CHAPTER 6

Health, Education and Wash
6.1.0 Introduction

Although Punjab’s overall health indicators are comparable to or slightly better than the national average, the province continues to face typical health problems and service challenges of the most densely populated and rural areas of the developing world. Across the globe, the healthcare sector expanding with rising economic prosperity, a changing disease profile, a growing global population and changing demographics that are resulting in a higher demand for healthcare services. A sound public health sector is critical for low-income segments of the population that already face a constrained access to adequate facilities at an affordable cost.

The very same drivers for growth globally are also shaping the development of the healthcare sector in Pakistan. This sector has been expanding and is expected to continue its expansion as changing population ratios, higher incidences of chronic disease and wider health insurance coverage create upsurges in healthcare spending. Comprising more than half of Pakistan's population, Punjab plays a key role in attainment of national health goals1. The province has shown better progress in comparison to other provinces, but lags behind countries like India, Bangladesh, Nepal and Sri Lanka that share similar socio-economic conditions as Punjab.

One of the key reasons slowing down progress is the high rate of population growth. It is adversely impacting service delivery and widening regional inequities. For many in Punjab, cost of healthcare, in addition to cultural and social barriers, is a major obstacle preventing access to effective health services. The province also faces equity concerns in terms of access to health outcomes and services, much worse in the southern districts. Poverty along with illiteracy, low status of women and inadequate water and sanitation facilities, all have a deep impact on over-all health indicators2. Keeping in mind, the critical link between investments in health and economic growth, it is imperative that Punjab aligns its policy-making to achieve targeted health outcomes. This chapter assesses the progress made against the targets set in the Punjab Growth Strategy and subsequent policy frameworks developed to strengthen outcomes. The reforms implemented as a part of the Health Sector Strategy and Roadmap Program brought about a number of significant improvements to Punjab’s healthcare system. With considerable potential for growth, Punjab's healthcare sector now provides a vast number of investment opportunities especially for the private sector. This report will also attempt to identify such engagement opportunities.

6.1.1 Health Wellbeing Index

The health wellbeing index uses data from three rounds of MICS to provide a snapshot of the progress in Punjab’s health sector. The health index uses multiple indicators for reproductive and child health at the district level. For reproductive health it includes contraceptive prevalence rate, antenatal coverage and skilled attendant at birth. To measure child health, it includes use of oral rehydration solutions and solid fuels for cooking. It converts each of these values into a score and then combines them together to rank the districts.

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1Punjab’s population stands at 110 million out of 207.7 million for all of Pakistan
The progress across districts is mixed. The gap between the best and least performing districts has reduced. However, those that are performing the worst (Rajanpur and RY Khan) remain at the bottom. There are some districts whose performance has worsened with time. Nonetheless the north south division is apparent and this trend will be observed throughout this report.

Table 1: Health Indicators of The Well Being Indicator

<table>
<thead>
<tr>
<th>Health Indicators</th>
<th>Indicator</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHILD HEALTH</td>
<td>Use of solid fuels for cooking</td>
<td>Number of household members in households that use solid fuels as the primary source of domestic energy to cook</td>
</tr>
<tr>
<td></td>
<td>Oral rehydration solutions, recommended homemade fluids, and zinc</td>
<td>Percentage of children age 0-59 months with diarrhoea in the last two weeks, and treatment with oral rehydration salts (ORS), recommended homemade fluids, and zinc,</td>
</tr>
<tr>
<td>REPRODUCTIVE HEALTH</td>
<td>Contraceptive prevalence rate</td>
<td>Number of women age 15-49 years currently married who are using (or whose husband is using) a (modern or traditional) contraceptive method</td>
</tr>
<tr>
<td>REPRODUCTIVE HEALTH</td>
<td>Antenatal care coverage</td>
<td>Number of women age 15-49 years with a live birth in the last 2 years who were attended during their last pregnancy that led to a live birth (a) at least once by skilled health personnel (b) at least four times by any provider</td>
</tr>
<tr>
<td>REPRODUCTIVE HEALTH</td>
<td>Skilled attendant at delivery</td>
<td>Number of women age 15-49 years with a live birth in the last 2 years who were attended by skilled health personnel during their most recent live birth</td>
</tr>
</tbody>
</table>

The progress across districts is mixed. The gap between the best and least performing districts has reduced. However, those that are performing the worst (Rajanpur and RY Khan) remain at the bottom. There are some districts whose performance has worsened with time. Nonetheless the north south division is apparent and this trend will be observed throughout this report.

Figure 1: Health Wellbeing Index (2007-08)
6.1.2 Policy Framework

Punjab Growth Strategy

The Punjab Growth Strategy (PGS) 2018 places an equal emphasis on accelerating economic growth and social outcomes which includes health. It recognizes the close link between health and economic growth and health as a policy objective in itself, independent of growth implications and encourages private sector engagement to help achieve health targets. The provincial government is currently involved in streamlining the planning process to effectively operationalize PGS. Budgetary allocations in the Annual Development Plan are being aligned to meet its health objectives with clear targets to improve public health outcomes particularly focused on women and children. It identifies the following as priority areas for reform and investment in health:

a. Shifting focus to Primary and Secondary Health Care
b. Shifting focus from Curative to Preventive Healthcare
c. Creating linkages between the Growth Strategy, Health Sector Strategy 2020, Health Roadmap and Health Sector Plan 2018
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a. Shifting focus to Primary and Secondary Health Care
b. Shifting focus from Curative to Preventive Healthcare
c. Creating linkages between the Growth Strategy, Health Sector Strategy 2020, Health Roadmap and Health Sector Plan 2018

d. Improving management of the health system
e. Linking health provision with social protection programs
f. Health information systems
g. Uninterrupted supply of essential medicines at all public health facilities
h. Addressing Infant and Maternal Mortality
i. Improving water, sanitation and hygiene (WASH) services
j. Making adequate and skilled workforce available
k. Ensure efficient, effective, equitable and prioritized healthcare spending.

Health Sector Plan 2018
While the strategy itself does not set a clear-cut target for Punjab’s health sector, the ensuing health sector plan developed for the first time provides clear direction and broad parameters for health sector planning. The plan sets out targets for the sector, which consists of multiple departments that includes Health, Population Welfare (PWD), Local Government & Community Development (LGCC), Housing Urban Development & Public Housing Engineering (HUD&PHE) departments. It focuses on four outcomes:

1. Reduced Child Mortality
2. Improved Maternal Health
3. Reduced incidence of HIV/AIDS, Malaria and other diseases
4. Access to improved water sources and basic sanitation.

Punjab Health Sector Strategy 2012-2020
The strategy entails a series of goals to essentially reconstruct the health system in Punjab. It became affective in 2014 and especially focuses on low performing districts of Punjab. It has been designed to take the following strategic directions:

• Achieve universal coverage of health services
• Focus on primary healthcare
• Improve quality of care
• Mainstreaming private sector health facilities
• Redefining the government’s role to one of facilitator
• Strengthening of institutional collaborations.

Punjab Health Reforms Road Map
The Health road map focuses primarily on women and children’s health issues in Punjab. It focuses on four areas:

• Vaccination coverage: Children die of vaccine-preventable diseases because they are not fully immunised
• Safe deliveries: Women and infants die during birth because they do not have access to medical care
• Primary healthcare: People do not get essential care because many BHUs do not have doctors or medicines
• District effectiveness: District Management is weak and does not address these and other problems.
• Strengthening of institutional collaborations.

Sustainable Development Goals
Punjab is still struggling to achieve the targets set under the MDGs.

However, the post MDG agenda now includes commitment to a new set of targets under the banner of SDGs. Government must align its health sector planning with SDG’s that pertains to health, nutrition and population (box below).

### Table 2: Progress Against Health MDGs in Punjab

<table>
<thead>
<tr>
<th>MDGS INDICATORS</th>
<th>TARGET</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOAL 4: REDUCE CHILD MORTALITY</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 5 mortality rate (deaths per 1000 live births)</td>
<td>52</td>
<td>93</td>
</tr>
<tr>
<td>Infant mortality rate (deaths per 1000 live births)</td>
<td>40</td>
<td>75</td>
</tr>
<tr>
<td>Proportion of fully immunized children 12-23 months</td>
<td>&gt;90</td>
<td>62.3</td>
</tr>
<tr>
<td>Proportion of under 1 year children immunized against measles</td>
<td>&gt;90</td>
<td>71.6</td>
</tr>
<tr>
<td>Lady health worker’s coverage (percent of target population)</td>
<td>100</td>
<td>78.8</td>
</tr>
<tr>
<td><strong>GOAL 5: IMPROVE MATERNAL HEALTH</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of births attended by skilled birth attendants</td>
<td>&gt;90</td>
<td>64.7</td>
</tr>
<tr>
<td>Contraceptive prevalence rate</td>
<td>55</td>
<td>38.7</td>
</tr>
<tr>
<td>Total fertility rate</td>
<td>2.1</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Replacement level fertility” is the total fertility rate—the average number of children born per woman—at which a population exactly replaces itself from one generation to the next, without migration. This rate is roughly 2.1 children per woman for most countries, although it may modestly vary with mortality rates.
As a positive move, Punjab in collaboration with WHO and UNICEF Pakistan, has officially launched SDG 3 to help achieve targets for health via alignment of provincial priorities. Goal 3 calls for an integrated approach to achieve progress on multiple goals that include alleviating poverty and hunger, commitment to end the epidemics of AIDS, tuberculosis, malaria and other communicable diseases by 2030, achieve universal health coverage, and provide access to safe and effective medicines and vaccines for all.

Based on the desk review exercised commissioned by the UNDP as part of launching the SDGs in Punjab, a mapping of available data against each target of the SDGs has been done.

The SDG roll out has just begun and progress will become visible in the coming months but it is the right time for provinces to gear up for it. However, many policymakers also feel that Punjab should move beyond MDGs only once its targets are achieved.

**Punjab Population Policy 2017**

The recently announced Punjab Population Policy calls for achieving replacement level fertility by 2030. In accordance with the SDGs and Family Planning 2020 goals, the Punjab Population Policy 2017 is also focused on increasing outreach and coverage of family planning services.

**6.1.3 Structure and Regulation**

**6.1.3.1 Bifurcation of Punjab’s Health Department**

The objective of this move is to provide due attention to primary and secondary healthcare and decrease load at tertiary level for provision of quality services. The single Health Department has been overstretched with the responsibility to manage service delivery from primary to tertiary in all 36 districts as well as to directly supervise execution of health programs. In addition, the Health Department was also responsible for policymaking, oversight and implementation of new programs, all through limited quality human resource while the addition of vertical programs, following devolution, to the portfolio of provincial health managers overburdens the already slim resources. This bifurcation is an acknowledgment of the fact that the sector’s management and infrastructure is so widespread, it is unmanageable by a single health secretary or set of administrative officials.

Thus, in 2015 the Punjab’s Health Department was divided into two separate departments: The Primary & Secondary healthcare (P&SH) and Specialized Healthcare Medical Education (SH&ME) departments.

**The Primary and Secondary Health Care Department:** This department is responsible for primary and secondary level health facilities including preventive health services and vertical programs and maintains functional responsibility for 27 DHQs, 119 THQs, 315 RHCs and 2,520 BHUs. Specialised programs like the Expanded Program for Immunization (EPI), TB Control (DOTS), Hepatitis Control Programs as well as special campaigns such as Dengue Campaign, Polio Eradication Campaigns also fall under the purview of the department. Establishments like Director General Health Services (DGHS), Drug Testing Labs (DTLs) and Bio-medical Engineering Workshops also assist the department in discharging its functions efficiently.

**Specialized Healthcare and Medical Education department:** Includes all specialized hospitals, Medical Universities, Autonomous Medical Institutes (AMIs), Nursing Schools & Nursing Examination Board, Punjab Pharmacy Council and Blood Transfusion Authority. DHQs, which have been scaled up to teaching hospitals also come under SH&ME Department.

**6.1.3.2 Management after the 18th Amendment**

The administration of the health system is divided between the province, divisions, districts, and tehsils. Following the 18th Amendment, health became a devolved subject. In Punjab the system is further devolved to districts, giving the provincial government a minimal administrative role. The Directorate General of Health Services looks after the day-to-day workings of the healthcare system. The unit is headed by a director general. The directorate receives administrative support from the divisional and district health offices.

Punjab is currently undergoing transition from the existing governance system to the system of local governance envisaged in the Punjab Local Government Act (PLGA), 2013. Under the new LG act, Punjab has taken control of 11 departments out of the 13 devolved to district level under the previous LG law 2001. Education and health will indirectly be
run by the provincial government through its proxies via district education and health authorities.

The Punjab government has established District Health Authorities (DHAs)\(^4\) all over the province under direct administrative control of newly appointed deputy commissioners (DCs) and former district coordination officer (DCOs). In the proposed health bodies, technocrats are being given a major role to run the administrative system of primary health care facilities, including DHQs, THQs and BHUs.

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**Box: Organization of Service Delivery**

In Punjab, health services are provided through a tiered referral system of health care facilities, with increasing level of coverage from primary to secondary to tertiary.

Basic Health Units: These are supposed to provide the vast majority of public health services and are the first stop for rural households seeking medical attention. In most cases, they serve the population of roughly one union council each, but in some cases there are two facilities per union council. The BHUs are staffed by a small number of personnel that provide preventive and primary healthcare services. Each unit has a doctor or medical officer (MO) who also serves as the BHU’s administrative head. The doctor is supported by a lady health visitor, a dispenser, and occasionally a health technician. Every BHU also serves as a center for five to six roving lady health workers, a vaccinator, and a school health and nutrition supervisor. These roving workers provide door-to-door preventive healthcare services and run awareness campaigns.

Rural Health Centers: While BHUs are almost ubiquitous in rural areas, they have limited usefulness for patients seeking slightly advanced but not specialized care. To serve such patients, the health system has established a tier of facilities known as RHCs. RHCs are better equipped than BHUs to manage minor emergencies and surgeries. They also have better diagnostic facilities, since most are equipped with basic laboratories and limited number of beds. Each unit is staffed by two to three doctors, who are supported by dispensers, female health visitors, and nurses. Unlike BHUs, these centers operate for longer hours to deal with emergencies, so their staff works in shifts. In some cases, the government has appointed specialists apart from general physicians to these facilities.

THQ and DHQ Hospitals: All tehsils and districts in the province are provided with large hospitals that are usually the most advanced healthcare facilities available in regions far from large cities. Administratively, these hospitals are run by senior doctors or medical superintendents who oversee medical staff that comprises doctors, nurses, and other technicians. These facilities are almost exclusively located in urban centers and towns. These hospitals are providing specialist services for major surgical allied and medical allied specialties including subspecialties and dental services.

Teaching Hospitals: These hospitals (mostly located in Lahore) deal with most advanced healthcare requirements and prepare doctors and paramedical staff for future needs. The hospitals are located in urban centers, almost exclusively in divisional headquarters. two divisions—Dera Ghazi Khan and Sargodha—do not have any teaching hospitals.

Source: Primary and Secondary Healthcare Department

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\(^4\)Under the Punjab District Authorities (Composition) Rules 2016.
According to the LG law, the DHAs would be responsible for monitoring all health facilities in Punjab as well as other health-related issues, including construction of new hospitals, dispensaries, basic health centres, new blocks at hospitals, construction of new departments, promotions of doctors and nurses, suspensions, budget approval, enrolment of new staff and monitoring of health centres in districts.

While DHAs will be the executing agencies of local councils, these authorities may undercut the powers of the elected LGs in the health service delivery, which can lead to discontent and even litigation. It would be a better idea for the provincial government to give a bigger role and greater authority to the elected heads of the LGs in the working of DHAs instead of controlling them from the provincial capital.

### 6.1.3.3 Regulation of the Health Care Delivery

Private health care lacks regulation and oversight by health authorities. This sector usually does not provide preventive services while the standard and quality of care it provides is also questionable. To rectify this the Punjab Healthcare Commission, an autonomous health regulatory body was established under the PHC Act 2010 and is now fully operational and mandated with licensing and regulation of private and public-sector facilities as well as defining standards of service for them. All Healthcare Establishments are required to implement Minimum Service Delivery Standards (MSDS) to acquire a license to deliver healthcare services (including labs and diagnostic centers) in Punjab. The model developed by the PHC has been immensely helpful in regulating the public and private healthcare establishments by promoting a culture of clinical governance.

The commission has already registered over 33,000 healthcare establishments including small and big hospitals, BHUs, clinics, homeopaths and diagnostic centres and issued around 18,000 licenses to facilitate people with quality healthcare services. It has produced charters for patients and healthcare establishment and a set of minimum service delivery standards for all healthcare service providers and establishments. These documents lie at the heart of the PHC’s mission. It has also issued guidelines on dengue. The PHC has also closed down businesses of over 3,000 quacks and imposed a fine of over Rs 27 million between late 2015 and 2017.

The PHC has made a good start but can do better. Over the years it has begun to assume the status government accords it – i.e. a first-resort investigative body in medical calamities and can considerably add to the weight of the body as an effective regulatory body. The Punjab Government notified its new regulations in August 2014, under which a Complaint Management System was also constituted. This system was mandated to investigate all kinds of complaints, from a minor mistake to criminal negligence during the treatment process. Critics of the PHC’s current operations believe, however, that PHC has yet to establish its complete independence as its focus has largely been the small-scale health facilities, rather than investigating high-profile cases surfacing in renowned hospitals, in Punjab.

Registration of all healthcare establishments remains a tall order given fast proliferation of such establishments. This leads to the next big question of how effectively PHC is going to enforce minimum standards given the large number of healthcare centres and presumably limited PHC staff.

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5 A complete list of these facilities is available at the PHC website, www.phc.org.pk
6 Section 6 of the PHC Regulations-2014 clearly defines the scope of the complaints: “The Commission may accept for the purpose of hearing and passing appropriate orders etc. and for taking such remedial steps etc. as per law, a complaint, regarding medical negligence, maladministration, malpractice, or failure in the provision of healthcare services.”
6.1.4 Access to and Coverage of Healthcare

6.1.4.1 Health Facilities in numbers

Table 3: Key Indicators of Health Inputs

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER OF HEALTH INSTITUTIONS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOSPITALS</td>
<td>328</td>
<td>340</td>
<td>357</td>
<td>363</td>
</tr>
<tr>
<td>DISPENSARIES</td>
<td>1323</td>
<td>1201</td>
<td>1304</td>
<td>1325</td>
</tr>
<tr>
<td>RURAL HEALTH CENTRES</td>
<td>336</td>
<td>337</td>
<td>348</td>
<td>341</td>
</tr>
<tr>
<td>BASIC HEALTH UNITS</td>
<td>2535</td>
<td>2606</td>
<td>2535</td>
<td>2547</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NUMBER OF BEDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOSPITALS</td>
<td>38715</td>
<td>39185</td>
<td>45319</td>
<td>45590</td>
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<tr>
<td>DISPENSARIES</td>
<td>387</td>
<td>438</td>
<td>480</td>
<td>452</td>
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<tr>
<td>RURAL HEALTH CENTRES</td>
<td>6060</td>
<td>6026</td>
<td>6212</td>
<td>6120</td>
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<tr>
<td>T.B CLINICS</td>
<td>381</td>
<td>82</td>
<td>86</td>
<td>86</td>
</tr>
<tr>
<td>BASIC HEALTH UNITS</td>
<td>4938</td>
<td>4936</td>
<td>4940</td>
<td>4666</td>
</tr>
<tr>
<td>HEALTH FACILITIES PER MILLION POPULATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOCTORS</td>
<td>509</td>
<td>543</td>
<td>567</td>
<td>593</td>
</tr>
<tr>
<td>NURSES</td>
<td>529</td>
<td>558</td>
<td>571</td>
<td>584</td>
</tr>
<tr>
<td>BEDS IN HOSPITALS</td>
<td>417</td>
<td>410</td>
<td>466</td>
<td>461</td>
</tr>
<tr>
<td>NUMBER OF HOSPITALS</td>
<td>18</td>
<td>16</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>PATIENTS TREATED BY HOSPITALS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDOOR</td>
<td>2568</td>
<td>2826</td>
<td>3073</td>
<td>2351</td>
</tr>
<tr>
<td>OUTDOOR</td>
<td>68219</td>
<td>69135</td>
<td>74521</td>
<td>35005</td>
</tr>
</tbody>
</table>


Between 2015 to 2016 the number of male patients increased from 41 million to 43 million while the female patients increased from 33 million to 34 million. And there are close to 3,500 health facilities across Punjab to cater the health needs of the population.

More than half (55 percent) of all health facilities are BHUs providing a range of preventive, curative and referral services. In Punjab, DHQ hospitals are the fewest in number (27), constituting less than 1 percent of facilities. Low numbers of DHQ hospitals mean that the population has limited access to specialized secondary healthcare. Punjab Rural Support Program is managing affairs of 1,149 BHUs and RHCs in 14 districts of the province.

Districts like Faisalabad and Lahore have the highest number of facilities with 291 and 215 facilities respectively. On the other hand, Chiniot and Rajanpur have only 57 facilities each. When gauging access to health facilities, the number of facilities should be compared to district populations to assess whether the number of facilities corresponds with high or less populated districts. Relatively less populated districts tend to have fewer tertiary level facilities, for example, Haifizabad has only 1 THQ whereas Lahore has 3. Higher number of facilities in Faisalabad corresponds to its large population (second largest population in Punjab).

\[A\] complete list of these facilities is available at the PHC website, www.phc.org.pk

\[B\] Section 6 of the PHC Regulations-2014 clearly defines the scope of the complaints: “The Commission may accept for the purpose of hearing and passing appropriate orders etc. and for taking such remedial steps etc. as per law, a complaint, regarding medical negligence, maladministration, malpractice, or failure in the provision of healthcare services.”
6.1.4.2 Outpatient Attendance

One of the key indicators to assess performance of the provision of health services in Punjab is to measure the extent of health facility utilization by the population—a good indicator for which is outpatient attendance per capita. Out Patient Department (OPD) attendance per capita is a proxy indicator for accessibility and utilization of health services that may reflect the quality of services. It does not measure the coverage of this service, but the average number of visits in a defined population.

Even if a district has a high number of facilities (like Faisalabad), access might still be compromised because of its relatively high population. Faisalabad has the fourth highest burden on facilities in terms of average female as well as male population per facility (12,301 females per facility). Similarly, Lahore with 215 facilities has 21,398 females per facility. This may indicate that facilities are overburdened throughout the province. Average population per health facility is as low as 6000 for Khushab and Chakwal and as high as 15,000 for Vehari and Rajanpur.

### Figure 4: District Wise Health Facilities in Punjab, 2016

Source: Punjab Gender Report 2017 (Health Department)

### Figure 5: Average Primary and Secondary Health Facility per capita, 2016

Source: Authors calculations using Punjab Gender Report 2017 (Health Department)

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*Health Department (reported in Punjab’s gender report 2017).*
Increase in the number of new patients includes an increase in OPD patients. OPD patients receive consultation and allied services and do not require to be admitted to a facility. Per capita OPD attendance in Punjab during 2015 was 1.2 up from 1.0 in 2013. Khanewal had the lowest Per Capita OPD attendance (0.7) while Bahawalpur had the highest (1.7). On average, daily OPD patient coverage increased across BHUs, RHCs, THQs and DHQs, rising from 244,000 to 294,000 between 2015 and 2016\(^1\).

### 6.1.4.3 Bed Strength

To analyse the degree of actual coverage and capacity of health facilities, number of beds, across facility types, is a useful indicator. According to data available with PERI, the bed strength at both the public and private hospitals falls short of the criteria established by PMDC.

The graph below shows that across both public and private hospitals there is a shortfall in the bed strength, with private hospitals facing a larger deficit.

#### Figure 6: Bed Strength in Public and Private Hospitals, Punjab

Source for Public Hospitals’ Information: Health Department

Source for Bed Strength Information: PERI Research titled ‘Review of Medical Teaching Facilities: Medical Colleges & Affiliated Hospitals in Punjab’& Contech

### 6.1.4.4 Outreach primary health care services

Outreach health services are being extended to the rural populations and urban slum communities through deployment of over 46,000 Lady Health Workers (LHWs) and 1,850 Lady Health Supervisors (LHSs) in all over Punjab are working with 70 percent coverage (37 percent in urban and 85 percent in rural areas) and contributed to bridge the gap between health facilities and communities.

The catchment area population of LHWs in Punjab has been increased from 1,000 to 1,500. Around 1,200 Community Workers are being recruited in Punjab to increase the coverage\(^1\). Moreover, the Community Midwives (CMW) and LHWs programmes have been deployed in the province.

Despite these efforts, the staff of the Integrated Reproductive Maternal Newborn Child Health & Nutrition Programme

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\(^1\)Punjab Gender Parity report 2017

\(^2\)https://pwd.punjab.gov.pk/system/files/Initiatives_0.pdf
Despite these efforts, the staff of the Integrated Reproductive Maternal Newborn Child Health & Nutrition Programme (IRMNCH) has decreased from 50,265 to 49,826 from 2015 to 2016. Considering the high Maternal Mortality Rates (MMR) especially in the Southern Districts, the Department will have to increase their efforts to rectify this issue or else these women will become increasingly vulnerable to the care of unqualified practitioners.

CMWs provide new born care and are also an important pillar of the IRMNCH Program. However, the overall share of CMWs in the IRMNCH workforce is just 5 percent. However, the demand remains much more. Estimates from 2014 show that at least 30 times more community midwives are needed in all rural areas of Pakistan.12

### 6.1.4.5 Availability of Staff

The problem of access to public health facilities is compounded by the non-availability of doctors and medical staff and is driven by two factors, lack of supply and rampant absenteeism. Efforts have been made to attract capable human resource in far flung health facilities by offering attractive salary packages which take into account the distance of the health facility from the District / Divisional Headquarters as well as the backwardness of the area.

**Shortage:** The current ‘Doctor-Population Ratio’ in Punjab stands at 1:2187 as compared to WHO’s recommended 1:100013. Figure 8 below shows district wise numbers of senior medical staff available per a million people. Lahore and Faisalabad have the highest number of facilities but lowest number of senior medical staff per million population - Lahore has 1.81 and Faisalabad has 3.8 senior medical staff per every 100,000 people. On the other hand, Attock has 17.62 senior medical staff per 100,000 of its population.

**Figure 7: Senior Medical Staff per 100,000 Population in Punjab (2016) District-Wise**

![Image](image_url)

Source: Health Department

Senior Medical Staff in Facilities including Dispensaries, RHCs, BHUs, DHQs, THQs, MCH Centers, Specialized hospitals and Teaching hospitals.

The shortage is not limited to the public sector; rather there is a dearth of trained doctors in general. As per latest data 45 percent of the posts for Specialists, 30 percent for general medical doctor and 16 percent for paramedical staff are lying vacant.

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The existing general nurse to patient ratio in Punjab is 1:11. The shortage in the nursing cadre for Charge Nurse (BPS 16) alone can be observed from the fact that against the sanctioned posts, around 20 percent remain vacant while the current sanctioned strength can only fulfill 55.4 percent of the current health care needs in the province. According to the Pakistan Nursing Council (PNC), there is still a need for an additional 8,925 nurses to match the demand supply gap.

There is also a critically low level of consultants at hospitals. Only 53 percent of hospitals have at least 1 anesthetist, 25 percent have at least one radiologist and 26 percent have one pathologist.

Absenteeism of public sector employees is also a pervasive problem just like in many other developing countries and rest of Pakistan. According to recent research, only one third of the doctors are found at BHUs during random visits. In the presence of widespread absenteeism, the non-availability of doctors will remain an issue even if all the vacant posts are filled. To address this issue the government has introduced Biometric Attendance which has led to increase in attendance of the medical staff and as already mentioned a number of healthy schemes have been initiated to increase the human resource and hospital capacity. According to latest data collected by the Special Monitoring Unit, responsible for rolling out the Health Road Map, absenteeism of medical staff at BHUs and RHCs has considerably reduced, so has the number of vacancies.

### 6.1.4.6 Use of Public Healthcare Facilities

Punjab has had a wide network of Basic Health Units spread across the country, but their utilization by the population in rural and peri-urban areas has remained low. Critical aspects of services delivery such as location of BHUs, ineffective referral system and medical practice variation in public and private sectors have contributed to overall low utilization of BHUs.

Curative use of public health facilities is very low. Most recent available data shows that for cases of diarrhea and cough in children, only 12.5 percent get treated using facilities of the public sector.

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17RoadMap presentation provided by SMU.


Low usage of public health facilities is partly a problem of access. People prefer the private sector, even when there is likely to be a public facility nearby by a factor six to one.

- In case of illness, in Punjab, almost 64 percent opt for private healthcare, while only 17 percent rely on public primary healthcare facilities and hospitals. Close to 20 percent don’t go anywhere.

- Only 15 percent of all deliveries take place in public facilities, 34 percent in private and the rest are done at home. For rural areas these numbers are even lower; 10 percent in public and 31 percent in private.

At the same time, there has been rapid growth of private sector health facilities as well as medical and paramedical training institutes across the Punjab. Private sector usage is recorded to be as high as almost 70 percent of the population.

The last two rounds PDHS surveys reveal an increasing trend in the use of private health facilities, even true for places where public facilities are known to exist. Most of these facilities are located in urban and semi-urban locations and range from ‘one room’ clinics to maternity homes, dispensaries, diagnostic laboratories and a few state-of-the-art tertiary type hospitals.

### 6.1.5 Health Status of the Population

While overall health indicators are improving, the policy discourse in Punjab focuses on some key elements of health outcomes that are used to constantly monitor public health outcomes.

#### 6.1.5.1 Maternal Health

**MMR**

Maternal Mortality Rate (MMR) in Punjab has decreased over the years but it remains one of the leading causes of death among women of reproductive age. Maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy. The MMR is measured as the number of maternal deaths per 100,000 live births. It represents the risk associated with each pregnancy, i.e. the obstetric risk and is also one of the indicators under the MDGs and now SDGs.

The MMR in Punjab was last recorded at 227 per 100,000 live births in 2013-14. Almost 16 percent of deaths amongst women of childbearing age in Punjab are related to pregnancy where close to 6,000 women die each year. Overall MMR has shown a declining trend but remains high when compared to the South Asian average of 189. For low and middle-income countries, the figure is around 237 per 100,000 while global MMR is at 216.

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23Hammer & Uzma 2014
24Pakistan Demographic and Health Survey (DHS) 2012-13
26World Bank Indicators
The health and wellbeing of a mother during delivery period depends on a number of key factors: attendance of a skilled person, availability of transport to a medical facility, pre and post-natal care.

**Ante-Natal Care**
In order to reduce morbidity risk, antenatal care is essential during pregnancy. It is critical in assessing pregnancy complications, necessary laboratory investigations, the provision of iron/folic acid supplements, and tetanus toxoid vaccinations. Antenatal care coverage (ANC-1) is an indicator of access and utilization of health care services during pregnancy. BHUs, the most accessible health facilities for a majority of the population, receive the highest number of ANC visits.

By 2016, overall ANC-1 coverage in Punjab stood at 88.6 percent (up from 83 percent in 2014), which implies that now only 11.4 percent (down from 17 percent in 2014) of the women do not receive antenatal care\(^{28}\). PSLM reports a slightly lower rate (figure below).

**Figure 9: First Antenatal Care Visits (by Facility) in Punjab (2016)**

By 2016, overall ANC-1 coverage in Punjab stood at 88.6 percent (up from 83 percent in 2014), which implies that now only 11.4 percent (down from 17 percent in 2014) of the women do not receive antenatal care\(^{28}\). PSLM reports a slightly lower rate (figure below).

**Figure 10: Pre-Natal Consultation (%age of married women 15-49)**

WHO recommends that pregnant women without any complications should visit an ANC provider at least four times during their pregnancy. Therefore, while it is encouraging that first visits increased, follow up visits to ANC providers were not as high as first visits, indicating drop outs. The total number of visits fell by 16 percent across all levels of facility.

TT-II (tetanus and neo-natal tetanus) immunization was provided to 75 percent (increasing from 66 percent) women against the expected population in Punjab, in 2015.

---

\(^{28}\)MICS 2014, 2016 figures from PHS 2016.
In 2016, the number of pregnant women with anaemia who visited ANC Centers in Punjab was 720,963 increasing by 0.3 percent since 2015. Whether this indicates more people accessing health facilities for ANC or more women suffering from anaemia needs to be explored further.

Deliveries

Almost a fourth of the births in Punjab (down from 40 percent in 2011) take place outside the health system\textsuperscript{29}. Most of such deliveries take place in rural areas (25 percent) compared to urban (11 percent)\textsuperscript{30}. The rest are not institutional deliveries and a large number of which are assisted by unskilled birth attendants.

\textbf{Figure 11: Place of Delivery in Punjab (percentage)}

| Source: MICS 2014, PHS 2016 |

\textbf{Table 5: Pregnant Women that Reveived Tetanus Toxoid (Married Aged 15-49 Years)}

<table>
<thead>
<tr>
<th>Year</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
<th>Urban</th>
<th>Rural</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>78</td>
<td>61</td>
<td>66</td>
<td>88</td>
<td>69</td>
<td>75</td>
<td>85</td>
<td>71</td>
<td>75</td>
<td>87</td>
<td>70</td>
<td>75</td>
</tr>
<tr>
<td>Punjab</td>
<td>80</td>
<td>66</td>
<td>70</td>
<td>90</td>
<td>77</td>
<td>80</td>
<td>89</td>
<td>81</td>
<td>83</td>
<td>91</td>
<td>81</td>
<td>84</td>
</tr>
</tbody>
</table>

Source: PSLM 2014-15

In 2016, the number of pregnant women with anaemia who visited ANC Centers in Punjab was 720,963 increasing by 0.3 percent since 2015. Whether this indicates more people accessing health facilities for ANC or more women suffering from anaemia needs to be explored further.

\textsuperscript{29}PHS 2016.

\textsuperscript{30}PHS 2016 – measure births by TBA.
Simple deliveries done at home are not necessarily a problem, provided there is a Skilled Birth Attendant (SBA) and appropriate referral possibility to hospitals for complicated deliveries. In fact, research indicates that MMR is lower if deliveries are conducted by SBAs. SBAs in Punjab include doctors, nurses, midwives and Lady Health Visitors (LHVs) whereas traditional birth attendants (TBAs) and Lady Health Workers (LHWs) are not considered SBAs. The problem arises when most women (three quarters) run into complications during delivery at a stage when there is no means through which emergency obstetric care services can be accessed in good time.

In births delivered at health facility, 27 percent of births were in public sector facilities and 47 percent of patients chose private sector facilities. However, there is continued improvement in increasing skilled birth attendance post 2014 as tracked under one of the indicators of the Punjab Health Reforms Roadmap. Not only has skill birth attendance gone up, the proportion of institutional deliveries has also given.

**Figure 13: Assistance During Delivery**

![Assistance During Delivery](image)

Source: PHS 2016, MICS 2014

Deliveries managed by round the clock primary care centers have also increased substantially in the province.

**Figure 14: Deliveries at 24/7 BHUs and RHCs (Total deliveries per month)**

![Deliveries at 24/7 BHUs and RHCs](image)

Source: IRMNCH

As a result of this initiatives, the number of live births increased from 566,627 in 2015 to 824,734 in 2016. The highest increase was visible in BHUs where live births increased from 289,672 in 2015 to 436,957 in 2016. RHCs saw an increase in live births from 139,108 in 2015 to 230,811 in 2016. The number of C-sections has also increased. The number of cases increased from 29,163 in 2015 to 40,899 in 2016, with a majority of c-sections (57 percent) undertaken in DHQs.
6.1.6 Family Planning

6.1.6.1 Demographics in Punjab

As a result of this initiatives, the number of live births increased from 566,627 in 2015 to 824,734 in 2016. The highest increase was visible in BHUs where live births increased from 289,672 in 2015 to 436,957 in 2016. RHCs saw an increase in live births from 139,108 in 2015 to 230,811 in 2016. The number of C-sections has also increased. The number of cases increased from 29,163 in 2015 to 40,899 in 2016, with a majority of c-sections (57 percent) undertaken in DHQs.

31 MICS 2014.
32 PHS 2016.
33 According to ‘Integrated Reproductive Maternal Newborn and Child Health and Nutrition Program Emergency Obstetric and Newborn Care’, a report by the Punjab government.
34 Population Welfare Department.

Figure 15: Post-Natal Consultation (% age of married women aged 15-49)

Source: PSLM 2014-15 & 2012-13

6.1.6 Family Planning

6.1.6.1 Demographics in Punjab

Punjab’s current population stands at around 110 million. Life expectancy in Punjab for both men and women has increased. In 2012 it was 66 for men and 65.5 for women, which increased to 67.3 for men and 66.9 for women by 2016. This figure is significantly lower than the global average of 73.5 for women but is gradually improving. However, female life expectancy still remains below male life expectancy (and below global average of 73.8), which is the opposite of the global trend where women outlive men.

Figure 16: Life expectancy in Punjab

Source: Gender MIS, 2017
Punjab is also undergoing a demographic transition from a situation of high fertility and high mortality to one of lower fertility and mortality. Its age dependency ratio is at 0.64, which means that a growing number of young people are entering the workforce. Its fast expanding population is placing strain on the province’s resources and placing additional burden on the health sector.

### 6.1.6.2 Fertility Rates and Population Growth

Pakistan has one of the highest Total Fertility Rates (TFR at 3.7) in the world\(^35\). For Punjab more, recent data confirms that TFR in Punjab decreased from 2.9 in 2014-15 to 2.8 in 2015-16 and is lower than the national average (3.1)\(^36\).

**Figure 17: Total Fertility Rates in Punjab**

<table>
<thead>
<tr>
<th>Year</th>
<th>TFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-08</td>
<td>4.7</td>
</tr>
<tr>
<td>2011</td>
<td>3.58</td>
</tr>
<tr>
<td>2014</td>
<td>3.5</td>
</tr>
<tr>
<td>2015</td>
<td>2.9</td>
</tr>
<tr>
<td>2016</td>
<td>2.8</td>
</tr>
</tbody>
</table>


TFR is most effectively assessed against the replacement rate that measures the number of deaths against the number of births. While the international replacement rate is measured at 2.1\(^37\), Pakistan’s national replacement rate is at 2.6. When TFR and replacement rate are the same, population control is most optimal. Punjab’s TFR is much higher than the national replacement rate.

Punjab’s population is growing at a natural rate of 2.13 and if this growth is unchecked, its population is estimated to grow to a staggering 180 million by 2050\(^38\). Currently Punjab’s crude birth rate and death rate stand at 28.5 and 7.2 per 1000 people respectively\(^39\).

In Punjab, fertility regulation is high, the fertility rate is lower than in rest of Pakistan, despite its dense population. Declining provincial annual birth rates will be reflected in a decreased birth cohort in Pakistan overall.

**Figure 18: Annual Birth Cohort (in humans)**

Source: WB report on immunization 2016

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\(^35\)World Bank Indicators, retrieved from https://data.worldbank.org/indicator/SP.DYN.TFRT.IN?

\(^36\)Gender MIS Punjab 2017.

\(^37\)Population Division, UN.


\(^39\)Bureau of Statistics.
6.1.6.3 Contraceptive Usage

Punjab's rapidly growing population can also be linked to the relatively low use of contraceptives, in comparison to international figures despite doubling the use of contraceptives since 2000\(^4\). Of the estimated 17.5 million married women of reproductive age (MWRA) in Punjab, 7.1 million women are using any family planning method and, among these, 2 million (about 12 percent) are using the less reliable traditional methods, and therefore, not entirely free of the risk of unwanted fertility (see box below to understand what stops women from planning families).

CPR has increased over the last few years, indicating why TFR has fallen: According to MICS, CPR in 2011 was 35 percent in Punjab It increased to 39 percent in 2014.

### Table 6 : Progress Against Family Planning Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>PDHS 1990-91</th>
<th>PDHS 2006-07</th>
<th>PDHS 2012-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPR using modern methods</td>
<td>10</td>
<td>23</td>
<td>29</td>
</tr>
<tr>
<td>CPR using any methods</td>
<td>13</td>
<td>33</td>
<td>41</td>
</tr>
<tr>
<td>TFR per child bearing woman</td>
<td>5.4</td>
<td>3.9</td>
<td>3.8</td>
</tr>
<tr>
<td>Unmet Need for Contraception</td>
<td>31</td>
<td>23</td>
<td>18</td>
</tr>
</tbody>
</table>

Source: PDHS 2006-07 & 2012-13

Another encouraging trend is the increase in the number of family planning visits. From 2015 to 2016, family planning visits in all districts increased by around 100 percent from 984,513 visits to 1,973,241 visits. The visits increased across all districts.

Figure 19: Family Planning Visits in Punjab (2015 and 2016)

Source: Health Department, Gender Report 2017

However, there is room for improvement. Close to 59 percent of married women of reproductive age would like to use contraceptives\(^41\). Population Council estimates that women in Punjab continue to have more children than they want (almost four on average when they want just three)\(^42\). A third of the women don’t practice family planning, as they want more children\(^43\). The unmet need\(^44\) for contraception stands 18 percent\(^45\).

While Punjab has the highest CPR among the provinces in Pakistan, being the most developed, it lags behind other regions and countries with similar levels of per capita income and development. The recently announced Punjab Population Policy calls for achieving replacement level fertility by 2030 while the health sector roadmap aims to reach CPR of 50 - 55 by 2020.

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\(^4\)Population Division, UN
\(^43\)PSLM 2013-14 - Main reasons for not practicing family planning included 31% that wanted more children, 16% were currently pregnant while 12% were lactating.
\(^44\)Unmet need for contraception refers to the proportion of married women who are fecund and do not wish to become pregnant soon but are not practicing any form of contraception.
\(^45\)MICS 2014 - This represents an improvement over previous levels in Punjab (31% in 1991 and 23% in 2006-07), and also compares favorably with the current proportions of unmet need in other provinces
The desperation that underlies unmet needs is reflected in the high rate of induced abortions in Punjab, estimated at 51 per 1,000 women of reproductive age. Every year, an estimated 1.3 million women opt to abort their pregnancies, predominantly in medically unsafe environments, at a cost of roughly Rs. 5,000 per abortion (Sathar et al. 2013)\(^46\). This translates into an annual expenditure of about Rs. 6,500 million (USD 62.5 million) on avoiding unwanted pregnancies in Punjab through abortions alone.

### 6.1.7 Child Health

#### 6.1.7.1 IMR and U5-MMR

Infant Mortality Rate (IMR) is an important indicator of a country’s socioeconomic development and quality of life and also reflects the general health status of its population. The objective of reducing the IMR is formalized in MDG 4, which had called for a two-third reduction in under-five child mortality by the year 2015.

According to MICS 2014, IMR in Punjab has in fact increased from 77 deaths (per 1000 live births) in 2008 to 82 in 2011 and fell to 63 in 2014\(^47\). According to latest data from Punjab Population Welfare department, IMR in Punjab as of 2015-16 stands at 60/1,000 live births, much lower than the national level of 77/1,000 live births\(^48\).

On the contrary, the under-5 Mortality Rate (U5MR) has also increased from 96 (per 1000 live births) to 105 between 2006 and 2011\(^49\). Neonatal mortality rate, i.e. the probability of dying within the first month of life, was found to be 55 per 1000 live births in the year 2012\(^50\).

### Figure 21: Trends in U5MR and IMR in Punjab

Source: PDHS and MICS

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\(^{49}\) Punjab MICS Report 2014.

\(^{50}\) National Institute of Population Studies, Pakistan Demographic and Health Survey (PDHS) 2012-13, 120
6.1.7.2 Vaccinations

Routine Immunization

Flattening rates of immunization has been a major challenge in preventive health care provision for Punjab. About 5.6 million children born each year in Pakistan need to be vaccinated. More than half of these expected births will occur in Punjab. The birth cohort is expected to decline after 2016 due to lower fertility rates, which will also lower the burden of immunization.

One of the primary objectives of the government in health sector is to expand the coverage of immunization and issue vaccination cards to keep track of vaccinations given to the child. Even though immunization rates vary across districts, income groups and the urban-rural divide, immunization coverage has grown and improved in Punjab at one of the fastest growth rates in the world.

PSLM data\(^{51}\) confirms 70 percent of the children (against a national average of 60 percent) were fully immunized (based on record\(^{52}\)) by 2014-15 compared to 65 percent in 2012-1\(^{53}\).

**Figure 22: Full Immunization (12-13 Months Based on Recall and Record)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
<th>2014-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunized</td>
<td>86</td>
<td>89</td>
<td>86</td>
<td>90</td>
</tr>
</tbody>
</table>

Source: PSLM-Varios issues

The Punjab Health Survey (PHS) reports that routine immunization coverage has now increased to almost 82 percent\(^{54}\). PHS confirms that Punjab was able to reduce the urban and rural disparity in immunization coverage with difference now just over one percent (urban 82.6 percent and rural 81.6 percent). After introduction of android-based application E-Vaccs (see section on key initiatives), vaccinators’ attendance improved from 46 percent in January 2015 to 97 percent by June 2016.

**Figure 23: Children 11 month covered by Antigen (%)**

<table>
<thead>
<tr>
<th>Year</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
<th>2014-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPV1</td>
<td>92</td>
<td>95</td>
<td>89</td>
<td>96</td>
</tr>
<tr>
<td>DT/BCG</td>
<td>86</td>
<td>97</td>
<td>84</td>
<td>92</td>
</tr>
<tr>
<td>Penta/Reza 1</td>
<td>95</td>
<td>92</td>
<td>79</td>
<td>88</td>
</tr>
<tr>
<td>Penta/Reza 2</td>
<td>68</td>
<td>74</td>
<td>66</td>
<td>68</td>
</tr>
<tr>
<td>Penta/Reza 3</td>
<td>64</td>
<td>64</td>
<td>64</td>
<td>84</td>
</tr>
</tbody>
</table>

Source: PSLM-Varios issues

\(^{51}\)MICS 2014 records an even lower rate for fully immunized children - 62.3%  
\(^{52}\)Full immunization rates (all the 11 recommended vaccines) based on record - immunization rates based only on the information given on immunization cards categorized as ‘record’ may therefore, underestimate coverage, however, it has the benefit of using written information recorded by health workers.  
\(^{53}\)Data from PSLM.  
\(^{54}\)Punjab Health Survey (PHS) 2016
More updated data from the P&SH Department confirms by 2016, 94 percent children in Punjab (up from 92 percent in 2015) were covered by the Expanded Program on Immunization (EPI). Punjab has also introduced the Rotavirus Vaccine in the routine immunization schedule of the EPI.

**Anti-Polio Vaccinations**

To date, Pakistan is one of the only two countries in the world where children are still being infected by the polio-virus. Anti-polio drives in Punjab have been very successful compared to other provinces. Punjab remained polio-free in 2016 though the country reported 20 cases—8 each from Sindh and KP and 2 each from Fata and Balochistan. In the Punjab, last case was reported from district Rahim Yar Khan in December 2015.

**Table 7: Cases of Polio between 2010 and 2016**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Punjab</td>
<td>9</td>
<td>2</td>
<td>7</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Economic Survey of Pakistan 2015-16

Children covered by Anti-Polio vaccinations has gone up from 17.6 million in 2014-15 to 18.34 million in 2015-16 with 100 percent coverage. Using the help of PITB, the province has been able to increase the geographical coverage of anti-polio campaigns from 25 percent in 2014 to 88 percent in 2016.

**6.1.7.3 Nutrition**

In Pakistan, 44 percent of children are stunted. This is the third highest percentage of stunted children in the world and means more than 9.6 million children. Last round of MICS confirms that every third child (33.5 percent) suffers from chronic malnutrition (stunting) in Punjab. Close to 5 million children in Punjab are stunted while 66 percent of Punjab households cannot afford a nutritious diet. There are also significant disparities in nutrition between children from rural and urban backgrounds.

Currently, the latest available data on stunting (low height for age) and wasting (low weight for height) is from MICS 2014. Almost 33.5 percent of children (between 0 and 5 years) have a stunted growth and around 17.5 percent are wasted.

The Health Department is working with P&DD to set 2020 targets to reduce the prevalence of stunting and wasting in Punjab. Targets will be finalized once a cross-sectoral plan is drawn up.

The targets for now against baselines is in the table below.

**Table 8: Nutrition Targets Punjab**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Objective</th>
<th>Baseline (MICS 2014)</th>
<th>Target up to 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Stunting</td>
<td>33.5%</td>
<td>30%</td>
</tr>
<tr>
<td>2</td>
<td>Wasting</td>
<td>17.5%</td>
<td>14%</td>
</tr>
<tr>
<td>3</td>
<td>Underweight among children (under 5 years)</td>
<td>33.7%</td>
<td>30%</td>
</tr>
<tr>
<td>4</td>
<td>Low birth weight babies (&gt;2,500 grams)</td>
<td>29.4%</td>
<td>23%</td>
</tr>
<tr>
<td>5</td>
<td>Early Initiation of Breastfeeding within one hour</td>
<td>10.8%</td>
<td>16%</td>
</tr>
<tr>
<td>6</td>
<td>Exclusive Breastfeeding until 6 months</td>
<td>16.8%</td>
<td>25%</td>
</tr>
<tr>
<td>7</td>
<td>% of children receiving age appropriate complimentary feeding</td>
<td>61%</td>
<td>75%</td>
</tr>
</tbody>
</table>

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57MICS 2014 – this is used to set a baseline for the roadmap.
58Ibid.
59Baseline Punjab figures of stunting and wasting from: MICS 2014.
6.1.8 Disease Burden

6.1.8.1 Non-Communicable

As risk factors become more prevalent in developing countries, diseases previously thought to be problems of the developed world such as cancer, cardiovascular disease and diabetes are increasingly becoming problems in developing countries. Punjab, like the rest of the country, is at the early stage of an epidemiological transition. While communicable diseases still account for a predominant share of morbidity and mortality in the province, the prevalence of non-communicable diseases (NCD) is rapidly rising.

The WHO estimates that NCDs accounted for 50 percent of total deaths within Pakistan in 2015 alone; this includes cancers, diabetes, chronic respiratory diseases and cardiovascular diseases which form the four main NCDs.

As non-communicable, chronic diseases require long-term care, costs associated with treating those suffering from chronic diseases are generally higher than infectious diseases. Therefore, an increased level of chronic diseases can be associated with increased levels of healthcare spending. NCDs encompass all diseases that are not transmitted from person to person. These include diabetes, hypertension, cancers, mental disorders, arthritis, injuries and accidents.

6.1.8.2 Communicable

The cases of Suspected Malaria and Suspected Meningitis are decreasing from year to year. There were a high number of Suspected Measles cases in 2013 due to the breakout of epidemic. The cases of Suspected Viral Hepatitis are increasing year to year. There is a remarkable decrease in Suspected Neonatal Tetanus year to year. In 2011, the lowest number of cases of Suspected HIV/AIDS was reported.

6.1.9 Public Health in Urban Centers

Reducing deaths from air pollution is one of the aims of the sustainable development goals. One of the targets for goal three, good health and wellbeing, is to ‘substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil’ by 2030.

Chapter 8 discusses the negative externalities of rising urbanization on the environment in terms of increased pollution. This directly impacts public health outcomes.

At the end of 2016, Punjab’s provincial capital, Lahore, faced elevated levels of air pollution due to rapid industrialization, growing vehicular emissions and rapidly reducing green cover. Last year, almost 60,000 Pakistanis died from the high level of fine particulate matter in the air, among the highest death tolls in the world from air pollution, according to the World Health Organization (WHO).


Natural urban barriers to air pollution have increasingly disappeared. The number of asthma patients is increasing. Delay in treatment and diagnoses leads the patient to death. In Punjab alone, the number is estimated to be 2 million. According to the office of Director General (DG) Health, Punjab, it was 1.7 million in 2013. This shows that the cases of asthma are on the rise.

Solutions to address the root causes of air pollution are slowly appearing. The Punjab government has instituted a number of emergency measures to mitigate the pollution, such as banning the burning of agricultural waste and closing steel mill factories. Punjab also needs to install more air quality testing equipment around the city. At least 10 to 15 different units are required for a city as big as Lahore.

### 6.1.10 Health Financing in Punjab

#### 6.1.10.1 Total health budget

The Punjab government allocates 0.7 percent of its spending to healthcare, compared to the OECD average of 8.9 percent\(^5\). Even overall, Pakistan spends less than a percent of total GDP on health. Health care expenditure also remains overly dependent on out-of-pocket household expenditure, with a low population coverage. Households on average spend close to 4 percent of their total expenditure on health\(^6\). Per capita government investment in the health remains low as per international standards, currently estimated to be between Rs559 to Rs900 per person per year\(^7\).

Overall health budget per capita has increased from Rs580 (in 2012-13) to Rs795 (in 2015-16). Given the rise in population, total healthcare spending needs to grow at a much faster pace than healthcare spending per capita.

**Figure 24: Trends in Federal and Provincial Government’s Expenditure on Health Sector (% of GDP)**

The Punjab government has continuously increased its healthcare budget over the past few years. The total health-care budget allocation increased from Rs 121.8 billion in 2014-15 to Rs. 166.1 billion in 2015-16 and now stands at Rs. 207.3 billion for 2016-17 including provision for clean water and sanitation and free medicines. However, the trend in health budget as a percentage of total provincial budget is mixed.


\(^6\)HIES 2015-16.

\(^7\)As per calculations in TRF+ budget 2016-17 analysis.
During the last fiscal year, the combined health department was bifurcated into two departments: (i) Specialized Health-care and Medical Education (SH&ME) and; (ii) Primary and Secondary Healthcare Departments (P&SH). Fiscal year 2016-17 is the first year in which each of these departments have been given their budget allocation.

In total around Rs. 207.3 billion have been earmarked for health, including allocations for water supply and sanitation, out of a total budget of Rs. 1.681 tn. In 2016-17, SH&ME has been allocated Rs 30,389 million and P&SH has been allocated Rs 24,338 million. The increase in budget in 2016-17 has been the highest since the past five years.

Outsourcing clinical support services in hospitals and laboratory is also efficient and helps reduce the burden on the public healthcare sector. This would involve outsourcing the inpatient imaging services and lab analyses within hospitals. Often hospitals lack such equipment because it is too expensive. The private operator would assume responsibility for initial capital financing of equipment, maintenance/repairs. Since the private would not be paid if the equipment was not working properly, there would be sufficient incentive for keeping everything functioning properly.

![Figure 25: Health Budget as a Percentage of Total Provincial Budget](source: Finanace Department, Punjab (Annual Budget Statements of Provinces for various years))

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![Figure 26: Share of Health Sector in Total Budget of Pakistan](source: Policy Briefs on Budget on TFP + Website)
For primary and secondary healthcare, per-capita allocation has increased from Rs559 in 2015-16 to Rs665 in 2016-17 whereas for specialized healthcare and medical education, per-capita allocation has increased from Rs730 to Rs907.

### 6.1.10.2 Development versus Non-Development

The budget for the primary and secondary health sector can be divided into three streams.

Current Budget consists of:

a. Provincial current budget: This stream relates to funding provincial level functions e.g. the drug laboratories, office of Director General Health Services, medical equipment repair workshops and can include funds made available to the provincial health department mainly for meeting its administrative expenses and so forth.

b. District current budget: This stream relates to funding district level health facilities i.e. the BHUs, RHUs, THQs and DHQs. This also includes administration costs such as running the office of the Executive District Officer and so forth.

Provincial development budget: This stream relates to funding development programs, which can be executed at central level, district specific or province wide. Budget under this can be used for building, renovation, upgradation of facilities, buying machinery and equipment. Most of the preventive programs are also funded through this stream of budget.

While the overall health budget has increased since 2010, rise in non-development expenditure has been steeper than in development expenditure.

**Figure 27: Allocation to the Health Sector (as per the Provincial ADP in millions)**

In 2016-17, 73 percent of the health budget was allocated for current expenditure (67 percent for district and 6 percent for provincial budget) and remaining 27 percent for development expenditure.

**Primary and Secondary Healthcare**

1. More than half of the non-development budget is allocated for salary expenses. Almost two thirds of the development funds have been allocated for centrally run development programs that include a) revamping of DHQs b) IMNCHN program c) expanded program on immunization and d) establishing strategic units etc. The rest has been allocated for district specific schemes with the lion's share going to Lahore (Rs0.92 bn from Rs5.25 bn).
More of the development funds have been allocated for secondary healthcare compared to primary and preventive healthcare.

Figure 28: Sub-sector wise Analysis P&SH, ADP Punjab 2016-17 (Rs in millions)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Revised Allocation</th>
<th>Releases (As per MPR)</th>
<th>Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventive Health Care</td>
<td>4640</td>
<td>120</td>
<td>2645</td>
</tr>
<tr>
<td>Primary Health Care</td>
<td>1274</td>
<td>365</td>
<td>859</td>
</tr>
<tr>
<td>Secondary Health Care</td>
<td>4091</td>
<td>834</td>
<td>3469</td>
</tr>
<tr>
<td>Research &amp; Development</td>
<td>1084</td>
<td>32</td>
<td>534</td>
</tr>
<tr>
<td>Special Initiatives</td>
<td>6711</td>
<td>1008</td>
<td>3413</td>
</tr>
<tr>
<td>ODP</td>
<td>200</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Supplementary Schemes</td>
<td>36/24/0</td>
<td>36</td>
<td>24</td>
</tr>
</tbody>
</table>

3. A rapid increase in development expenditure increases recurrent expenses. According to one estimate the Rs7 bn increase in primary and secondary health's development budget may result in an annual additional requirement of Rs3.6 bn in (almost 8 percent of the existing) current budget. These costs can hardly be absorbed by the meager increase in the current budget for districts. If not met, the development investment made may be at risk of being lost.

4. Allocation for districts in North Punjab is 1.2 times more than the combined allocation for districts in Central and South Punjab. Average allocation per district for North is Rs202 million, for Centre Rs122 million and for South it is Rs98 million.

Specialised Health and Medical Education

1. The size of the development budget in 2016-17 has grown more than 1.5 times since 2015-16. This increase represents an additional Rs8.59 bn. This implies additional requirements for recurrent budget. That could be in the form of maintenance contracts of new diagnostic equipment, purchasing reagents to conduct lab tests etc.

2. Physical asset procurement has grown by 144 percent since 2015-16. The largest allocation (68 percent) been made to procure medical laboratory equipment.

3. More than 80 percent of the Annual Development Plan (ADP) has been allocated to development projects that will be executed by the spending units in their respective districts. The remaining 16 percent will be managed centrally. This is encouraging and in line with granting more autonomy at lower tiers.

4. More than half (54 percent) of the funds have been allocated to districts in North Punjab while rest are shared between districts in South and Central Punjab. Average allocation per district for North Punjab is Rs1,545 million, Centre Rs447.18 million and South Rs924.49 million.

6.1.10.3 Budget Throw Forward & Under Utilization

The cases of Suspected Malaria and Suspected Meningitis are decreasing from year to year. There were a high number of Suspected Measles cases in 2013 due to the breakout of epidemic. The cases of Suspected Viral Hepatitis are increasing year to year. There is a remarkable decrease in Suspected Neonatal Tetanus year to year. In 2011, the lowest number of

66Definition of Centre, South and North is taken based on divisions as defined by the government of Punjab. South: DG Khan, Multan, Bahawalpur, Central: Sahiwal, Faisalabad,
cases of Suspected HIV/AIDS was reported.

**Figure 29: New vs Thrown Forward Schemes, Punjab**

<table>
<thead>
<tr>
<th>Year</th>
<th>Throw Forward (at start of fiscal year)</th>
<th>Cost of new schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-14</td>
<td>34</td>
<td>66</td>
</tr>
<tr>
<td>2014-15</td>
<td>32</td>
<td>68</td>
</tr>
<tr>
<td>2015-16</td>
<td>35</td>
<td>65</td>
</tr>
<tr>
<td>2016-17</td>
<td>28</td>
<td>72</td>
</tr>
</tbody>
</table>

Source: Planning and Development Department. Government of Punjab

While utilization has increased over the years, in 2015-16, the Primary and Secondary Health Department was only able to spend 85 percent of what was allocated to it.

### 6.1.10.4 Does the Budget Support creation of Local Governments?

Punjab has held local government elections under the PLGO under which, health continues to be a devolved subject. Devolving power to local bodies will be a complex task and efforts in this regard have been initiated though there are several teething issues:

1. Firstly, provincially controlled budget (current and development) grew by 58 percent in comparison to district controlled budget that grew by only 8 percent.

**Figure 30: Health Budget per District 2016-17**
2. Provincial allocations for procuring drugs increased by 74 percent in comparison to an increase of 12 percent for districts. In fact, the share of provincial budget in total allocation for medicines has increased from 28 percent in 2015-16 to 37 percent in 2016-17.

3. Growth in budget allocation in 23 of the 36 districts has been less than 10 percent since 2015-16\textsuperscript{67}. Five districts post an increase of more than 25 percent in their respective health budget\textsuperscript{68}. This can put constrains on the district health system as the districts would have to fulfill their development requirements along with providing the increments in the salaries. It could also be the case that the salary costs are met by reducing the non-salary part of the allocations.

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\textsuperscript{67}TRF+ budget documents
\textsuperscript{68}TRF+ Health Budget Brief 2016-17
6.1.11 Private Sector Engagement

6.1.11.1 PPPs as drivers of Healthcare

PPPs in health are becoming a useful instrument to advance healthcare provision while improving service delivery across the landscape of the health sector. The underlying rationale for PPP interventions is that PPPs can help improve service delivery and the provision of basic infrastructure, including for the poor.

The key drivers of implementing PPPs include:

- The ability to using expertise and skills of the private sector - PPPs allow governments to leverage the expertise and skills of the private sector and thereby improve the quality and accessibility of public health care systems.
- The opportunity to increase financing for health. According to Price Water Cooper estimates, the BRIC nations (Brazil, Russia, India and China) are expected to experience an even stronger growth in health spending. As a percent of GDP, it is expected to grow from 5.4 percent in 2010 to 6.2 percent in 2020. This amounts to a 117 percent increase in actual spending over the decade with China is leading the way.

Some of the most common and feasible PPP's Punjab can engage in includes hospital-based partnerships that can be tailored to meet specific needs. The private sector's role can range from facility management and non-clinical services, to specialized clinical services, and to full hospital management including all clinical services. Such PPPs are based generally but not exclusively on long term contracts and project finance where the private sector takes over the running of certain functions previously reserved for the public sector.

Another popular category of PPPs in health is for delivering health programmes. These PPPs can be categorised into several sub-groups such as research and development, improvement of access to health products, public advocacy and increasing awareness, regulation and quality assurance and training and education. These are also common across the developing world, and variants of these have already been tested in Punjab.

6.1.11.2 Learning from Global Experience

The increasing number of PPPs in health are helping to build a considerable base of international experiences to draw upon for future projects. Punjab can learn from successes in PPPs undertaken in various countries especially including those with limited prior experience in engaging with the private sector.

Hospital PPPs have been successful in several countries.

- Canada: Under the PPP hospital model, a private company constructs and owns the physical hospital building and leases to the hospital board which takes the responsibility of running the hospital.
- Turkey: Investors finance, construct (or renovate), furnish, supply, operate and maintain hospitals. The Ministry of Health remains responsible for providing medical services but the project company provides certain clinical and non-clinical support services in these new hospitals.

Developing countries also have reasonable experience with facility-based PPPs.

- India: The Government of Andhra Pradesh provides basic medical treatment to patients living below poverty line through the Arogyasri health insurance scheme. A significant number of poor patients needed dialysis services and many state-run hospitals had limited or no capacity to perform dialysis. To address this issue, B. Braun Medical (India) Pvt. Ltd., a subsidiary one of the world's leading healthcare suppliers, established and operated dialysis centers in return the government paid the private operator an agreed price for each performed dialysis.

PPPs for public advocacy can also help create awareness especially in the realm of preventive and promotive healthcare.

- Central America: Hand washing promotion initiative was launched under a contractual partnership to bring together soap companies, government ministries, NGOs and media in three Central American countries (Costa Rica, Guatemala and El Salvador) to prevent diarrheal disease. This PPP was established in 1996 to 1999 and focused on hand washing campaign through usage of mass media. Hand washing promotion initiative improved hand washing behaviour associated with reductions in diarrheal disease and sustained involvement of private sector partners in public health promotion.

Outsourcing clinical support services in hospitals and laboratory is also efficient and helps reduce the burden on the public healthcare sector. This would involve outsourcing the inpatient imaging services and lab analyses within hospitals. Often hospitals lack such equipment because it is too expensive. The private operator would assume
responsibility for initial capital financing of equipment, maintenance/repairs. Since the private would not be paid if the equipment was not working properly, there would be sufficient incentive for keeping everything functioning properly.

6.1.11.3 PPPs in Punjab

The Punjab government is keen to engage with the private sector in healthcare and has already executed some interventions in this regard. While it may be too early to comment on their success, it is safe to say that government is making progress on institutionalizing a PPP framework for service delivery in various sectors that includes health.

An indicative list of functions that the Punjab government can outsource to private providers is provided in the Table below.

Table 10: Indicative List for PPPs

<table>
<thead>
<tr>
<th>FUNCTIONS</th>
<th>PROVIDERS</th>
<th>GOVERNMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>INFRASTRUCTURE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide buildings (funds for repair if critical work needed)</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Maintain Building</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Provide furniture and equipment at the time of hand-over</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Provide funds for any missing furniture and equipment against a basic checklist at the time of hand-over</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Maintain furniture and equipment (replace/fx if needed)</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>SUPPLIES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procurement of medical and non-medical supplies (including medicines)</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Management of stocks</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>PEOPLE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employ existing facility staff</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Employ any new / additional facility staff</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Transfer / write ACR of existing facility staff</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Dismiss existing facility staff</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Dismiss any new/additional facility staff</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>MANAGEMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting KPIs, key guidelines (minimum working hours etc)</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Managing day-to-day routines of facility staff (non-outreach)</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Light supervision of performance of outreach staff, establishing strong connections to improve referral facilities</td>
<td>✔️</td>
<td>✔️</td>
</tr>
<tr>
<td>Training facility staff</td>
<td>✔️</td>
<td>✔️</td>
</tr>
</tbody>
</table>

Currently, the government is engaging with the private sector through various models. Some of the key partnerships include a) outsourcing management of health facilities b) outsourcing provision of non-clinical services c) health insurance through private sector d) representation on boards.

6.1.11.4 PPP Cell at the P&D

While the PPP cell, established at the P&DD, has taken time to structure itself to start on some key PPP interventions, it now contains a growing portfolio of projects with several underway and many others in the pipeline. At the moment there is only one PPP, under review, in the health sector.

Outsource management of health facilities in five districts

Punjab government is engaging in outsourcing management of health facilities (BHUs, RHCs, THQ hospitals and DHQ hospitals) in five low performing districts (Chakwal, Jhang, Lodhran, Khanewal and Pakpattan) to external parties under a PPP management contract. The role of the private sector would be in maintenance of infrastructure, procurement of medical and non-medical supplies, enforcing protocols, hiring staff, implement a referral system etc. The government would remain involved in monitoring performance and providing promised funds. The qualified firms would ensure maximum services under the agreement for management of contract for three years, which would be extendable on the basis of performance.
Similar PPP arrangement was introduced back in 2015 as well, that aimed to outsource management of 566 BHU, 67 RHCs, 25 THQs and 11 DHQs. But private firms showed lack of interest in this scheme.

Another challenge will be how to attract appropriately trained staff to work in the health facilities and how to pay private doctors without increasing patients’ out-of-pocket payments? Market-based salaries for managers will be necessary to increase accountability for hospital management. Moreover, greater flexibility for the contractors is needed to take advantage of the private sector’s effectiveness in achieving higher quality healthcare.

Implementation of a monitoring and evaluation component will be important to ensure effectiveness of the PPP and enable the government to select and scale up the best private providers. Performance indicators relating to efficiency, quality, and equity measured against a baseline can drive accountability, increase performance, and heighten clinical standards within facilities.

### 6.1.11.5 PPPs under the Health Sector Roadmap

#### Outsourcing Non-Clinical Services

Outsourcing of cleanliness / janitorial services has shown promising results in the five pilot hospitals under the health sector reform roadmap. Learnings from this pilot are expected to improve outsourcing of the remaining 35 hospitals across Punjab.

**Figure 33: Hospital Cleanliness Percentage of Clean Areas**

```
DHQ Kasur  49
  16
DHQ Muzaffargh  55
  23
DHQ TT Singh  69
  27
DHQ MB Din  82
  28
DHQ Sheikhupura  88
  28
```

Source: MEA data Oct-Jan 2017

**NOTE:** Outsourcing started in DHQ Kasur and Muzaffargarh in August, and in July for Sheikhupura, TT Singh and Mandi Bahauddin.

Outsourcing of other non-clinical services as per the Health Roadmap is also on track. Security and parking, mechanical, electric and plumbing, generator operations and maintenance, horticulture and laundry will be out-sourced in 40 hospitals by May 2017.

A revised strategy is being implemented for outsourcing management of hospitals. A performance management system, hospital management information system, minimum service delivery standards and lean management structure will be developed by June 2017 for 40 hospitals in Punjab.

With the outsourcing of these services, cleanliness at hospitals has improved. Around 15 janitorial services have been introduced at public hospitals. Likewise, companies have been hired to dispose of toxic waste at hospitals.

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Source: P&SH Dept, PMU
6.1.11.6 PPPs in partnership with Foreign Stakeholders

Building HR: The Turkish health ministry has agreed to extend technical cooperation and consultation to the Punjab Health Department (PHF) for the development of the nursing sector. The cooperation would also include capacity-building and training of human resources and further improve the system of human organ transplantation.

6.1.11.7 Private Sector engagement through the Punjab Health Foundation

The Punjab Health Foundation (PHF) is specifically mandated with the task to assist and promote the private sector in providing improved health coverage. It will help provide financial assistance to individual doctors, NGOs, health institutions and allied projects to establish and upgrade existing facilities and inputs.

PHF recently accorded approval to issue interest free loans of up to Rs. 10 million for setting up hospitals by the doctors. However, this loan would be issued on mortgage condition whereas loan of Rs. 200,000 to Rs. 700,000 will be granted on social collateral basis.

6.1.12 Governance through Companies

6.1.12.1 The case of Health Insurance

The main task of the Punjab Health Initiative Management Company (PHIMC) is to execute social health protection initiatives, demand side financing schemes including pro-poor health insurance schemes and collaboration with private sector to provide universal health coverage. The PHIMC mandated for execution of the Prime Minister’s National Health Insurance Program (PMNHP) in Punjab province is already operating in the four target districts of the Punjab – Rahim Yar Khan, Khanewal, Narowal and Sargodha. Under the programme, a total of 7.9 million people in the target districts are getting quality health services.

PHIMC has also recently signed a contract with the Benazir Income Support Programme (BISP) and NADRA to expand pro-poor health insurance schemes to remaining 32 districts of the Punjab. Under the contract, the BISP will provide data of poor people from Punjab earning less than USD 2 / Rs. 200 per day. NADRA will verify the national identity cards and thumb impressions of these beneficiaries to ensure transparency.

6.1.12.2 Innovation Fund

Punjab Population Innovation Fund

The Punjab Population Innovations Fund is a route for testing out innovative (including previously untried) models for serving the unmet needs of men and women, both never users and past users, as well as users of traditional methods, with a special emphasis on the poor. The direct goal of all interventions will be to increase access to services, especially in the underserved urban and rural areas, through innovative approaches in communication and service delivery.

The Punjab Population Innovation Fund offers an opportunity to innovate and find out-of-the-box, more effective approaches for family planning communication and service delivery. PPIF’s role will remain neutral and independent of existing systems. It has been launched as a private sector company with an incubation period in the Planning department.

New service providers (especially males) could be incentivized to provide family planning services and the contraceptive choices they can offer enhanced through subsidies for commodities and training through the PPIF. Inducting private providers opens up the possibility of longer term change and sustainability. Once providers are given initial induction into family planning, they can add it to their portfolio and find ways of setting up supply chains through local pharmacies and wholesale suppliers. It is assumed that the private sector will not need long-term support, especially if consumer interest is strengthened simultaneously. The poor already rely on low-cost private sector services for reproductive health needs and are making considerable payments out of pocket for abortion, antenatal care, and delivery services, adding family planning services would be a natural choice and would not require additional advertisement and trips for them.


For example, 52% of cited sources of modern contraceptives are outside of the public sector (PDHS 2012-13).
District Delivery Challenge Fund (DDCF)

The Sub National Governance Programme’s (SNG) District Delivery Challenge Fund (DDCF) is an innovation fund to pilot innovations in service delivery in the health and education sectors. The intention is that these pilots will demonstrate positive results in terms of improved service delivery, and some of them will be adopted and taken to scale by local government. A modest investment by DFID has not only delivered successful pilots, some of which have changed the quality of public services at point of delivery, it has also influenced the way in which a larger indigenous innovation fund is to be managed and implemented.

Strong partnerships with government and early and widespread dissemination of results increase the appetite of government to adopt promising pilots – an excellent example of this was showcasing DDCF innovation at the Punjab Information Technology Boards innovation fair in Lahore – which exposed DDCF pilots to a wider audience and market. At a more basic level the direct engagement of district government ensured pilots were closely aligned with needs and also that they were designed in the knowledge of the procedures that needed to be applied to ensure take up and adoption by government, including strategy to ensure they were able to be incorporated within local government planning and budgeting processes to maximize the chance of being take up.

6.1.13 Key Initiatives

6.1.13.1 Primary Healthcare

Improved Immunization

The Department has achieved a number of milestones in immunization over the past few months

- There have been significant increases in coverage: Independent validation shows 82 percent of 12-23mo infants have received all vaccines scheduled in their first year (i.e. up to Measles-1).
- Validation of Maternal and Neo-Natal Tetanus elimination
- Introduction of rotavirus vaccine: By protecting the children of Punjab from one of the largest causes of childhood mortality, this vaccine has the potential to save thousands of lives every year.

The Department is working on new actions to strengthen vaccination

- Improved coverage in DG Khan & Rajanpur by having a dedicated delivery team, additional vaccinators and introducing vaccinator pay-for-performance scheme and incentives for district managers.
- Introduction of new vaccines: Punjab plans to scale-up Rotavirus vaccine to all 36 districts and introduce a DPT booster for children aged 3-5yrs, launch a TD campaign for children over 6yrs in high risk districts and introduce a hepatitis birth dose.

WHO and UNICEF validated in November that Punjab is the only province that has successfully eliminated Maternal and Neo-Natal Tetanus.

Deliveries

Government is expanding access to care by introducing 24/7 delivery service in more BHUs. The Department has
improved functionality of 24/7 BHUs and RHCs by ensuring SBAs are posted to provide round the clock coverage. In addition, the facilities are provided following services that include: working electricity connection, back-up power, working water supply, functional delivery table and light, blood pressure apparatus in delivery room, emergency tray with all items prescribed by IRMCH and functional labour room toilet. The progress has been quick as per latest data is shown in the graph below.

**Figure 34: Facilities Achieving all Requirements for Functionality, %age**

![Graph showing improvements in BHUs and RHCs](image)

Source: MEA Data on Knockdown Criteria (Oct 2016, 8-16 Feb 2017)

These gaps and overall facility outlook will be addressed through newly established health councils. The approved funding per facility is Rs 200k for a normal BHU, Rs250k a BHU+, Rs300k for a 24/7 BHU and Rs500k for a RHC.

### 6.1.13.2 Improving performance of BHUs and RHCs

Basic inputs in BHUs and RHCs have improved. According to latest data collected by the Special Monitoring Unit, responsible for rolling out the Health Road Map, absenteeism of medical staff at BHUs and RHCs has considerably reduced, so has the number of vacancies. At the same time, provision of medical facilities has improved drastically.

#### Table 11: Basic Input Indicators for BHUs and RHCs, Punjab 2017

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>BASELINE, JAN 2015</th>
<th>DEC 2016</th>
<th>JAN 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHU SUPPLIES</td>
<td>58%</td>
<td>99%</td>
<td>99%</td>
</tr>
<tr>
<td>BHU CONTRACEPTIVES</td>
<td>42%</td>
<td>98%</td>
<td>98%</td>
</tr>
<tr>
<td>BHU MEDICINES</td>
<td>67%</td>
<td>97%</td>
<td>98%</td>
</tr>
<tr>
<td>RHC MEDICINES</td>
<td>71%</td>
<td>94%</td>
<td>97%</td>
</tr>
<tr>
<td>RHC UTILITIES</td>
<td>94%</td>
<td>97%</td>
<td>98%</td>
</tr>
<tr>
<td>BHU UTILITIES</td>
<td>89%</td>
<td>95%</td>
<td>95%</td>
</tr>
<tr>
<td>RHC SMO/MO/WMO PRESENCE</td>
<td>75%</td>
<td>86%</td>
<td>86%</td>
</tr>
<tr>
<td>BHU OTHER STAFF PRESENCE</td>
<td>77%</td>
<td>86%</td>
<td>87%</td>
</tr>
<tr>
<td>BHU MO PRESENCE</td>
<td>64%</td>
<td>83%</td>
<td>84%</td>
</tr>
<tr>
<td>RHC SMO POSTING</td>
<td>75%</td>
<td>80%</td>
<td>79%</td>
</tr>
<tr>
<td>RHC MO/WMO POSTING</td>
<td>74%</td>
<td>76%</td>
<td>79%</td>
</tr>
<tr>
<td>BHU MO POSTING</td>
<td>58%</td>
<td>74%</td>
<td>74%</td>
</tr>
</tbody>
</table>

Source: IRMNCH; MEA data

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6SMO/MO/WMO Presence is reported as a 3-month rolling average

ibid.
### 6.1.13.3 Hepatitis Elimination

The Health Department has set goals in line with WHO standards to eliminate Hepatitis C in Punjab by 2030. A Hepatitis Bill has been formulated to regulate the private sector and forwarded to the Law Department. Key features of the bill include implementation of auto disposable syringes in private sector, mandatory testing for Hepatitis before blood transfusion, dialysis, surgeries and organ donation, targeted interventions on quacks, barbers and salons and an effective implementation mechanism.

### 6.1.13.4 Punjab rural ambulance service

Khadim-e-Punjab Rural Ambulance Service has been introduced. The service has been introduced in the province on the pattern of Rescue-1122 and pregnant women or any family member can call on helpline 1034 for ambulance in emergency situation for transportation to a nearby health center or hospital.

The government of Punjab has launched new motorcycle ambulance service. Currently the service is launched in Lahore but soon this service will also be given in 9 divisional headquarters of the province.

### 6.1.14 Secondary Healthcare

The Secondary Health Roadmap aims to ensure that all 128 DHQs and THQs have quality staff and medicine available with functional and up-to-date equipment, quality infrastructure and services provided by the hospitals and good hospital management systems.

#### 6.1.14.1 Staff Attendance and Capacity

Attendance against the roster is improving fast while clinical staff capacity is being built as shown in the table below. The roster system was rolled out in October and individual attendance against duty roster has monitored.

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>TARGET</th>
<th>JAN 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAFF ATTENDANCE (CLINICAL)</td>
<td>85%</td>
<td>79%</td>
</tr>
<tr>
<td>STAFF ATTENDANCE (NON-CLINICAL)</td>
<td>85%</td>
<td>80%</td>
</tr>
<tr>
<td>KEY POSTING</td>
<td>80%</td>
<td>69%</td>
</tr>
<tr>
<td>KEY CONSULTING POSTING</td>
<td>80%</td>
<td>61%</td>
</tr>
</tbody>
</table>

Focused efforts through a biometrics attendance system have improved attendance of clinical staff by 27 percent in two months. Clinical staff includes consultants, all general cadre doctors and nurses.

Despite additional efforts with Punjab Public Service Commission (PPSC) and ad-hoc hiring, close to 1 in 3 MO posts remain vacant. Of a target of 2498, 1881 have been filled up.

Additional interventions will ensure 24/7 availability of key consultants. Four posts of consultants will be sanctioned in all DHQs to achieve round the clock coverage. Incentives up to Rs10,000 per shift will be given to consultants for evening and night duty.

#### 6.1.14.2 Availability of Medicines

Overall dispensation is on track but Out Patient Departments (OPDs) will require an in-depth review and plan to achieve the target. It is that section of the hospital where patients are provided medical consultations and other allied service. Indoor and emergency medicine dispensation have achieved their targets but OPD is substantially behind target (57 percent against target of 80 percent). Implementation of the Prescription Management Information System (PMIS) is also underway. By Feb 2017, the system has been installed in a 100 out of 128 hospitals. Process will be completed by March 2017.

Specific strategies rolled out in 40 Hospitals only ("40 H")

Table hours spent are calculated by taking the difference between time-out and time-in only recording hours that tally against the duty roster. Individual weekly attendance of a doctor is calculated by using Min [hours worked in week / 36 , 1] which is then averaged at hospital level and then district and provincial level.

Source: MEA data Dec 2015-Dec 2016 for number of posts. HISDU data Dec-Jan ‘17 for PPSC hiring.

Indoor: 89% in Jan 17, against target of 85%.

Emergency: 90% in Jan 17, against target of 90%.

Source: HISDU, Primary & Secondary Health Department.
Under the new central rate contract for medicines, 70 percent of the medicines will be procured from international firms like GSK and Pfizer. Patients in THQs/DHQs in Punjab are hence expected to receive high quality medicines.

Increased monitoring, linked to inventory system is expected to reduce pilferage. Cross-validation between data sources (prescription management system and medicine inventory and equipment control system) will help reduce pilferage. Data available through PMIS will additionally improve P&SH Departments demand planning, and supply management capabilities.

6.1.14.3 Drug Testing Laboratories

A state-of-the-art drug testing lab is working in Lahore while such labs situated in Rawalpindi, Multan, Faisalabad and Bahawalpur are also being developed according to the international standards. DTLs of Lahore, Rawalpindi and Faisalabad will be upgraded by LGC, UK and DTLs of Multan and Bahawalpur would be upgraded by experts from Ministry of Health, Turkey at the level of ISO-192025 Certification.

6.1.14.4 Compliance to Minimum Service Delivery Standards

Compliance should be monitored through Monitoring and Evaluation Assistants and PMU’s inspection team. First five hospitals would receive financial incentives upon completion of MSDS. There are 160 indicators which are part of the MSDS compliance and the percentage of protocols being followed by 40 hospitals was 19 percent in Feb 2017, which is expected to reach at least 50 percent by Dec 2018.

6.1.15 Family Planning

Population Welfare Department (PWD) has launched a revamped media campaign with early indications of success. On average 50 calls are received each day of which 82 percent are regarding contraceptive methods and 5 percent regarding family planning facilities. In the long run, improving CPR requires cross-sectoral strategies and alignment.

6.1.16 Provincial Health and Nutrition Program

Provincial Health and Nutrition Program (PHNP) was rolled out in March, 2013 with Department for International Development- UK (DFID) backing to support delivery of Essential Health Services Package (EHSP). The objective of the Program is to bring about a reduction in the morbidity and mortality arising from common illnesses, especially among the vulnerable population. The Program plans to achieve this by improving health and quality of life for women, children and the poor, and progress towards the MDGs, now SDGs by increasing delivery and access to nutrition, family planning, maternal, new-born and child health services.

6.1.17 Information Systems

6.1.17.1 E-Vaccs

Under E-Vaccs, an immunization information system with an accompanying smartphone application for vaccinators stores real-time immunization records onto a centralised database. The first E-Vaccs application was launched in June 2014 in four districts of Punjab and rapidly rolled out to all 36 districts by October 2014. Around 4k smart-phones with mobile application were provided to field vaccinators.

Attendance: Instead of signing registers at BHUs as proof of attendance, vaccinators now sign-in three times a day. The first check-in is at their assigned location, the second at their kit stations which is usually a mosque or a house in the district and the third at the end of the day when they have to enter a vaccinator log on their smartphone application of how many children were vaccinated and which antigens had been used.

The sign-in is done by taking a picture of the kit station with the smartphone application. The pictures are geo-tagged and time stamped, providing evidence of vaccinators’ physical presence at the location. As a result of this attendance improved drastically from 36 to 94 percent.

Coverage: To improve coverage, a dashboard was developed to monitor the performance in each district, including each

82Source: P&SH Dept, PMU.
individual vaccinators activity and earmark areas covered by the field workers for any reason. This new and improved system was dubbed E-Vacc-2 and was implemented throughout Punjab by October of 2015. Using these initiatives, geographical coverage ended up increasing from 25 percent in 2014 to 88 percent in 2016.

**Figure 35: Immunization under E-Vaccs-Punjab Coverage**

![Map of Punjab Vaccination Coverage from October 2014 to May 2016](Image)

**Note:** This map depicts Punjab Vaccination Coverage from October 2014 and May 2016. Red Area shows vaccination activity not recorded in the vicinity. Green area shows vaccination activity conducted in that month in the vicinity.

Vaccination Cards: Har Zindagi – Every Life Matters, a research project from Information Technology University (ITU), made the original application more accessible and improved efficiency in record generation by coming up with a redesigned immunization card for parents. Similar in design and color to a Pakistani passport so parents would keep it more carefully, the new immunization card contains a Near-Field Communication tag inside it that enables real-time information sharing between the card and the mobile application in the vaccinators smart-phones once they are tapped together. This helps generate detailed digital records for each child and helps field vaccinators rely upon the same data for all subsequent visits.

**6.1.18 Health Insurance Program**

Health Insurance program being managed by the Punjab Health Initiative Management Company (PHIMN) formed to lead social protection initiatives in health. It mandated to execute Prime Minister’s National Health Insurance Program in the Punjab and distribute Pakistan Sehat (health insurance) cards.

Both public and private healthcare facilities having 10 plus beds and provisionally licensed by Punjab Healthcare Commission are entitled to be included in the scheme. The beneficiary will then be eligible to go to any panel hospital. The State Life Insurance Corporation of Pakistan is managing the provision of services in all districts selected for the insurance program. Punjab government will pay the premium to the insurance company. Between January to June 2017 three more districts will be added, benefiting a population of 1.6 million families and 11.2 million individuals. The government aims to implement this programme in all 36 districts of Punjab by the end of 2018.

**6.1.19 Punjab Health Line**

At a time when Dengue continued to pile casualties over 350,000 and left many confused and hopeless, PITB established a call center in merely two days. This meant to feature a toll free 24/7 helpline (0800-99000) where people would call for registering complaints and seeking advice with 150 doctors on reception. Punjab Health line has registered over 250,000 calls till date. Callers could bring to the attention of these health professionals any health-related issues ranging from sanitation related matters to overcharging of health services by hospitals. The health initiative is still active and has registered over 250,000 calls to date.
6.1.20 Child Stunting and Stunting Reduction Program

The Khadm-i-Punjab Child Nutrition and Stunting Reduction Program has been approved. In the first phase, the program will be launched in 11 districts of south Punjab.

Punjab exclusive breast-feeding bill is being chalked out as only 18 percent mothers in Punjab exclusively breast feed which is one of the major reason for high stunting and wasting in children. To promote exclusive breast feeding, Punjab is planning to pass exclusive breast-feeding bill.

The Health Department is working with P&D to set 2020 targets to reduce the prevalence of stunting and wasting in Punjab. The new targets for 2020 are being set and will be finalised once a cross-sectoral plan is drawn with the help of the P&D department.

6.1.21 Challenges

The first major reason for poor health outcomes in the Punjab is the long-standing urban bias in provision of public health services. The health system is biased in favour of the urban elite and against the provision of primary health care. The situation is particularly bad in the rural areas. Citizens’ reluctance to use even the government health facilities that may be available is the high degree of absenteeism of key personnel from the facility.

**Shortage of staff:** The stock of human resources in the health sector is skewed, with a relative oversupply of doctors and a shortage of nurses and paramedics—it is estimated that there are two doctors per nurse in the Punjab, instead of a desirable ratio of one doctor per at least three qualified nurses. The shortage of nurses and health technicians is a major contributor to poor standards, that can subtract from the good work performed by doctors.

This shortage impacts with poorer groups with more severity, who are not able to afford private nursing care to fill the gaps in the public sector.

**Lack of credible data to inform policy:** Punjab’s health system needs better data collection methods and organization. Current surveys in Pakistan lack information on the leading causes of health status of mothers and children. The data that exists does not show any discernible impact of publicly provided curative care on any measure of health status. If the intention of governments is to rely on these services to serve the people of Punjab, the total absence of evidence in its support needs to be explained. There has been much data collection but little that has been usable for policy analysis.

Cross cutting Reforms and integrated planning: In the long run, certain reforms in the health sector requires cross-sectoral strategies and alignment. Population control, increasing CPR, preventive health care in particular requires a cross-sectoral approach. Water and Sanitations services impact public health outcomes as do family planning and population control interventions. Secondly, bifurcated health departments in Punjab must gear to-wards institutional reforms and structural revamping. The bulging budgets along with strategic initiatives to bring the reforms in the health sector is imperative for attaining the sectoral objectives of SDGs in which health is one of the major focus.

**Expansion of preventive and promotive health services:** Preventive care refers to measures taken to prevent diseases, (or injuries) rather than curing them or treating their symptoms. Maternal and child health services, immunization and nutrition programs fall under this category. Currently greater expense is being incurred in running schemes to treat infections /diseases as compared to programmes for prevention. This increases financial burden on both governments and private individuals both, in addition to latent social implications.
Primary healthcare: For the poor and the most vulnerable, immediate healthcare arrives at the level of basic healthcare centres. A functioning, vibrant public primary healthcare system safeguards the health of vulnerable and impoverished populations often at the first most critical point of medical intervention. In many cases, it is also life-saving. The focus of the health expenditure is mainly on secondary and tertiary care. Larger hospitals by their very nature concentrate their resources in favour of some populations and away from the poor and marginalized.

Inadequate increase in district budget: While the overall budgetary allocation has increased, district level budgetary allocations should also be increased enough to not only meet new project targets but to also meet the increase in salaries.

Managing PPPs: As it pursues an innovative approach to addressing a critical health problem, Punjab government needs to ensure private sector interest and participation in the partnership. It must provide the right incentives to the private sector to participate in PPPs.

Health Workforce: The health workforce is a critical factor in the long-term planning, implementation and maintenance of healthcare services. Human resource policies need to lay out a medium- to long-term path to provide the sector with skilled, motivated and accountable health workers. The government is conscious of this challenge and has begun hiring allied health professionals previously were not recruited anywhere. These constitute skilled technicians and workers in the medical field with four-year graduate degrees and will support the consultant to manage patients.

Managing Health Insurance: The scheme is the first health insurance program of its kind in Pakistan but needs to be managed properly. Some of the concerns include:

- **Size of the benefits:** the highest level ‘priority package’ is up to Rs250,000 per person, per year, for a list of complex conditions such as cancer. It is estimated that cancer treatment costs on average are much higher than this amount. Moreover, most cancer patients also incur other related costs that are not accounted for in this amount.

- **Private sector engagement:** There is also a concern with managing private hospitals that will be on the panel. Monitoring them for quality, services and value of money may become a challenge.

- **Overburdening urban facilities:** Given the lack of healthcare facilities in rural areas, provision of health cards can bring a massive influx of patients into urban government-run hospitals already overworked. Money from this program should feature an element of primary care and public awareness initiatives rather than simply funding secondary and tertiary care. This is important since research evidence would suggest that primary healthcare initiatives in communities and public health education campaigns have a wider and larger impact on improving health in the long run.

- Lastly, the health insurance scheme talks a big game for secondary healthcare but ignores the state in which public sector primary healthcare finds itself. Under the insurance scheme, relief has been provided at secondary level.

Regional Disparities: Facilities need to be distributed evenly compared to the population catchment area. There is wide variation in the number of BHUs per district in terms of average rural population per BHUs. Rajanpur, with the fewest BHUs of all the districts, has a higher rural population per BHU—close to 30,000 people. In Faisalabad, on the other hand, a BHU serves on average fewer than 20,000 rural patients. Moreover, there is wide variation in both the number of RHCs and the rural population per RHC among the districts. Not only does this mean there are more doctors per facility in some areas as compared to others, it also means that the administrative (monitoring) workload of district officers is uneven.

**Box: Treating Hepatitis**

An example is the difference in costs incurred with respect to the prevention and treatment of Hepatitis B, both medication as well as latent costs such as social and economic implications. The cost of a Hepatitis B vaccination is less than 0.5% of the treatment cost, yet there is less focus on the former even though this cost is also fully or partially incurred by the government through infant immunisation programmes. In addition to the adverse monetary impact, the Hepatitis B patient incurs a number of hidden costs which could have been easily prevented such as the loss of employment in extreme situations, an adjustment in lifestyles as a result of medication side effects and an adverse impact on social relationships.

**Source:** Government of Punjab, P&D Department, Punjab Health Sector - Mapping Key Priority Reform Areas (2016 – 2017)
variation in the number of BHUs per district in terms of average rural population per BHUs. Rajanpur, with the fewest BHUs of all the districts, has a higher rural population per BHU—close to 30,000 people. In Faisalabad, on the other hand, a BHU serves on average fewer than 20,000 rural patients. Moreover, there is wide variation in both the number of RHCs and the rural population per RHC among the districts. Not only does this mean there are more doctors per facility in some areas as compared to others, it also means that the administrative (monitoring) workload of district officers is uneven.

6.1.22 Way Forward

Focus on preventive and promotive healthcare: To improve health outcomes and reduce the burden on the health budget, Punjab needs to renew its focus on preventive and promotive care by investing in devolved vertical programmes, social mobilisation, educational interventions and behaviour change promotion. This will achieve a number of things: a) facilitating these interventions are in line with the achievement of the SDGs, b) will involve parallel investments by other departments to improve water, sanitation and hygiene services c) increased expenditure on preventive and promotive care will reduce costs of treatment and create fiscal space to counter non-communicable and some infectious diseases that have re-emerged and/or are endemic.

Sufficient focus on primary healthcare: A stable primary healthcare system ensures patients are not compelled to go to secondary health facilities for minor problems and are able to receive appropriate treatment closer to home. Detection and diagnosis of disease can be made earlier at primary health facilities such as BHUs and RHCs, before referring a patient to the appropriate specialist centre for treatment, which in turn, reduces the burden of patients at the main hospitals. Primary facilities are also more pro-poor and do more to reduce regional disparities than tertiary ones.

Improve child mortality and maternal health: Even though Maternal Mortality in Punjab has decreased over the years, it is still high compared to regional rates. Infant Mortality rate (IMR) also remains worryingly stagnant. Improving child and mother heath requires an integrated approach including preventive health programs and improvement in health seeking behaviour and lifestyle. Skilled Birth Attendants (SBAs) play a crucial role in protecting lives of mothers and new-borns through clean and medically sound delivery practices, early identification and prompt management of complications. Maternal mortality can be prevented if potential complications are discovered and treated in time. Lowering fertility rates by increasing the use of family planning can also help reduce the number of pregnancy-related deaths. Increasing the capacity of LHV’s to undertake antenatal care will make easier for a possible birth-related problem to be identified by the antenatal care supervisor (LHV or midwife) who could then refer cases to a doctor on an as-needed basis.

Improve nutritional status of mothers and children: The Government of Punjab should implement different programmes and promote scaling up of nutrition specific interventions, particularly those targeting under-nutrition, for both mothers and children. The capacity of relevant institutions can be built via a multi-sectoral approach, to improve food security indicators, specifically focusing on children under 5 and pregnant and lactating women. The successful and complete establishment of the multi-sectoral nutrition cell (MSNC) will be crucial to the implementation of strategies across the 36 districts in Punjab.

Reduce burden of non-communicable diseases: Programmes to reduce risk factors, promote healthy diets/life-styles and decrease the overall burden of non-communicable diseases can be implemented within the region, to address NCDs such as chronic diseases, mental health and substance abuse.

Private sector engagement: PPPs and outsourcing in non-clinical services and lab/ diagnostic facilities can be explored as the first point of up scaling private sector engagement. For this purpose, a) articulate that contracting-out policies need to be developed for high value services such as diagnostic laboratory support, ambulance services or the provision and maintenance of advanced medical machines to effectively engage and monitor the private sector b) for non-core clinical services such as janitorial services, dining, parking, security, hospital waste and hospital incineration can also be outsourced to the private sector. While private sector engagement to run hospitals independently is also being explored, it has not been more successful in countries with more developed/ advance healthcare systems. Another area to explore or private sector involvement is engaging with media on awareness campaigns and using innovative partnerships with technology houses to pilot innovative eHealth services and projects.

Strengthening Family Planning: Family planning programs can reduce unwanted fertility by reducing the various
social, economic, and health barriers to the use of contraception. Fulfilling the unmet need for birth spacing through raising the CPR to 59 percent would result in reduction of 45 percent of maternal deaths, 26 percent of infant deaths, and 76 percent of young child deaths^83.

In view of the substantial levels of unmet need of family planning in Punjab and the limited resources available, a strong focus on improving access to quality family planning services would likely be a more effective and practicable short-term strategy for increasing contraceptive prevalence than attempting to generate additional demand through, for example, livelihood programs for women^84. Governments should launch a transformative communication strategy targeting all stakeholders, engage men with family planning information and services, undertake youth-friendly approaches to reach the next generation with family planning information, encourage PPPs and advocacy, mainstreaming ownership of the family planning mandate in the health system. The direction of reforms under PPIF support this.

**Improve Supply of Medicines:** Improved supply of medicines should be underpinned by a comprehensive drug control regime. Health departments should design a regulatory framework to monitor and investigate drug activity from initial reporting to final inspection. Supply of medicines can be improved by enhancing provision of cold chain equipment to districts, ensuring uninterrupted supply of vaccines through improved logistics and undertake capacity building of Expanded Program for Immunization (EPI) staff.

**Improve Data Collection:** A high priority for either the statistical bureau of the province and the main line ministries is to work together to collect data that can be used for answering the simplest questions concerning the determinants of health status, and general well-being, of the Punjabi citizenry. There has been much data collection but little that has been usable for policy analysis.

Improving management of the health facilities: It’s not necessary that doctors are the only entities who can control the administrative matter of hospitals or any other type of health facilities. An experienced person with the academic background of disciplines related to management, administration and finance could equally manage the facilities effectively.

**Handling Data Gaps**

Existing surveys are inadequate for answering essential policy questions. At present much of the data is collected in an ad hoc, uncoordinated manner to fill information gaps.

Data capturing indirect variables is also useful but missing. Non-healthcare variables, such as roads (measure of accessibility of health care), the disease environment, dietary patterns, educational attainment for children and parents alike, access to clean drinking water etc can significantly impact health outcomes. Data on some of these variables such as road network, school enrolment etc exists. However, it is not in a form that can be merged for analysis. Insufficient data on water quality limits greatly limits our understanding of impact on health.

Long-term panel data collection can lay the foundation for more rigorous policy assessments. Tracing indicators over time can help assess impacts of any policy change on health outcomes and also enable policy makers to identify the impact, if any, of different variables on status of health.

A high priority for either the statistical bureau of the province and the main line ministries is to work together to collect data that can be used for answering the simplest questions concerning the determinants of health status, and general well-being, of the Punjabi citizenry.

The new data that can be collected and will be critical to informing policy in the immediate to mid-term includes:

1. **Vacancies for staff in public facilities:** This is relevant if the measures of input are facilities built since under-staffed clinics abilities to serve are undermined.

2. **Absenteism in facilities:** It is important to investigate the reasons for absenteism for greater accountability of public providers to policymakers.

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^84 Background Paper for PPIF 2017
3. **Quality of medical advice:** This divide into two overlapping questions: what do doctors know (and how much do public sector doctors know compared to private sector doctors and other practitioners and what do they do in practice?

4. Size of the private sector and the substitutability of public for private care. From the patient experience, it is known that there is an enormous private sector, largely unknown to public officials. However, much more thorough study is required of what providers exists.

5. Data on water quality and sanitation services to help establish the link between clean drinking water and sanitation, and public health outcomes.

6. Indicators that show improvement in terms of, for example, increased visits to ANC centers, and increased patients, need to be corroborated with further investigation to see if this increase was due to increased coverage, increased population or increased ailments.

Moreover, mapping SDGs will be insufficient without a measure of the relevant indicators. For example, in specific there is a need to update measures for out of pocket expenses and overall provincial health accounts and access of coverage of data. The Government of Punjab has done a mapping of these indicators and identified where data is lacking.

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**Key initiatives in data collection:**

Punjab Health Survey: The Punjab Health Survey is a coordinated effort of DFID and the government of the Punjab to pave way for collecting periodic data to prioritize for the health sector and gauge progress on the roadmap. The survey provides data on immunization coverage, skilled birth attendance and breastfeeding practices for all 36 districts. The field work involves 1,320 randomly selected survey sites spread over every part of the province and reaches 18,480 households. It used Computer Assisted Personal Interviewing (CAPI). The capacity for conducting household surveys developed in the province is the real value added and the province will benefit from this enhancement in other fields as well.

District Health Information System: DHIS is district -based Routine Health Information System functional since 2009. It represents a mechanism of data collection, transmission, processing, analysis and information feedback to the first level care facilities & secondary level health care facilities. DHIS provides a baseline data for district planning implementation and monitoring on major indicators of disease pattern, preventive services and physical resources. The revised system, unlike the previous system, gathers and collates information from Secondary level hospitals (DHQs and THQs) and incorporates many indicators of the HMIS.

Multiple Indicator Cluster Survey: Government in collaboration with the UNICEF Pakistan would conduct Multiple Indicator Cluster Survey (MICS) by using MICS six methodology at Tehsil Level with larger indicators in upcoming year 2017. This MICS would also provide base line for the Sustainable Development Goals (SDGs) for monitoring the reporting indicators in the Punjab Province.
6.1.23 Conclusion

While more investment in health expenditure is required to improve the performance of Punjab's health sector, an effective system of monitoring should also be put in place to ensure funds and public resources are properly utilized. Healthcare should be organized and financed in such a way that the system provides incentives to the public, civil society and private providers for improving performance in health service delivery. The issue of continuity of care is of particular importance to leadership and governance, understanding the health system from the perspective of patients accessing points of care at different places and times, and potentially moving between public and private sectors is essential.

Punjab can adopt a focused multi-pronged approach to improve the provision of primary and tertiary healthcare by building on existing infrastructure and expanding services into areas with limited outreach. Once a universal health policy is formulated, the private sector can better identify its role in complementing that of the state in health service provision.

Following the promulgation of the 18th Amendment to the Constitution, provincial and local governments in Pakistan are constrained by a lack of expertise in formulating pertinent health policies and inadequate institutional capacity to carry out reforms. Hence, participation of health researchers, public health physicians, and social scientists is essential in knowledge synthesis, translation and advocacy to effectively implement the interventions in the health sector. Complex pathways of gender inequalities leading to poor health outcomes such as maternal and child morbidities and mortalities, nutritional deficiencies, have not been clearly understood, and making this a health research priority may facilitate effective policymaking and implementation of local prevention programs and better healthcare delivery in the Punjab.