private sector towards public health goals.

12.8 Quality of private health sector in Pakistan

Pakistan is one of the countries with the highest utilization of the private sector (71%) in the Eastern Mediterranean Region. The private sector is mostly utilized for primary and secondary care services, while government tertiary hospitals still dominate in the provision of affordable and functional hospital care. The high level of primary care utilization is due to a combination of factors, including staff and drug shortages at government health facilities, confinement of government clinics to day hours, and allowance of dual practice to government staff whereby they can divert patients to private clinics. It is difficult to separate licensed from non-licensed practitioners in the private sector due to lack of regulatory systems. Data on the quality of health care services at private sector establishments are patchy. Private practitioners are reported to have good availability of basic equipment, though the drugs dispensed often do not follow those recommended by WHO protocols and the process of care is uneven *(27)*. The average number of medications prescribed in Pakistan is higher than for many other low- and middle-income countries, prescription practices frequently do not follow standard recommended therapies, and there is high use of injectables *(28)*, with these practices more prevalent in the private sector *(22, 29)*. Table 12 shows findings from a four-district WHO cross-sectional survey of quality parameters in outpatient clinics of licensed providers using diabetes mellitus as a tracer lens *(17)*.

Table 12. Quality indicators for diabetes mellitus management in outpatient settings

Indicator	% of facilities
Availability of infrastructure	
Physical examination room	46
Urine dipstick for glucose test	69
Basic equipment availability	
Examination table	77
Functional glucometer	74
Fundoscope	31
Weight machine	93
Availability of essential drugs	
Availability of WHO recommended oral hypoglycaemic drugs	57
Availability of WHO recommended insulin injections	57
Process of care counselling for diabetes patients	
Health education on lifestyle, diet provided to % of patients	100
Percentage of patients received IEC material on diabetes mellitus	96
Patient satisfaction	
Percentage of patients who are satisfied with care they received at facility	99
Percentage of patients who are satisfied with staff attitude	64

Source: Hafeez A *(17)*.

12.9 Continuum of care

Pakistan does not have a health system that binds users to a single point of contact – government facilities are free of cost and can be accessed in any district or city. Furthermore, patients often bypass primary care facilities to access the outpatient departments of large government hospitals for routine primary care services, as there is no gatekeeping for hospital access. Although there is an elaborate network of primary, secondary and tertiary facilities, so far a referral system that filters patients from primary to hospital care and back-referral to primary care for follow-up and rehabilitation does not presently exist. The current organization

of the health MIS in the government sector also limits continuity of care and is organized for health programming decisions. There are no case notes and patient folders, with information recorded in registers for tallying patient numbers, nor is there a system of back-referral information.

In the private sector, health services are largely paid for through out-of-pocket payments rather than through prepaid insurance arrangements tied to certain accredited providers. Hence patients freely hop from one general practitioner to another or directly access specialist services depending on ability to pay. The concept of certified family practitioners providing a single source of care for the needs of different age groups has not taken hold in Pakistan due to competition from general practitioners and specialists, and lack of an established government cadre. Although there is a Family Practice Association of Pakistan, the number of certified family practitioners is few, with high attrition to the Gulf countries.

Lady health workers remain the single point of contact for low-income communities, and offer a platform for continuity of care. The Lady Health Worker Programme package of services has expanded over the years from initially contraceptive provision and maternal and child health awareness to involvement with polio, communicable diseases and undernutrition. However, with an expanding package of services, their ability to provide quality services is becoming questionable. Hence lady health workers tend to provide time to services that are vertically accountable and are incentivized, such as polio, with decreasing attention to their service package. Moreover, more remote and disadvantaged areas do not have Lady Health Worker Programme coverage.

12.10 Health co-production

In Pakistan there have been various attempts to initiate community inclusion in health care production. District health management teams were formed in the 1990s for inclusion of elected representatives in decision-making on health care. These however were not fully operationalized, though they have recently been revived; and there is less representation of civil society. Hospital boards with citizens' representation were set up at secondary care hospitals, but again were not continued beyond the period of the project. Village health committees are in place in several union councils to oversee the work of lady health workers, but many are not functional.

Health service implementation is therefore dominated by choices made by health managers and providers. There is only one consumer protection network, but that mainly targets the safety of products and drugs. There is currently little on the ground in terms of forums for local choices on health care, consumer rights awareness and medical grievance platforms.

13. Pathways of success and failure in primary health care

This section includes two notable pathways of success and two notable pathways that led to barriers to improvement of PHC services. The following elements of inquiry have been presented:

- Decentralization of decisions for health care management and services: success
- Type and extent of purchasing arrangements: success
- Government capacity to manage partnership agreements: barrier
- Integration of vertical programme structures: barrier.

13.1 Decentralization of decisions for health care management and services

13.1.1 Structure

Devolution of health to the provinces in Pakistan resulted in major structural changes in governance, providing increased fiscal, planning and administrative space. The impact is still unfolding and can be measured in the long term, though outcomes in terms of stewardship, financing and monitoring are already visible. Two functions are explored here – stewardship and planning, along with financing to see how these have been affected by devolution.

The 18th Amendment to the Constitution of Pakistan devolved the powers of 21 sectors, including health, from federal to provincial level. Few functions related to health were left with the federal level, and an Interprovincial Concurrent List was formulated with consensus listing of international commitments, drug licensing, registration and pricing functions, export and import of goods and services, and professional councils, such as the Pakistan Medical and Dental Council, Nursing Council and Pharmacy Council as federal functions. Notably, planning, sector stewardship, priority setting, financing, services regulation, and management of health care services, including federal vertical programmes, were delegated to the provinces.

Preceding the devolution was the increase in fiscal space and financial autonomy provided by the National Finance Commission Award, 2011. The National Finance Commission Award is a revenue distribution formula between the federation and the provinces for the revenues collected by the federal government for a period of five years. The seventh National Finance Commission Award was agreed between the federal and provincial governments after a long-awaited period of 14 years, and increased the fiscal space of the provinces by slashing the federal share of tax revenues from the 55–62% given in the previous awards to 44% in the new award, with 56% given to the provinces *(30)*. It also provided an equity-based formula for distribution of resources to the less populated provinces based on development indicators and security challenges.

13.1.2 Stewardship and planning

Following devolution the provincial governments, which had traditionally followed a federally driven and tightly bound planning process, were confronted with a stewardship challenge. Although the devolution was announced in 2010 there was no action by the Federal Ministry of Health for transition until its abolishment in June 2011. During this period no plan was developed for handing over resources, prioritizing key issues and responses, and demarcation of responsibilities within provincial structures. Hence provinces were suddenly confronted with a large increase in responsibilities while lacking the structures and capacity to take this forward.

> "The devolution was thrown to the provinces with a single stroke of pen; the provinces had neither the capacity nor prepared to take this up – this was when a decision was taken that province specific health sector strategies need to be developed." (Key informant)

Following devolution all the provinces, assisted by development partners, immediately started on development of a sectorwide health strategy to span a long-term 8–10-year period. The province-specific health sector strategies were developed through an evidence-based consultative process involving the private sector, NGOs, experts and development partners, and were preceded by provincial health sector situation analysis exercises. All provinces have since developed their health sector strategies outlining the major outcomes, outputs, strategies and reforms, with large emphasis on PHC interventions. Three of the provinces also now have a 3–4-year costed implementation plan with a results framework for implementation of the strategies. The provinces have also introduced a number of policy acts exercising their stewardship role and in support of the health sector strategies, including acts on public-private partnerships, health services regulation, and hospital autonomy. The provincial department in all provinces, except Balochistan, have a policy and reforms unit, or a public-private partnership unit to take forward the stewardship initiatives. Further restructuring and capacity-building is an issue that needs to be addressed. Moreover, the health sector strategies now need to be linked with the medium-term development and budgetary framework of the government system in all provinces.

In two of the provinces – Sindh and Khyber Pakhtunkhwa – the planning process has now moved forward to the district level with development of district health plans. Much will now depend upon whether the district health plans get translated into annual budgets and become the benchmarks for monitoring and accountability of the districts.

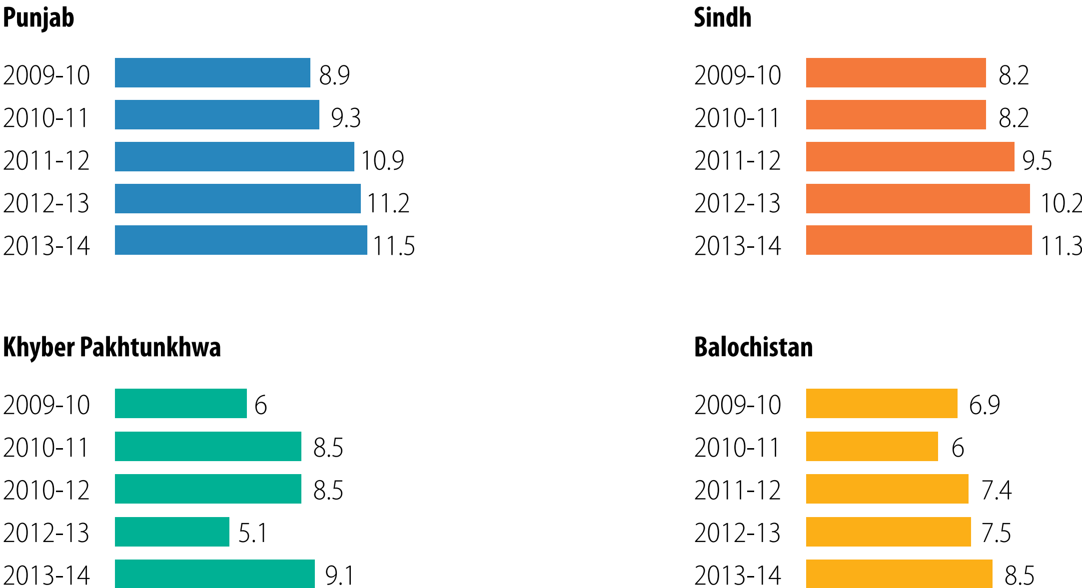
> "The devolution of 2011 brought empowerment to the provinces, for which they had contested for decades, but will it bring a change, is yet to be seen." (Senior bureaucrat)

Hence, while devolution has occurred in a haphazard and unplanned way, it has resulted in provincial and district-level empowerment in planning and administration, and has led to financial allocation in accordance with evidence-based needs.

13.1.3 Health spending

The transfer of fiscal autonomy of social sector spending to provinces has translated into increased spending on health by the provinces. The provincial share of the budget going to health has increased in all four provinces (Figure 10.). At the same time the share of health in the federal budget has declined, and is now mainly given towards partial support of the vertical preventive programmes until 2016.

Figure 10. Provincial share of budget to health



An analysis of government pooled budgetary allocations from all sources also shows significantly higher health budget allocation to the provinces and districts after the 2011 devolution, while the federal share shows a decrease over the same period. Federal allocations have declined from 23% of the total public sector budget in 2008/2009 to 11% in 2012/2013 (Figure 11). The provincial share has shown the largest increase from 41% in 2008/2009 to 59% in 2011/2012. The district share of allocations has declined after the lapse of the local government ordinance from 32% in 2008/2009 to 25% in 2012/2013.

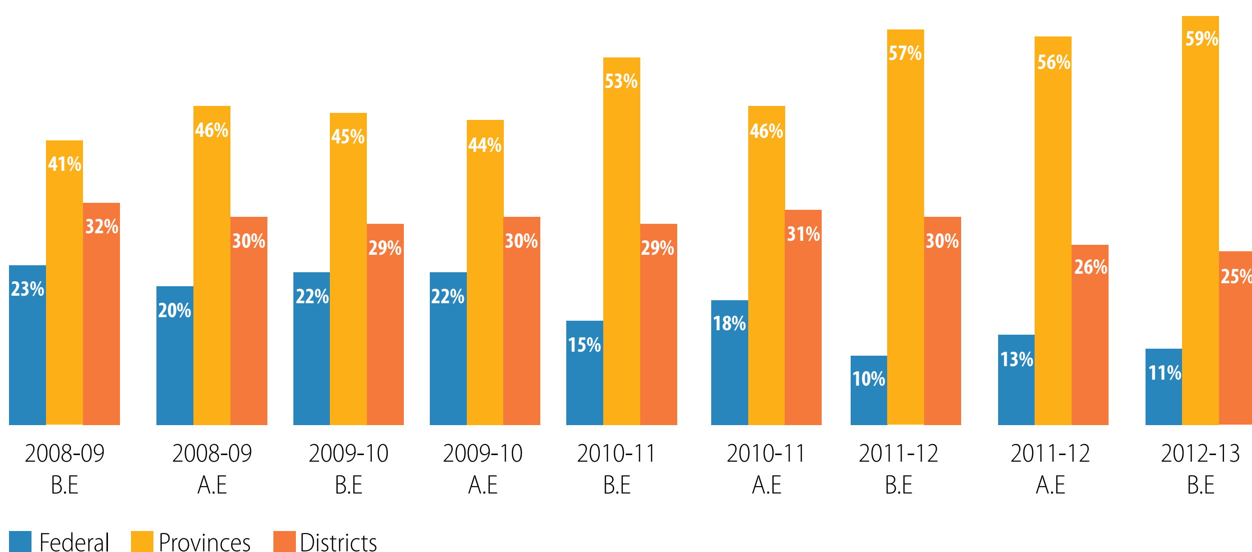
Devolution, by providing the requisite financial and administrative authority, has been successful in equitably increasing spending to health and also in providing a greater share to the provincial health system. Further increase in district allocations can make existing allocations more equitable.

However, despite an equitable increase in funding, there has been less change in spending priorities. Health expenditure of the development budget continues to be dominated by construction work and large tertiary care schemes. While there has been some increase in funding for the Expanded Programme on Immunization and for nutrition due to incentivized matching donor support, the provinces have not moved to take over funding of the vertical programmes, including the large Lady Health Worker Programme, from the federal level. As a result of low ownership for preventive care, there has been preference for continued federal support to preventive health programmes. The operational budget, which was largely consumed by salaries, has shown an increased share of spending on medicines and supplies. However, spending on governance, monitoring and evaluation, training and communication continues to be similarly low as before. Hence devolution, while being successful in more enhanced health spending, has been less successful in effective spending of financing.

13.2 Type and extent of purchasing arrangements

Contracting out has been a popular mechanism in Pakistan for making organizational changes in the way services are delivered. Two major initiatives of contracting out primary health services in Pakistan are presented here, drawing comparisons for

Figure 11. Consolidated health budget 2008–2013: federal, provincial and district shares (%)



Key: B.E = budget estimate, A.E = actual expenditure.

Source: Technical Resource Facility, budget and expenditure analysis *(31)*.

sustainability. Government instigated and designed contracting out of primary care facilities has sustained and expanded, while a smaller-scoped, donor-supported contracting out of maternal, newborn and child health services failed to be sustained. Politics and power have fundamental implications for the intent, design and implementation of contracting-out initiatives in Pakistan *(32)*.

13.2.1 People's Primary Healthcare Initiative (2005–present)

In Pakistan, an extensive contracting-out initiative – the People's Primary Healthcare Initiative (PPHI) – is in place whereby the management of 2490 basic health units have been contracted out to an NGO. The initiative started during the mid-2000s during the period of district devolution in Rahim Yar Khan district of Punjab, when the local district legislature took exception to the poorly run government primary care facilities. The district office and the provincial health department were considered to have poor capacity for managing health services and hence with the help of the provincial Planning and Development Department, which is the overarching department across all government departments, a unique contractual arrangement was set up. The management of all the basic health units of the district was outsourced to a government-funded NGO, the National Rural Support Network, comprising retired civil bureaucrats and a project structure involving civil service officers in active service deputed to manage primary care services. A single-line transfer of the health facilities' budget was given to the contracted set-up, along with full administrative control for programming. Additional funds for administrative costs and monitoring were provided as a special grant from the public sector budget.

With the support of the Chief Minister and the powerful civil administrative bureaucracy, the contracting out of basic health units was extend to 10 districts in Punjab and called the Chief Minister's PHC Initiative. It was then rapidly expanded to all provinces of Pakistan and renamed the People's Primary Healthcare Initiative (PPHI), with strong support from both the elected representatives and the civil bureaucracy as a means to rectify poor governance within the government health system. The initiative met with resistance from the staff of the Department of Health, especially from district health officers, whose budget and administrative domain was reduced to secondary care services and outreach-based preventive health services. Although there were initial delays in the transfer of administrative control in the districts, higher-level support meant that it was rolled out successfully.

With the passage of time, the National Rural Support Network has been transitioned out of the contractual agreement and the PPHI has been registered as a new government-funded company comprising serving civil service officers deputed for its management. Contracts have been extended and management contracts for rural health centres are also being provided to the PPHI in some of the provinces. The PPHI is an example of a home-grown contracting-out arrangement that has expanded and been sustained. Key factors were the legislature's demand for functional primary care facilities and support from Pakistan's elite civil service, which found an opportunity to directly bring health networks under its management.

13.2.2 Donor-funded contracting for maternal, newborn and child health services (2008–2012)

The Norway-Pakistan Partnership Initiative, supported by the Norwegian Government, introduced contracting out in Sindh province of Pakistan specifically for maternal, newborn and child health services. The aim was to improve those services through results-based financing, and contracting out was one of the main initiatives supported through this mechanism. Funding was provided by the Norwegian Government, with the implementing partners being the maternal, newborn and child health vertical programme of Sindh and the United Nations Children's Fund (UNICEF). Funds were channelled to UNICEF for management while the maternal, newborn and child health programme's role was

technical endorsement and oversight coordination with the provincial and district governments.

Contracting out of maternal and child health services at government primary care facilities was implemented in two districts of Sindh – Shaheed Benazirabad and Larkana – over a two-year period. The contracts were confined only to maternal, newborn and child health services, in line with the donor mandate. The bidding drew an ample response from large local NGOs and the contract was competitively awarded to an NGO consortium. A separate third-party monitoring and evaluation contract was set up with another firm to inform on performance deliverables for financial releases.

The initiative ran into problems during implementation. It was difficult to separate the maternal, newborn and child health staff and supplies from the general health facility budget, as the same core team provided all the services at the primary care facilities. Budgetary and administrative control for the contracted-out government health facilities could not be transferred to the NGO due to resistance by the district health officers. The maternal, newborn and child health programme had little administrative control over the districts while the provincial health secretariat having administrative leverage over the districts had little ownership of an initiative perceived to be led by foreign donors and United Nations agencies. Contracting out was hence confined to donor-provided funds, and these were used by the contracted NGOs for hiring separate contractual staff and supplies rather than management of existing staff and services, with funds being allocated to hiring of supplementary staff, training, upgrading facilities, and provision of extra supplies and equipment. Pay-for-performance incentives, built into the contracts, were given to all staff regardless of performance.

Due to the absence of an endline survey, reliable estimates of coverage and equitable use are not available, though third-party monitoring results indicate functioning services, upgraded facilities, staff presence and high levels of client satisfaction among those who utilized services *(33)*. Facility utilization for maternal, newborn and child health services dropped after withdrawal of project staff, cessation of extra supplies, and closure of hands-on monitoring provided by the contracted NGO. These changes could not be sustained after contract termination as reliance was on contractual staff and donor-provided top-up funds.

Confinement of the scope of contracting to maternal, newborn and child health led to a project-based approach rather than institutionalizing organizational and fund flow changes. There was similarly undue reliance on the vertical maternal, newborn and child health programme, which had little power and authority over district budgets and administrative set-up. Reliance on donor funds rather than core government funding also led to predictable fold-up of contracting after project closure.

13.3 Government capacity to manage partnership agreements

PHC services have been contracted out to NGOs in recent years as an approach to widen health service coverage and improve quality, efficiency and transparency of health services. Based on international experience, contracts can and should become useful tools to regulate and incentivize the provider towards intended targets. For this to happen there needs to be adequate capacity to manage contracting from its inception, including contract design and drawing in competitive providers for contract monitoring and payments *(34)*.

In Pakistan the largest model of contracting out of PHC service delivery is the PPHI. Details of this initiative are given in the previous section. The main purpose behind this initiative was to make the basic health units more functional and thereby increase service utilization.

Third-party evaluation of the PPHI shows higher utilization of contracted basic health units in terms of volume of outpatient attendance. There has also been improved cleanliness and maintenance, higher staff presence, and higher patient satisfaction

compared to Department of Health-managed facilities (Table 13) *(21)*. However, there has not been an increase in facility-based preventive and promotive services, such as immunization, family planning, maternity care, and growth monitoring.

The uneven performance of the PPHI can be related to weaknesses in the contract management capacity of the government. According to stakeholders, the contracts were more a formal requirement to divest management authority in the new PPHI structure and were not designed as a management tool. Moreover, there was no practical experience in the government system in how to design and monitor contract arrangements for services *(14)*. Procurement experience is mainly confined to drug and technology tenders, usually fixed at the lowest-priced bid.

The PPHI contracts are input based, and lack detailed specification of a service package and key performance indicators for services *(21)*. There has also been no involvement of the departments of health in designing these contracts, which are handled and developed by the higher levels of bureaucracy and approved through the Chief Minister's secretariats. Hence in the absence of tight targets the emphasis continues to be on curative care rather than preventive care. Another constraint is that the contract does not provide administrative control over preventive care outreach services, and these continue to remain within the district health offices and the vertical programmes. Therefore while previously the primary health facility in each union council was the pivotal point for microplanning and monitoring of field outreach activities, there is now fragmentation between the health facilities and field activities.

The contracts also are not well specified in terms of monitoring and supervision mechanisms and roles, nor do the district heath offices and provincial departments of health have sufficient capacity to monitor contracts. A third-party role has not been built in and was only conducted once through donor support.

Table 13. Reasons for using basic health units given by those who received services (%)

Factor	PPHI basic health unit, consumers (%)	District Department of Health basic health unit, consumers (%)
Easy access	48.2	86.0
Quality service	44.5	7.8
Reasonable price	5.1	5.5
Concerned staff	1.7	0.3
Suitable hours	0.5	0.3
Total	100.0	100.0

Source: Martinez et al. *(21)*.

PPHI activities, due to the extensive decision space given to them with single-line budget transfers, have often tended to divert from the PHC programming followed by the government *(35)*. For example, the initiative has adopted a cluster approach, rotating the medical doctors through a cluster of nearby basic health units as opposed to the rule of one doctor per basic health unit followed in government-managed facilities. It has also introduced other programming changes, such as ultrasound machines at the basic health unit level *(36)* and keeping drugs that do not comply with the government's Essential Drugs List. This has given rise to conflict in the districts, but due to lack of specification of service packages and standard operating guidelines in the contract, and absence of arbitration channels, there has been a lack of resolution of the challenges.

Financial transparency also becomes a concern, given the one-line budgetary transfer and power to freely move funds across spending lines. Staff salaries have been raised above government-provided rates and there are discrepancies from district to district in terms of level of the hard allowances offered. So far there has been no public audit of PPHI accounts.

There is also lack of clarity and understanding of the contractual penalty system, and lack of use of arbitration. Typing in financial payments or bonuses to targets could have been another mechanism

to leverage the PPHI towards less-met targets, but these have also not been employed.

"Turf" issues on control of budgets and authority at lower levels, and lack of understanding and ownership of preventive programmes at the higher provincial levels, have contributed to this fragmentation. District health officers have often complained of lack of financial and administrative decision space to rectify district health service delivery, and demanded similar sets of powers as those given to the PPHI to allow fair comparison.

> "Why are we being compared with the PPHI, give me the same Class I powers, and see what I can do." (district health officer)

In summary, while the PPHI has been an extensive and sustained reform measure, the lack of government capacity to manage the outsourcing arrangements has led it to performing below its potential.

13.4 Integration of vertical programme structures

Pakistan has a long history of implementing vertical programmes and has the following vertical programmes in place:

- Expanded Programme on Immunization
- Prime Minister's Programme for Prevention and Control of Hepatitis
- Roll Back Malaria
- National Programme for Family Planning and Primary Health Care
- Lady Health Worker Programme
- Enhanced HIV/AIDS Control Programme
- National Tuberculosis Control Programme (supported by Strengthening National Tuberculosis Control Programme by Ensuring Uninterrupted Drug Supplies)
- National Programme for Prevention and Control of Avian and Pandemic Influenza
- Maternal, Neonatal and Child Health Programme
- National Programme for Prevention and Control of Blindness
- Improvement of Nutrition through Primary Health Care.

Most of these have been initiated with donor support to focus attention on a priority global area, either through providing the major share of funding (HIV, nutrition, maternal, newborn and child health) or incentivizing government commitment with a smaller matching share of funds (such as the Expanded Programme on Immunization) or provision of technical assistance (malaria, tuberculosis DOTS). In some cases it is the government that has set up vertical programmes in areas of high political priority (Lady Health Worker Programme, Prime Minister's Programme for Prevention and Control of Hepatitis).

Design, management, monitoring and funding had been through the federal government, while provinces provide partial funding and implementation. Many of the vertical programmes that started as vertical projects in the development budget were meant for horizontal integration into the health care delivery system, but none have been transitioned into the operational budgets of provincial governments. Vertical planning exerted by the Federal Ministry of Health, donor accountability, and low ownership of preventive programmes in provincial government have combined to extend the continuity of vertical programmes well beyond 30–40 years.

Following devolution, a desire for integration of vertical programmes originated from declining federal support for these programmes and the need for additional resources for implementation of the projects from the provincial government budget. In those circumstances, the provincial health departments weighed a number of options:

- continuing with the vertical approach;
- partial integration of programmes having the same objectives at the PHC level;
- complete integration of all vertical programmes into the health systems.

However, after much deliberation, it was agreed that the desired results could be achieved using a phased approach for integration, gradually progressing to complete integration over time.

With devolution, all provinces have developed an essential health services package for primary health care that is the basis for integrated provision of services through health facilities or community outreach. Khyber Pakhtunkhwa has moved to structurally combine the vertical programmes into a single essential or minimum service delivery package having a single budget and one administrative and monitoring structure. Development partners were requested to overcome the deficit on provincial financing from supporting the health sector in Khyber Pakhtunkhwa. Punjab province has functionally integrated the vertical programmes into two major programmes – communicable disease control, and maternal and child health and undernutrition – while continuing the Expanded Programme of Immunization as a separate programme. Structural integration is proposed as the next step. Sindh and Balochistan have committed to integration in their sector strategies and have formulated the Health Sector Plan, but integration is yet to move forward.

The integration of vertical programmes, although well articulated at the planning stage, has been delayed in all provinces. This is primarily due to continued dual funding of the vertical programmes by the federal government until 2016, and recent extension beyond 2016. The existence of an open vertical budgetary line has thus hampered the creation of a new budget line for vertical programme staff and supplies. In Sindh and Balochistan, the move towards integration was also resisted by vertical programme managers. Many of the vertical programme managers enjoy political patronage, and there has been insufficient strong and stable leadership in the ministry to overcome this barrier and move towards service integration.

> "Behind every vertical programme director is a politician. How can change be brought in, in such a context?" (deputy director, vertical programme)

In summary, while devolution has provided space for integration of vertical programmes, the issues of continued dual funding and lack of sufficient leadership commitment has constrained implementation.

Annex 1. Key demographic, macroeconomic and health indicators of Pakistan

Indicator	Results	Sources of information	Remarks
Total population of country	184.35 million	National Institute of Population Studies, 2016 *(1)*	
Sex ratio: male/female	102 male/100 female	PDHS 2012–13 *(2)*	
Population growth rate	2%	PDHS 2012–13	
Population density (people/sq. km)	231 per sq. km	PDHS 2012–13	
Distribution of population (rural/urban)	61.4% rural, 38.6% urban	National Institute of Population Studies, 2016	
GDP per capita	US$ 1316.6	World Bank, 2013 *(3)*	
Income or wealth inequality (Gini coefficient)			Not available
Life expectancy at birth	Male = 64.4 years Female = 66.5 years	PDHS 2012–13	
Top 5 main causes of death (ICD-10 classification)	Top five causes of premature mortality in Pakistan (2013) 1. Ischaemic heart disease 2. Lower respiratory infections 3. Cerebrovascular diseases 4. Neonatal encephalopathy 5. Diarrhoeal diseases	http://www.healthdata.org/pakistan	

PDHS = Pakistan Demographic and Health Survey.

Annex 2. Demographic, macroeconomic and health profile of Pakistan

Area	Summary	Source of information
Demographic profile	Population: 184.35 million 61.4% rural, 38.6% urban Growth rate 2% Sixth most populous country Literacy rate: 43.4%	PDHS 2012–13 *(2)*
Macroeconomic profile	GDP/capita: US$ 1316.6 GDP growth: 4.7% GNI/capita: US$ 4920 Ranking: Lower middle income	World Bank, 2013 *(3)*
Health profile	Total fertility rate: 3.2 Maternal mortality ratio: 274/100 000 Under-5 mortality: 89/1000 Neonatal mortality: 55/1000 Infant mortality: 74/1000	PDHS 2012–13 PDHS 2006–07 *(7)*

Annex 3. Basic information on Pakistan health system

Indicator	Results	Sources of information	Remarks
Total health expenditure as proportion of GDP	2.8%	Pakistan National Health Accounts 2011–12 *(9)*; World Bank, 2013 *(3)*	
Government health expenditure as proportion of GDP	1%	World Bank, 2013	
Public expenditure on health as proportion of total expenditure on health	36.8%	World Bank, 2013	
Out-of-pocket payments as proportion of total expenditure on health	54.9%	World Bank, 2013	
Voluntary health insurance as proportion of total expenditure on health	0.2%	Health equity and financial protection report, Pakistan: World Bank, 2012 *(11)*	
Donor contribution as proportion of total expenditure on health	2%	Health equity and financial protection report, Pakistan: World Bank, 2012	
Proportion of households experiencing catastrophic health expenditure	5%	Household Integrated Economic Survey, 2010–11	
Number of physicians per 1000 population	0.8	WHO Eastern Mediterranean Region HRH observatory, 2014	8/10 000
Number of nurses per 1000 population	0.6	WHO Eastern Mediterranean Region HRH observatory, 2014	6/10 000
Proportion of population consulting the following for general health consultation:			
Private sector	71%	Pakistan Social and Living Standards Measurement Survey, 2008–09 *(13)*	The later editions have not reported consultation for general health problems
Public sector	21%	Pakistan Social and Living Standards Measurement Survey 2008–09	
Homeopathy	1%	Pakistan Social and Living Standards Measurement Survey 2008–09	
Hakim	3%	Pakistan Social and Living Standards Measurement Survey 2008–09	

Annex 4. Focus group discussion participants

List 1			
Sr. #	**Designation**	**Organization**	**City**
1.	Director Programmes	MoNHSR&C	Islamabad
2.	R/A PSPU	120-B Muslim Town	Lahore
3.	DG Health	DG Health Office	Hyderabad
4.	National Coordinator	USAID Deliver Project	Islamabad
5.	Provincial Team Leader	TRF+	Peshawar
6.	DG Health	DG Health Office	Peshawar
7.	Director Health	DG Health Office	Muzaffarabad
8.	ADG	MoNHSR&C	Islamabad
9.	Director Health Services	Health Directorate FATA	Peshawar
10.	PA-HOSO (FATA)	UNFPA	Peshawar
11.	Consultant	HSRU, HP	Peshawar
12.	Director	PHSA	Islamabad
13.	DDPH	DG Health Office	Peshawar
14.	Coordinator	HSRU	Peshawar
15.	DD (P&D)	FATA Directorate	Peshawar
16.	Assistant Director EPI	DG Health Office	Peshawar
17.	Manager P&A EVA-BHN H	University Town	Peshawar
18.	Programme Manager	2-G Model Town	Lahore
19.	Project Director	SHPI	Peshawar
20.	H&N Officer	UNICEF	Peshawar
21.	Consultant	TRF+ Office	Peshawar
22.	Chief	HSRU	Peshawar
23.	CPO	Health Department	Peshawar
24.	Additional Secretary Health	Health Department	Peshawar
25.	Coordinator	Health Secretariat	Peshawar
26.	PD-IMU	Defense Officer Colony	Peshawar
27.	HSS	WHO Country Officer	Islamabad
28.	GIZ Deputy Head	F/8–4 Street 50	Islamabad
29.	Health of Officer WHO KP/FATA	University Town	Peshawar
30.	Consultant	MoNHSR&C	Islamabad
31.	Consultant	JSI	Islamabad
32.	Consultant	HAS	Islamabad

List 2			
Sr. #	**Designation**	**Organization**	**City**
1.	Director Programmes	MoNHSR&C	Islamabad
2.	DG Health	DG Health Office	Hyderabad
3.	Director Health	DG Health Office	Hyderabad
4.	DG Health	DG Health Office	Quetta
5.	Deputy Prov. Coordinator, MNCH	Health Directorate	Quetta
6.	DG Health	DG Health Office	Peshawar
7.	Director Health	DG Health Office	Muzaffarabad
8.	DG Health	Directorate of Health	Gilgit-Baltistan
9.	Coordinator HSRU	Department of Health	Peshawar
10.	Director	MCH-PIMS	Islamabad
11.	HO UNICEF	UNICEF Office	Lahore
12.	Member P&D	Department of P&D	Lahore
13.	Director Technical	Healthcare Commission	Lahore
14.	Additional Secretary (Health)	Directorate of Health	Lahore
15.	Director NCD & Mental Health	24 Cooper Road	Lahore
16.	ADGHS, IMRNCH	5 Montgomary Road	Lahore
17.	Provincial PM EPI	Directorate of Health	Lahore
18.	Logistic & Procurement Officer	5 Montgomary Road	Lahore
19.	Programme Director	EVABHN, DFID	Lahore
20.	Humanitarian Analyst	UNFPA	Lahore
21.	Maternal Programme Specialist	UNFPA	Lahore
22.	Training Coordinator, MNCH	Health Department	Karachi
23.	R/A PSPU	120-B Muslim Town	Lahore
24.	PSPU	PSPU	Lahore
25.	Director Health & Nutrition	Save the Children	Islamabad
26.	HO UNICEF	UNICEF	Lahore
27.	CEO	AA Associates	Islamabad
28.	Director	3-A Temple Road	Lahore
29.	PHS	Civilian Housing Society	Lahore
30.	Provincial Team Leader	TRF-Plus	Lahore
31.	RMNCH Focal Person	M/o NHSR&C	Islamabad
32.	Associate Prof.	Children's Hospital	Lahore
33.	Gynecologist	Hameed Latif Hospital	Lahore
34.	PD	QOC Standards Project	Peshawar

Sr. #	Designation	Organization	City
35.	Head office WHO	24 Cooper Road	Lahore
36.	TO-WHO	WHO Country Office	Lahore
37.	NPO-HSS-WHO	24 Cooper Road	Lahore
38.	CPO	UNFPA	Lahore
39.	YPO	UNFPA	Lahore
40.	Hospital Administrator	PSSHMC Hospital	Lahore
41.	Consultant	JSI	Islamabad
42.	Consultant	JSI	Islamabad
43.	Lead Resource Person	AKU	Karachi
44.	Consultant	JSI	Islamabad
45.	Consultant	JSI	Islamabad
46.	Consultant	JSI	Islamabad
47.	RA(HW) PSPU	New Muslim Town	Lahore
48.	Health Specialist	Zaman Park	Lahore
49.	Consultant	–	Lahore

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