



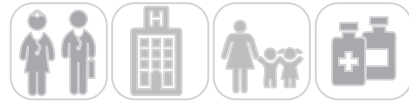
Sub-National Governance
Programme



NEEDS ASSESSMENT AND EVIDENCE BASED BUDGETING

Primary Health Care

Sheikhupura



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Primary Health Care

Sheikhupura

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This report has been prepared to better understand the dynamics of the budgeting of health service delivery at the district level in Punjab, Pakistan. The report is a result of desk based analyses carried out in collaboration with several partners. This work was led by Naveed Saleh Siddique, Governance Adviser, SNG Punjab, and supported by the following research associates: Khadija Maryam, Meenal Javed, and Adil Naseem. The Geographic Information Systems (GIS) maps and analyses were supported by the World Bank's team working on IT solutions for improving governance. The analyses of budget and financial statements were undertaken by the Sub-National Government (SNG) Programme Punjab team, which is presented as a separate report.

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List of abbreviations

ARI	Acute Respiratory Infection
BHU	Basic Health Unit
BOD	Burden of Disease
CDC	Community Disease Control Programme
CEI	Client Exit Interview
CM	Chief Minister
CMW	Community Midwife
CPR	Contraceptive Prevalence Rate
DCO	District Coordination Officer
DHA	District Health Authority
DHDC	District Health Development Centre
DHIS	District Health Information System
DHQ	District Headquarter Hospital
DoH	Department of Health
DRG	District Reform Group
EDO	Executive District Officer
EDO (H)	Executive District Officer (Health)
EPHS	Essential Package of Health Services
EPI	Expanded Programme on Immunisation
FP	Family Planning
FY	Fiscal/Financial Year
GIS	Geographic Information System
HFA	Health Facility Assessment
HIV	Human Immunodeficiency Virus
HNEO	Health and Nutrition Education Officer

HR	Human Resource
IMR	Infant Mortality Rate
LHV	Lady Health Visitor
LHW	Lady Health Worker
MCH	Maternal Child Health
MCHC	Maternal & Child Health Centre
MDGs	Millennium Development Goals
MEA	Monitoring and Evaluation Assistant
MICS	Multiple Indicator Cluster Survey
MIS	Management Information System
MMR	Maternal Mortality Rate
MNCH	Maternal, New-born and Child Health
MO	Medical Officer
MREO	Monitoring Research and Evaluation Officer
MSDS	Minimum Service Delivery Standards
MPPT	Multi-Purpose Paramedic Trainer
MTBF	Medium Term Budgetary Framework
NMNCH	National Maternal, Neonatal and Child Health
OPD	Out Patient Department
ORS	Oral Rehydration Salts
PDHS	Pakistan Demographic & Health Survey
PHC	Primary Healthcare
PHCC	Punjab Healthcare Commission
PHDC	Provincial Health Development Centre
PHIS	Punjab Health Information System
PER	Performance Evaluation Report
PITB	Punjab Information Technology Board
PLGA	Punjab Local Government Act

POL	Petrol Oil & Lubricant
PSLM	Pakistan Social and Living Standards Measurement Survey
PRSP	Punjab Rural Support Programme
RHC	Rural Health Centre
SBA	Skill Birth Attendant
SHC	Secondary Health Care
SH&NS	School Health and Nutrition Supervisor
SFHP	Second Family Health Project
SOPs	Standardized Operating Procedure
SNG	Sub National Governance
STIs	Sexually Transmitted Infection
TBAs	Traditional Birth Attendants
THQ	Tehsil Head Quarter
TRF	Technical Resource Facility
TPI	Technology for People Initiative
TT	Tetanus Toxoid
U5MR	Under five Mortality Rate
UC	Union Council
UN	United Nations
UNICEF	United Nations Children's Emergency Fund
VCT	Voluntary Counselling and Testing
WHO	World Health Organization
WMO	Women Medical Officer

Executive Summary

- i. The Sub National Governance (SNG) Programme aims to strengthen government's capability to deliver health and education services by providing technical assistance to sub-national governments of 12 selected districts of Punjab and Khyber Pakhtunkhwa (KP) to enable them to: take decisions based on robust evidence; make services more responsive to people's need; and strengthen government capability to deliver basic services.
- ii. To achieve these targets the SNG Programme conducted a health sector needs assessment in district Sheikhpura to identify the gaps and issues in access, coverage and quality of primary health service delivery (just focusing on BHUs) based on some select indicators for each aspect of the above stated aspect of service delivery. The aim was to identify the real needs of the people, especially women, children and marginalized groups; and suggest pragmatic and practicable solutions to bridge these gaps and improve service delivery.
- iii. The needs assessment was carried out using the latest secondary data available from the published sources on Primary Health Care (PHC) sector. Additionally, primary data collected by the Directorate General of Health Services in Punjab for the Punjab Health Information System (PHIS) and the data collected from the EDO (H) of the district was also used. The World Bank team also supported the study by carrying out a GIS analysis to assess the ease of access to PHC facilities in district Sheikhpura. The current situation was assessed and the gaps were identified in PHC service delivery by comparing the present status of select indicators with the standards of service delivery laid down in the provincial Essential Package of Health Services (EPHS) and the Minimum Service Delivery Standards (MSDS).
- iv. This report consists of six sections. First four sections are introductory in nature providing background and a vivid picture of current situation of primary healthcare in Punjab and district Sheikhpura, fifth section provides findings of the study and gaps identified in service delivery at the PHC level, while the last section gives recommendations to bridge these gaps.

Budget allocations

- v. Out of the total district budget of Sheikhpura, Rs.1.072 billion was spent in the health sector. This is almost 19% of the total expenditure in the financial year 2013-2014. The salary expenditure for the same year was Rs. 5.153 billion and the non-salary part consisted of Rs. 0.619 billion. Primary health was allocated Rs. 432.075 million during the same year while the utilization of budget in PHC was 97.55%.
- vi. In addition to this, Rs. 5.5 million was also allocated to District Health Development Centre (DHDC) that was established in Sheikhpura in 1995 with the aim to improve district health service through training, development and

operational research activities. This DHDC has 5 technical staff and 6 supporting staff members.

Coverage

- vii. Maternal Mortality Rate (MMR) is measured as the number of maternal deaths per 100,000 live births. MMR in Punjab was estimated to be 227 per 100,000 live births in 2012-13. During the same year 73% of the women received pre natal services in Punjab and 76% received the same service in district Sheikhpura. As the standard for coverage of pre natal services is 100%; therefore a gap of 24% exists in coverage of the service. During year 2013, Antenatal Care (ANC-1) coverage in Punjab was 93% while in district Sheikhpura 99% woman availed this facility against the expected population i.e. 3.4%. Here, the expected population refers to the estimated yearly target population for ANC-1 coverage. According to the PSLM survey, during the year 2013, postnatal care services were availed by only 28% women in Punjab and 24% in district Sheikhpura against the standard of 100% coverage, leaving a gap of 76% in the district. During the same year, total infants deaths in BHUs of district Sheikhpura were 1802 while 40 maternal deaths were also reported.
- viii. Safe childbirth and effective neonatal care are essential to prevent child mortality. According to MICS 2011, Infant Mortality Rate (IMR) in Punjab was 82/1000 live births, and 77/1000 live births in district Sheikhpura while Under 5 Mortality Rate (U5MR) was 104/1000 live births in Punjab and 97/1000 live births in district Sheikhpura. Additionally, 84% of the children aged 12-23 months were fully immunised in the district. Although time series data suggests that IMR is showing a downward trend in the province, a lot needs to be done to bring the IMR down to meet the MDG target for infant mortality.
- ix. A child's birth weight is an important indicator for vulnerability to childhood illness. According to MICS (2011), out of total live births, 28.1% babies in Punjab and 27.7% in district Sheikhpura were born with low birth weight (<2.5kg). It was found that 15% of children in Punjab and 17% in Sheikhpura were severely stunted. This is a challenge for health sector planners and caregivers as this has an adverse effect on infant mortality.
- x. Deliveries conducted by Skilled Birth Attendants (SBAs) at the time of delivery have important contribution towards averting maternal and neonatal mortality and morbidity at the time of childbirth. During the year 2013, 75% deliveries in Punjab and the same percentage of deliveries were conducted in district Sheikhpura by SBAs against the expected population i.e. 2.9%. Therefore a gap of 25% still exists against the standard.
- xi. Maternal, New-born and Child Health (MNCH) is a priority area under the Provincial Health Roadmap. This is also an area that needs special focus of the district in order to improve coverage of MNCH related services and to reduce IMR and MMR. In order to improve coverage and outcomes of MNCH related indicators, it is recommended that MNCH related vacant positions in the district must be filled on priority basis. In case it is not possible to fill all positions, it is

recommended that a cluster approach may be adopted and a doctor may be allocated to three or four BHUs. Additionally, as the data suggests that most of the deliveries are taking place at home, therefore it would be useful to train the traditional birth attendants and group them with Lady Health Workers (LHWs), where referrals are made in case of complications. The district can also utilize the DHDC to train the Traditional Birth Attendants (TBA), so that they can play a better and effective role.

- xii. The most important and relatively ignored component of MNCH is advocacy and awareness raising. It is recommended that the district Sheikhupura may devise a comprehensive advocacy and awareness raising campaign to communicate MNCH related messages to the public. The local cable network can be used for this campaign.
- xiii. Immunisation coverage is a good indicator of health system performance. TT immunisation indicates the proportion of pregnant women protected against Tetanus Toxoid. In 2013, 81% women in Punjab and 86% women in district Sheikhupura were immunised against the expected population while according to the MSDS the immunisation coverage should be 100%. This again indicates a gap in coverage of TT immunisation. Similarly, total EPI coverage in Punjab was 47% while in Sheikhupura it was 59%. According to Pakistan Social and Living Standard Measurement (PSLM) survey, Polio 1 coverage in Punjab and Sheikhupura was 98% and 99% in 2013. These figures seem to be magnified as a number of cases of polio were reported in the province during the year 2013.
- xiv. The data clearly indicates gap in immunisation coverage in the district. However the extent of gap varies according the source of data that is looked at. This creates doubts on the authenticity of the data. Therefore there is a need to ensure that data is collected through an independent agency, using robust data collection methodology, at least on an annual basis, if not earlier.
- xv. Additionally, as found during the study, one of the major reasons for vaccinators' poor performance is that the funding for POL is not released on time, resultantly the vaccinators are not able to visit their beats for vaccinations. Therefore, it is recommended that the POL for vaccinators may be reflected as a separate head in the budget, and not made part of the overall health sector budget. Moreover, fleet cards are recommended to be issued to the vaccinators for POL. It is further proposed that in district Sheikhupura, the Union Councils (UCs) with low immunisation coverage and with incidence of polio and measles reported should be marked as hot-spots and special focus in terms of manpower and other resources should be given to these hotspots to improve immunisation coverage and control the incidence of disease.
- xvi. 1The vaccinators are spending a lot of days on non-routine vaccination, which is affecting their routine vaccination. There is a need to reduce their days spent in non-routine vaccination. A decision in this regard has to be made by the provincial health department.

- xvii. SNG has conducted a detailed study of existing business process of EPI. The report was presented to the Health Department and other relevant stakeholders in a meeting chaired by the Secretary Health Department. It was agreed in the meeting by all the stakeholders that the suggested model is workable and likely to improve coverage. It is therefore recommended that work on piloting the model proposed in the SNG report may be taken forward on priority basis by the Health Department.
- xviii. E-Vacccs monitoring system rolled out in the districts with the help of PITB needs to be strengthened by imparting additional trainings to the vaccinators. The monthly report generated by PITB of this data must be shared with the DCOs concerned and the EDO (H). The district officers need to be trained to effectively use these reports to undertake effective planning for increasing coverage.
- xix. It is further proposed that in district Sheikhpura, the Union Councils (UCs) with low immunisation coverage and with incidence of polio and measles reported should be marked as hot-spots and special focus in terms of manpower and other resources should be given to these hotspots to improve immunisation coverage and control the incidence of disease.
- xx. 12% couples in Punjab and 20% in Sheikhpura consulted health facilities for Family Planning (FP), indicating a huge gap of 80% in district against the MSDS prescribed standards. Increase in CPR can be achieved through improvement in availability of contraceptives at the health facilities, and through referrals. There is a need to establish robust stock monitoring system to ensure that the right stock reaches the right healthcare facilities where it is in demand. Additionally, proper protocols do not exist for referral of FP clients. There is a need to develop these protocols. LHWs are discouraged not to refer clients to healthcare facilities for contraceptives due to shortage of contraceptives at these facilities. Supplies need to be improved to create the right incentive for LHWs to undertake referrals. LHWs must also refer women for long-term methods against referrals for short-term methods. Likewise, targets can be set by the district for provision and referrals for family planning services. Proper data recording will be essential to monitor that the targets are achieved. Therefore recording of FP information can be made part of the data collected by the health sector Monitoring and Evaluation Assistants (MEAs).
- xxi. The top five diseases recorded during the year 2013 were Acute Respiratory Infection (ARI), Fever due to other causes, Scabies, Peptic Ulcer Diseases and Diarrhoea/Dysentery in <5 years. ARI was the commonly occurring disease in Punjab as well as in district Sheikhpura. Time series analysis of data suggests that although incidence of ARI is coming down over the years the incidence for diarrhoea/dysentery is on the increase, requiring further investigation into its causes.
- xxii. The Government of the Punjab is pursuing a policy of provision of free medicine of to all patients attending a public sector health facility. However,

the availability of medicine in BHUs and that too in accordance with the burden of disease is an elusive goal. Stock out status measures the percent of health facilities that experienced a stock out of any tracer drug/medicine for any number of days at any time in the year. The percentage for all drugs out of stock was 25% in Punjab and 51% in district Sheikhupura as per the PHIS data. This is an alarming situation and indicates a gap in coverage of health care service provision at the district level.

- xxiii. One of the major factors affecting the health care at BHUs includes staff absenteeism, limited time (from 8 AM to 2 PM) of service provision at BHUs and poorly trained staff. Only 74% of total sanctioned positions were filled in public sector health facilities of Punjab. Some of the essential staff positions such as medical officers, women medical officers and vaccinators were vacant as almost 51% sanctioned positions of MOs and 20% sanctioned positions of vaccinators were vacant in Punjab during 2014. The situation in Sheikhupura is not much different. 79 positions of medical officers were sanctioned at BHU level in the district while only 44 were filled. Similarly only 84 vaccinators were present in Sheikhupura against 109 sanctioned positions.
- xxiv. Vertical programmes have been under implementation in the province for quite some time now addressing priority areas such as MNCH and EPI. In district Sheikhupura the following vertical programmes are under implementation: Expanded Programme for Immunisation, Epidemics Prevention and Control Programme, National Maternal and Child Health Programme, National Programme for Family Planning, & Primary Health Care, Nutrition Programme, Prevention and Control of Hepatitis and TB control Programme. The study found that most of the vertical programmes are working in isolation having very little coordination with the District Health Department. This has diminished the utility of these programmes and the synergized effect, that could have been possible, is missed. One of the main reasons for this is that although the various vertical programmes have been devolved from the Federal to the Provincial Government, they have not been appropriately devolved to the district level and their reorganization, which is required to integrate them with the existing health structures at the district level, has not taken place. Resultantly parallel structures exist at district level, with both working in silos with very little communication or exchange of operational information. Therefore, it is recommended that a provincial level assessment may be carried out and organizational changes be made to effectively integrate the vertical programmes with the exiting district health structures and institutions.

Quality

- xxv. To assess the quality of health facility infrastructure and equipment, a primary survey was conducted by Technical Resource Facility (TRF) at 22 health facilities including 13 BHUs in district Sheikhupura. The study revealed that most of the

BHUs lack basic infrastructure and equipment specified in MSDS. Client Exit Interviews (CEIs) were also conducted which showed that majority of the clients visiting the public sector primary healthcare facilities were generally satisfied with the services. The lack of essential equipment has to be made good over time by the district, as a huge capital investment is needed in procuring missing equipment, which is not possible immediately due to the large sums involved. Additionally, the study also found that even the existing equipment is not well maintained by the districts. Therefore the district must make necessary allocations for maintenance and repair of existing equipment in its budget.

- xxvi. A detailed analysis has been carried out to assess the workload of total 79 BHUs of Sheikhpura using PHIS data. The analysis revealed that average outpatient load per working day across all BHUs in the district was 23 while majority of the BHUs in Sheikhpura (43 out of 79) experienced a “LOW” outpatient load per working day relative to average across all BHUs in the district. There is a need to investigate this further and assess the reason for the same, in case the workload is low due to issues of accessibility or lack of services at the BHU. The district must assess the cost of providing missing facilities at the BHUs. In case the cost is too high, the district may decide to consolidate BHUs. This would also spare staff and other resources that could be utilized elsewhere in the district. In addition to that, it was also observed that total OPD cases have significantly reduced from 838,000 in the year 2010 to 550,000 in the year 2013.
- xxvii. BHUs are the first port of call for a large majority of population of the district when it comes to medical treatment. A large number of MNCH related services are also provided at the BHU, therefore there is a need to improve the working of BHUs. In order to improve the performance of BHUs, community based monitoring is proposed. Additionally, a cluster approach is recommended where a few BHUs are tied up with an RHC and the RHC is to support the working of BHU and be responsible for its performance.

Access

- xxviii. Access to health facilities is an important aspect of the overall health care system and has direct implications for the burden of disease. For the purpose of this report, the issue of access to BHUs was looked into using GIS maps and by developing different layers of data such as BHU locations, presence of roads and availability of doctors. On the basis of this analysis those areas were also identified that do not have any access to BHUs because of distance from locality and travel time that make these facilities almost inaccessible at the time of emergency. There is a need to undertake detailed analysis on similar lines to identify all such areas. Medical camps are proposed in order to provide healthcare facilities to these inaccessible localities/villages. Most of the bottlenecks in PHC service delivery are governance related issues, and improvement in governance is likely to improve the quality of service delivery. It is recommended that the District Health Authorities (DHAs) be proposed as a

local government tier under the Punjab Local Government Act (PLGA) 2013, must be implemented forthwith in letter and spirit. The service delivery at the district level is severely affected by over centralization at the provincial level. If DHAs are established and sufficient decentralization of authority and power is allowed along with a robust monitoring and evaluation system, the PHC service delivery is likely to improve.

Governance and management issues

- xxix. It has been found in this study that evidence based planning is not being practiced in the districts. This is for various reasons - lack of capacity and credibility of the available data being few such reasons. In order to improve the quality of health sector data, PITB is also involved in a number of initiatives. Punjab Health Watch and Medicine Inventory Management System are two such initiatives that are in various stages of development. Some capacity development has also been carried out by PITB in this regards, but feedback from the field suggests that a lot needs to be done to enable the health sector managers at the district level to use the initiatives to improve service delivery in their districts. One major drawback of these systems is that they have been designed as monitoring tools and thus lack the information and reporting needed for effective planning. Additionally, the health sector planners do not have any incentive to use data for planning. The present system of performance management is not effective and resultantly the health care managers have no incentive to perform better as their posting, transfer or promotion is not linked to their performance against some well-defined key indicators. Therefore it is proposed that the appointment of officers must be on merit and for a fixed tenure, subject to achievement of performance targets. This system will work effectively if a robust data gathering system is also in place and credible data is collected to determine the performance of health care staff against service delivery indicators. A move in this regard is already on the cards under the Health Roadmap Punjab. The Punjab Health Roadmap team has also prepared disaggregated targets for each of the districts in the province against selected indicators. Once the results are tracked over time and rewards and punishment linked with the performance of health sector managers, they will have an incentive to use the data to improve health service delivery.
- xxx. Most of the bottlenecks in PHC service delivery are governance related issues, and improvement in governance is likely to improve the quality of service delivery. It is recommended that the District Health Authorities (DHAs) proposed as a local government tier under the Punjab Local Government Act (PLGA) 2013, must be implemented forthwith in letter and spirit. The service delivery at the district level is severely affected by over centralization at the provincial level. If DHAs are established and sufficient decentralization of authority and power is allowed along with a robust monitoring and evaluation system, the PHC service delivery is likely to improve.

1 Background and introduction

1.1 Background

The Sub-National Governance (SNG) Programme aims to strengthen governments' capability to deliver health and education services by providing technical assistance to sub-national governments of 12 selected districts of Punjab and Khyber Pakhtunkhwa (KP) to enable them to: take decisions based on robust evidence; make services more responsive to people's needs; and strengthen government capability to deliver basic services.

To support the achievement of these objectives, the SNG Programme conducted a health needs assessment in Sheikhpura district, Punjab to: identify gaps and issues in the access, coverage and quality of primary health services; highlight gaps in health sector performance indicators and identify the factors influencing these gaps (planning, budgeting and management processes); and inform relevant stakeholders about the service delivery gaps and identified needs.

1.2 Introduction

This needs assessment was carried out in-house using the latest secondary data available from published sources on primary healthcare sector. Primary data collected by the Director General Health Services, Punjab for Punjab Health Information System (PHIS) was also used. Additionally, data was also collected from EDO (H) of the districts concerned for the analysis carried out in this report. Wherever available latest and most reliable sources were used, and to further enrich the study a GIS-based analysis was also conducted by the World Bank team for this report, in order to examine the ease of access to the primary health facilities in district Sheikhpura. The gaps in service delivery of PHC were identified, based on a set of representative indicators which address each of the three aspects of PHC, namely access, quality and coverage. This was followed by district health sector current budget review in order to find out how the finances at the district level can be reallocated in order to meet the identified needs better. On the basis of these analyses, budget proposals will be prepared for aligning the district budget to sectoral needs. These budget proposals are presented in a separate report.

Although, the PHC services are delivered through, both, the BHUs and the RHCs; however, for the purpose of this needs assessment study, the scope is limited to the BHUs in district Sheikhpura.

The needs assessment report has been divided into six sections; first section is introduction which provides the background, objectives and scope of the needs assessment study. Second section discusses the overall health profile of the Punjab province and covers the key issues across the province; whereas, the third section presents the profile of district Sheikhpura. In the fourth section an analysis has been carried out of PHC service delivery by the BHUs using key indicators for access, coverage and quality, while, fifth section presents the findings of the study by identifying the gaps based on the agreed standards for service delivery, provided in the Essential Package of Health Services (EPHS) and the Minimum Service Delivery Standards (MSDS). The sixth section presents recommendations for improving primary health care service delivery in the district using evidence-based planning and budgeting targeting the citizen needs. The report includes a number of graphs and tables to support the text and to provide a clear picture of specific indicators in the district.

1.3 Objectives

The key objectives of this needs assessment are to:

- identify issues with access, coverage and quality of primary health services in light of the needs of people in the district, especially women, children and girls;
- highlight gaps in planning, budgeting and management processes, with a special focus on women, children and girls; and
- inform relevant stakeholders, including policy-makers, health managers and frontline service providers, about service delivery gaps and identified needs, along with recommendations to improve the provision of primary health care

1.4 Scope of needs assessment

The needs assessment study was conducted for district Sheikhpura (in the northern SNG cluster). This was useful in developing an understanding of health sector service delivery issues, especially for women, children and girls. The following three main aspects of the public health sector performance were considered during the needs assessment exercise:

I. physical accessibility of BHUs for the catchment population:

In order to review this aspect, estimates of the average distance and average travel time of individuals in a catchment area from a BHU were obtained through the GIS mapping of the BHUs in the district and the figures obtained were compared with the accepted standards of distance and travel time;

1.4.1 Physical access of primary health care facilities (BHUs)

In order to examine access to primary health services in BHUs in this study, the following important aspects of service delivery were analysed:

- i. **Physical accessibility of BHUs for catchment population:** In order to review this aspect, estimates of the average distance and average travel time of individuals in a catchment area from a BHU were obtained through the GIS mapping of the BHUs in the district and the figures obtained were compared with the accepted standards of distance and travel time;
- ii. **availability of roads:** This aspect of accessibility of the primary health facilities was also addressed through the GIS based analysis; and
- iii. **availability of a doctor at the BHU:** Mere access to a BHU is of a very limited use for a patient unless a doctor is also available at the facility. This aspect was also examined with the GIS analysis.

1.4.2 Coverage

In order to evaluate coverage of the primary health services in district Sheikhpura, the needs assessment exercise assessed:

- i. implementation of MSDS, the EPHS and other services packages in accordance with the local needs;
- ii. overview of disease patterns of district Sheikhpura through primary and secondary data sources, namely the PHIS and the Health Information System Punjab Annual Report (2013) and comparison of the pattern with the scope of healthcare services to assess gaps; and
- iii. availability of requisite staff, medicines, and diagnostic services at facility level in accordance with requirements of the MSDS and the EPHS; where, the information on the BHU doctors, other staff and medicines was obtained from the district health managers (EDOs).

1.4.3 Quality

The needs assessment study focused on service delivery and governance related aspects of quality, such as gauging the client satisfaction level and the effectiveness of management practices to support delivery of health care services at the local level in accordance with local preferences and needs. In this context, the following aspects were examined:

The needs assessment study focused on governance related aspects of quality, such as documentation of the client satisfaction level and the effectiveness of management practices to support delivery of healthcare services at the local level in accordance with local preferences and needs. The following aspects were examined:

- i. **Client satisfaction** This study uses the data on client satisfaction obtained from the Health Facility Assessment (HFA) survey 2011 conducted by TRF, as a part of which Client Exit Interviews (CEIs) were conducted at a sample of 7 surveyed Rural Health Centres (RHCs) in district Sheikhpura. The HFA report described satisfaction based on the perceptions of the clients using primary healthcare facilities.
- ii. **Supply side or management practices,** The management practices encompass the public financial management systems of the districts, such as budgeting, planning and management practices and how these processes take into account the local needs – especially those of women, children and girls.
- iii. **Utilisation of resources:** By comparing budget allocation and expenditure trends the resource utilization trends were reviewed (the findings of this analysis are presented in a separate report).

2 Punjab: health profile

A comprehensive review of the literature, research materials, articles, and evaluation reports has been carried out to assess the existing situation of health care services and policy interventions in Pakistan. The secondary evidence from the local and global literature highlights gaps, needs, lessons learnt and best practices, to emphasise the challenges in service provision of health care.

2.1 Background and demography

Punjab is the most populous province of the country. Its current population is estimated to be over 100 million. It has an area of 205,345 square kilometres, consisting of 36 districts and 127 tehsils¹. Despite an extensive network of public health care facilities of 340 hospitals, 2606 BHUs, 337 RHCs, 282 MCHCs and 1201 dispensaries; the overall health status of its population is below the desired level². This is evident from the key primary health indicators of the province, some of which have been discussed below.

2.2 Maternal health

Maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy. **The Maternal Mortality Rate (MMR)** is measured as the number of maternal deaths per 100,000 live births. The MMR not only represents the risk associated with each pregnancy, i.e. the obstetric risk, but it is also a measure of the progress towards Millennium Development Goal (MDG) 5 – of improving maternal health.

The MMR in Punjab was estimated to be 227 per 100,000 live births in 2012-13, which is lower than the national figure of 276³. Complications during pregnancy and child birth are recognized as a leading cause of death and disability among women of reproductive age.

In order to reduce morbidity risk, ante-natal care is essential during pregnancy. **Ante-natal care coverage (ANC-1)** is used as an indicator of access and utilization of health care services during pregnancy. Overall **ANC-1 coverage** in Punjab was 93% of the total expected population. Out of the women who availed ANC-1

1 Department of Health, Government of Punjab, *Essential Package of Health Services for Primary Health Care in Punjab*, 2013, 9

2 Bureau of Statistics, Government of Punjab, *Statistical Pocket Book of The Punjab*, 2013

3 Pakistan Millennium Development Goals Report, 2012-13, UNDP

services, 21% were reported to be anaemic⁴. **TT-II (tetanus and neo-natal tetanus)** immunisation was provided to 64% women against the expected population in Punjab, in 2013⁵.

Research indicates that MMR is lower if deliveries are conducted by **Skilled Birth Attendants (SBAs)**. In Punjab, 74% deliveries were conducted by SBAs in 2013; however, the share of deliveries conducted at public health sector facilities was as low as 28% of the expected population in 2013⁶. The number of pregnant women registered by Lady Health Workers (LHWs) reflects the extent to which pregnant women in the catchment area have come in contact with the public healthcare system, which can be used as a crude measure of access to maternal care. In 2013, the number of newly registered pregnant women per LHW was 20. While, **Family Planning (FP)** services were only availed by 12% of eligible couples from the public sector health facilities, against the expected population⁷.

2.3 Childhood mortality

Infant Mortality Rate (IMR) is not only an important indicator of a country's socio-economic development and quality of life; but it also reflects the general health status of its population. Additionally, the objective of reducing the infant mortality rate is formalized in MDG 4, which calls for a two-third reduction in under-five child mortality by the year 2015⁸. According to the Multiple Indicator Cluster Survey (MICS) 2011 report, Punjab has an IMR of around 82 per 1000 live births⁹, while the **Under-5 Mortality Rate (U5MR)** in the province is around 104 per 1000 live births. **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 2012¹⁰.

In comparison with other developing countries, such as Sri Lanka and India which had an IMR of 8 and 41 per 1000 live births respectively in 2013; Pakistan had the highest recorded IMR, estimated to be 69 per 1000 live births in the same year.¹¹ Moreover, the IMR of Pakistani Punjab was significantly higher, at around 82 per 1000 live births, when compared with the IMR of 30 for the Indian Punjab, in 2011.^{12 13}

4 Department of Health, Government of Punjab, *Health Information System Punjab Annual Report*, 2013, 21

5 The expected population refers to the estimated yearly target population for the relevant indicator covered in DHIS survey

6 Department of Health, Government of Punjab, *Health Information System Punjab Annual Report*, 2013, 1-2

7 Department of Health, Government of Punjab, *Health Information System Punjab Annual Report*, 2013, 2

8 National Institute of Population Studies, *Demographic and Health Survey 2012-13*, 117

9 Government of Punjab, *Multiple Indicator Cluster Survey (MICS)*, 2011

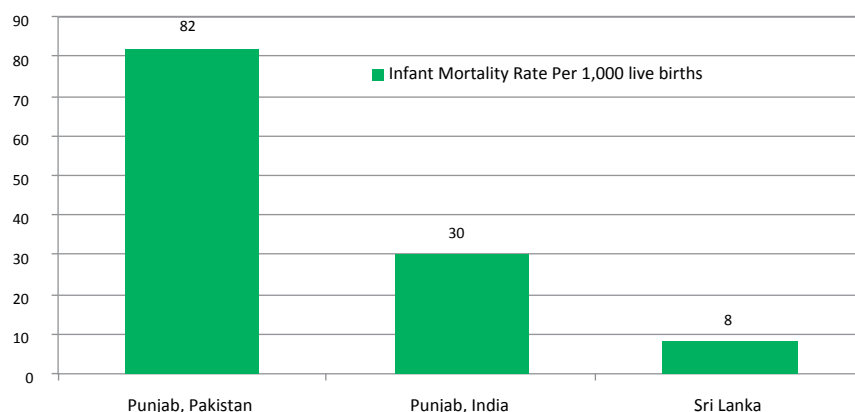
10 National Institute of Population Studies, Pakistan Demographic and Health Survey (PDHS) 2012-13, 120

11 World Bank, <http://data.worldbank.org/indicator/SP.DYN.IMRT.IN>, (18th Nov, 2014)

12 Government of Punjab, *Multiple Indicator Cluster Survey (MICS)*, 2011

13 Government of India, Ministry of Health and Family Welfare, National Health Mission, 2011

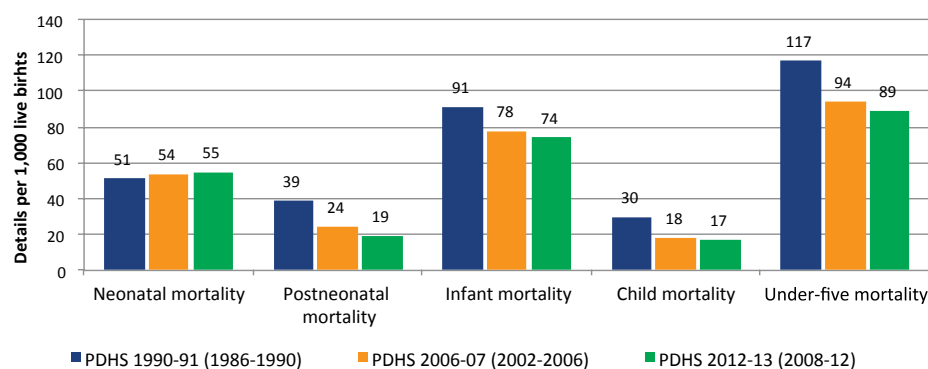
Figure 1: Comparison of IMR with other developing economies



Source: Punjab MICS 2011, National Health Mission 2011, Population Council 2013 (WHO estimates)

Childhood mortality trends observed by comparing the data from Pakistan Demographics and Health Survey (PDHS) 2012-13 with data from 1990-91 and 2006-07 PDHS surveys confirm a declining trend in both IMR and the under-5 mortality rate in Punjab to the extent of 17% and 28%, respectively. However, the neo-natal mortality rate has increased by around 4% in the same period. Furthermore, the data suggests that all three types of mortality rates are higher for rural areas as compared to urban areas in Punjab.¹⁴

Figure 2: Trends in childhood mortality (1986-2012)



Source: Pakistan Demographics and Health Survey (PDHS), 2012-13

2.4 Nutritional status

Malnutrition is a major contributor to the high number of infant deaths. A child's birth weight defines the child's chances of survival, in addition to being an important indicator for the child's vulnerability to childhood illnesses¹⁵. According

¹⁴ National Institute of Population Studies, Pakistan Demographic and Health Survey (PDHS) 2012-13, 120-23

¹⁵ National Institute of Population Studies, Pakistan Demographic and Health Survey (PDHS) 2012-13, 124

to MICS (2011), out of the total live births, 28.1% babies were born with low birth weight (<2.5kg). While, over 15% of children under the age of five years were severely stunted and around 11% children were under-weight for their age in the province in 2013.

2.5 Workload of health facilities

The number of out-patients treated in a working day can be used as an indicator of the workload of a health facility. Particularly, the number of OPD visits can help differentiate between over-burdened and under-utilized health facilities. According to the Health Information System Punjab Annual Report (2013), the total OPD visits were 94.5 million in 2013. Additionally, the per capita OPD attendance can be used as an indirect indicator of public trust on the health services. The overall per capita OPD attendance was 1 in the province, which had increased from previous years. The average per day OPD attendance in BHUs and the RHCs was reported to be 47 and 151 visits per day respectively. Furthermore, the overall age and gender wise distribution of the patients visiting the health facilities shows that the percentage of female patients was comparatively higher (55%); while the highest number of patients was reported within the age group of 15-49 years, out of which female were 29% and male 18%¹⁶.

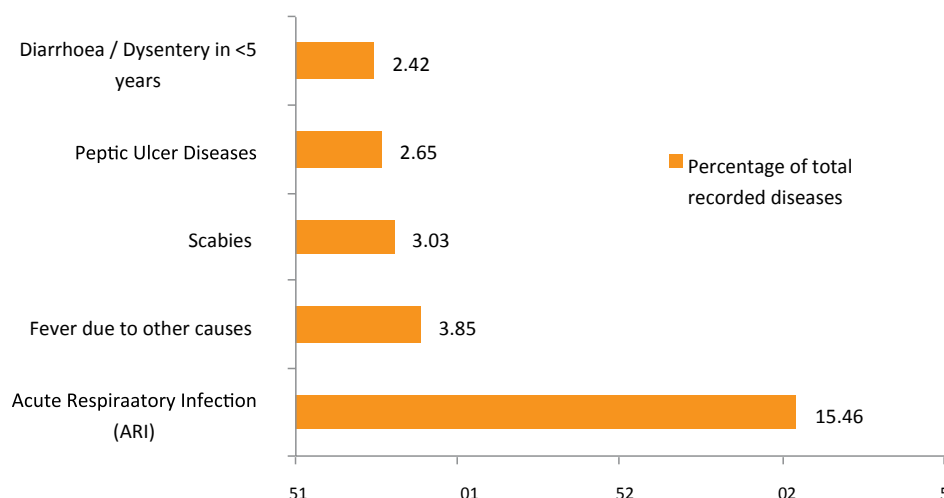
2.6 Disease pattern

The top five diseases out of a total of 43 reported in the Health Information System Punjab Annual Report (2013) were: Acute (upper) Respiratory Infection (ARI), Fever due to other causes, Scabies, Peptic Ulcer Diseases and Diarrhoea/ Dysentery in ages under and above 5 years. The total cases of ARI alone constituted around 15% of the reported cases¹⁷. Moreover, the majority of the top reported diseases are communicable, with certain diseases disproportionately affecting the poor more due to their prevailing environment and socio-economic conditions.

¹⁶ Department of Health, Government of Punjab, Health Information System Punjab Annual Report, 2013, 1

¹⁷ Ibid.

Figure 3: Top five recorded diseases in 2013 (Punjab)



Source: Health Information System Punjab Annual Report, 2013

2.7 Medicine availability

Non-availability of essential medicines specified by the EPHS for primary health care in Punjab is a key factor due to which many patients at the BHUs do not get the basic care that they require. Stock-out status is an indicator of the percentage of health facilities that experienced a stock-out of any tracer drugs/medicine i.e. 18 essential drugs, for any number of days at any time of the year which also reflects the quality and coverage of primary care at public health facilities. On an overall basis 25% of health facilities in Punjab experienced a stock-out of tracer drugs/medicines in 2013¹⁸.

2.8 Immunisation

Immunisation coverage estimates provide a measure for monitoring immunisation services, to guide disease eradication and elimination efforts, and is a good indicator of public health sector performance. Expanding immunisation coverage is also crucial for the country's progress towards achieving the MDG 4 which requires reaching the target of above 90% immunisation coverage for children between the ages of 12-23 months. The immunisation coverage for children between the ages of 12-23 months in Punjab was reported to be 89% in 2013.¹⁹

¹⁸ Ibid.

¹⁹ Pakistan Bureau of Statistics, Pakistan Social And Living Standards Measurement (PSLM), 2012-13

2.9 Human resource

In Punjab, BHUs are faced with a significant shortage of doctors and other paramedic and nursing staff. On an overall basis only 74% of all sanctioned positions were filled according to MIS cell, Health Department of Punjab. The details are as below:

Table 1: Total filled positions against the sanctioned strength

Staff positions	Sanctioned positions	Filled positions	Vacant positions	Percentage vacant
MO/WMO	2299	1137	1162	50.54%
LHV	2043	1841	202	9.98%
Dispenser	1903	1792	111	5.83%
Midwives	3527	1937	1590	45.08%
Vaccinators	3348	2702	646	19.30%
SH&NH	2006	1364	642	32.00%

Source: MIS Cell, Health Department, Government of the Punjab, 2015. EPI Cell, PHIS

2.10 Conclusion: Punjab health sector status

The identified key health indicators discussed above in some detail show that major issues related to public service delivery exist in the primary health sector in Punjab. A first glance at the overall health indicators for the province suggests that maternal and childhood mortality, immunisation, unavailability of essential medicines at the BHUs and unfilled staff positions are some of the critical areas which require improvement. These issues have now also been prioritized in the Punjab Health Reforms Roadmap, 2014.

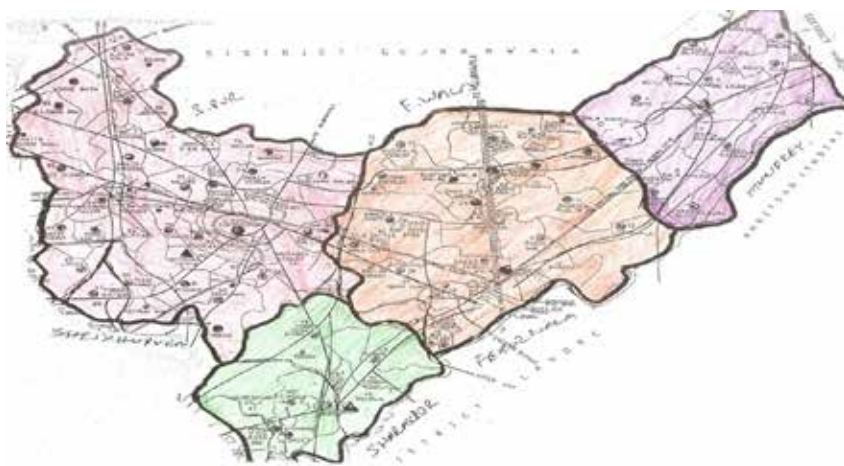
After taking a brief look at various health sector indicators for PHC in Punjab, it would be appropriate to see how district Sheikhupura fares against some of these indicators. This analysis is presented in the following sections.

3. District Sheikhpura: background

3.1 History and location of the district

Sheikhpura is one of the oldest cities in Punjab, which was established in the 19th century under the rein of the Mughal Emperor Jahangir. Sheikhpura attained the status of a district in 1920. It is spread over an area of 3,280 Sq. kms, with a length of 103 kms and a width of 74 kms; bounded by the districts of Gujranwala, Hafizabad, Narowal, Nankana Sahib and Lahore. The district consists of 5 Tehsils which include: Sheikhpura, Ferozwala, Muridke, Sharaqpur and Safdar Abad^{20 21}.

Figure 4: Map of district Sheikhpura



Source: Three Years Rolling Plan 2010-13, District Sheikhpura

3.2 Demography

Sheikhpura has an estimated population of 2.8 million, of which 51% are females and 49% are males. Majority of the district's population, around 67%, lives in the rural areas. The annual estimated growth rate of the population is around 2.41% and the population density in the district is estimated to be 678 persons per Sq. Km²².

The following section presents information on a number of key indicators related to coverage, quality and access for district Sheikhpura; so that the current state of primary health sector service delivery is established. Furthermore, gaps are identified by comparing the present status with the standards approved by the Provincial Government of Punjab for PHC service delivery.

20 Government of Punjab, <http://www.punjab.gov.pk/sheikhpura>, (7th Nov, 2014)

21 Government of Punjab, Three Years Rolling Plan (2010-2013), District Sheikhpura, 2009, 8

22 ibid

4. District Sheikhupura: health sector performance indicators

The conceptual model of effective PHC encompasses primary care which is preventive in nature and includes health promotion and community development within a comprehensive framework. The foundations of efficient PHC services are coverage, quality and access²³. These three aspects of the public primary health sector can be assessed by measuring the key health indicators against the targets and standards defined in the Millennium Development Goals (MDGs) 2015, EPHS and MSDS (2008), which aim to standardize health services for more equitable access.

4.1 Budget allocation for PHC

The total expenditure of district Sheikhupura for the year 2013-14 was Rs. 5,772 million, and out of this, Rs. 1,072 million was spent on health sector in the district. This is almost 19% of the total expenditure in the financial year. The salary expenditure for the same year was Rs. 5153 million and the non-salary part consisted of Rs. 619 million. Primary health was allocated Rs. 432 million during the same year while the utilization of budget in this sector was 97.55%. The details are given below:

Table 2: Sheikhupura Budget and actual expenditure (2013-14)

Heads	Budget estimates (Rs. In million)	Actual expenditure (Rs. In million)
District budget	5,572	5,772
Health budget	1,079	1,072
Salary budget	4,976	5,153
Non-salary budget	596	619
PHC budget	432	429

4.2 District Health Development Centre (DHDC)

Under the Second Family Health Project (SFHP) Lahore, a network of District Health Development Centre (DHDC) was established in the province with a Provincial

²³ Department of Health, Government of Punjab, Essential Package of Health Services for Primary Health Care in Punjab, 2013, 14

Health Development Centre (PHDC) Lahore. At that time a district-based DHDC Sheikhpura was established in 1995. The aim of DHDC is to improve / support the district health service under the technical support of PHDC Lahore through training, development and operational research activities. The sanctioned staff strength of a DHDC is 11 as indicated in the Table 3 below:

Table 3: DHDC Human Resource	
Technical Staff	Supporting Staff
Programme Director	Office Assistant
Monitoring Research & Evaluation Officer (MREO)	Driver
Multi-Purpose Paramedic Trainer (MPPT)	Naib Qasid
Health & Nutrition Education Officer (HNEO)	Chowkidar (x2)
LHV Trainer	Sanitary worker

4.3 Health facilities in district Sheikhpura

The healthcare service delivery in the province is provided through both public and private healthcare facilities. These two types of facilities vary in accessibility, content, affordability and equitable provision. The public sector facilities are tightly regulated even when quality may vary widely. On the other hand, where private sector provision is not optimally regulated, there is variation in quality and a clear picture is not available due to inadequate documentation, monitoring and reporting mechanisms. Public sector is by far the major provider of healthcare services in rural areas, and it is also the main provider of preventive care throughout the province²⁴. In addition to a DHQ and THQ hospitals a total of 9 RHCs, 79 BHUs and 5 dispensaries are currently operating in the district²⁵ while private sector is also contributing to healthcare service delivery with 97 small sized hospitals, 31 clinics, 2 dispensaries and 14 other facilities.^{26 27}

4.4 Coverage

Coverage is a measure of the extent of services made available to the intended users. In case of Punjab, MSDS and EPHS define the whole array of services that will

²⁴ Government of Punjab, Situation Analysis, Punjab Health Sector Strategy, 2012, 72

²⁵ Department of Health, Government of Punjab, Health Information System Punjab Annual Report, 2013, 5

²⁶ EDO (H), District Sheikhpura, 2014

²⁷ Other facilities include medical centers, medical stores and medical complexes.

be made available at the BHUs and RHCs. Coverage is not limited to a particular aspect of service provision, but ranges from resource allocation to the achievement of desired objectives²⁸.

For the purpose of this analysis, the key indicators used to assess the coverage of primary health within the areas of maternal health, child health and immunisation have been discussed in subsequent pages.

4.4.1 Maternal health

Prenatal care helps prevent complications during pregnancy and ensure healthy childbirth. In 2013, 76% of the pregnant women were given prenatal care in district Sheikhupura. However, only 26% of those receiving prenatal services received this service from a government health facility, while 65% were provided this facility at a private hospital/clinic, and 9% consulted the TBA²⁹. During the year 2013, 99% pregnant women in district Sheikhupura were covered for antenatal care (ANC-1) services; which is higher than the provincial figure of 93%³⁰. Tetanus Toxoid (TT) immunisation was provided to 86% pregnant women and the district was ranked 16th in the province³¹. While 70% of the women were immunised against tetanus/neonatal tetanus (TT-II).³²

Deliveries conducted by SBAs are important in averting maternal and neonatal mortality and morbidity³³. According to the Health Information System Punjab Annual Report, in 2013, 20% of the newly pregnant women were registered by the LHWs in district Sheikhupura. 75% of the deliveries were conducted by the SBAs as reported by the LHWs³⁴. Additionally, in 2013, 23% deliveries were conducted at government hospital/RHC/BHU while 42% were reportedly carried out at a private hospitals/clinics and remaining 35% took place at home³⁵. Furthermore, 12% of the eligible couples availed family planning services from public sector health facility against the expected population³⁶.

Globally, of the 2.9 million new born deaths that occurred in 2012, close to half of them occurred within the first 24 hours after birth. Labour, birth and immediate postnatal period are the most critical for new-born and maternal survival³⁷. During the year 2013, total infants deaths at BHUs of district Sheikhupura were 1802

28 WHO, http://www.who.int/healthsystems/hss_glossary/en/index2.html (12th Nov, 2014)

29 Pakistan Bureau of Statistics, Pakistan Social And Living Standards Measurement (PSLM), 2012-13

30 Department of Health, Government of Punjab, Health Information System Punjab Annual Report, 2013, 28

31 Pakistan Bureau of Statistics, Pakistan Social And Living Standards Measurement (PSLM), 2012-13

32 Department of Health, Government of Punjab, Health Information System Punjab Annual Report, 2013, 40

33 National Institute of Population Studies, Pakistan Demographic and Health Survey (PDHS) 2012-13, 130

34 Department of Health, Government of Punjab, Health Information System Punjab Annual Report, 2013, 42

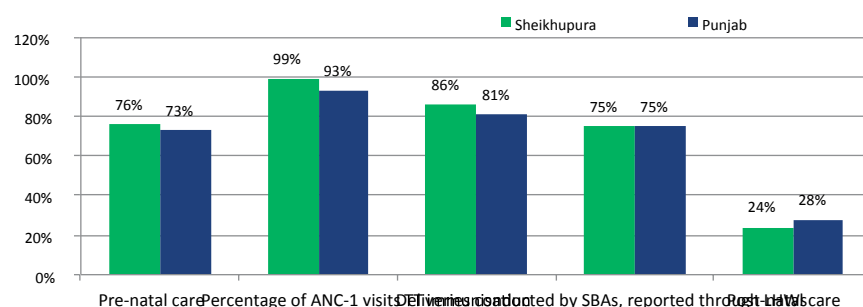
35 Pakistan Bureau of Statistics, Pakistan Social And Living Standards Measurement (PSLM), 2012-13

36 Department of Health, Government of Punjab, Health Information System Punjab Annual Report, 2013, 37

37 WHO, http://www.who.int/maternal_child_adolescent/topics/newborn/postnatal_care/en/ (12th Nov, 2014)

while 40 maternal deaths were reported at the same facility level³⁸. According to the Pakistan Social and Living Standards Measurement (PSLM) Survey, in the year 2013, only 24% of the mothers in district Sheikhpura consulted a health facility for postnatal services which is slightly below the provincial figure of 28%. Out of those who received postnatal services, 33% went to government facilities, 58% visited private facilities/clinics and 9% availed these services from other facilities^{39 ii}.

Figure 5: Situation of maternal health (2013)



Source: Health Information System Punjab Annual Report, 2013

4.4.2 Child health

A child's risk of dying is highest in the neonatal period - the first 28 days of life. Safe childbirth and effective neonatal care are essential to prevent these deaths. Globally, 44% of child deaths under the age of five take place during the neonatal period⁴⁰. According to MICS 2011, IMR in district Sheikhpura is 77/1000 live births, and U5MR is 97/1000 live births⁴¹. Additionally, 84% of the children aged 12-23 months in the district were fully immunised. It can further be added that 72% children in the urban areas while 92% children in the rural areas were fully immunised. Full immunisation means that the child has received vaccination of BCG, DPT1, DPT2, DPT3, Polio 1, Polio 2, Polio 3 and measles. Furthermore, this percentage is based on recall and records i.e. the children who reported to have received full immunisation and also have an immunisation card. It is important to note that even the record-based measures cannot be based exclusively on vaccinations recorded on the health card. Instead, it is calculated for all children who had a health card, using all immunisation reported, whether or not these were recorded on the card. The measurement of coverage of immunization based on memory recall is not very accurate⁴². In addition to this, neonatal tetanus protection was provided to 82% children in the district⁴³. These figures, however, appear exaggerated and different percentages are cited in different reports - generally higher figures of coverage are quoted in government

38 Department of Health, Government of the Punjab, Punjab Health Information System (PHIS), 2013

39 Pakistan Bureau of Statistics, Pakistan Social And Living Standards Measurement (PSLM), 2012-13

40 WHO, <http://www.who.int/mediacentre/factsheets/fs178/en/> (13th Nov, 2014)

41 Government of The Punjab, Multiple Indicator Cluster Survey (MICS), 2011

42 Pakistan Bureau of Statistics, Pakistan Social And Living Standards Measurement (PSLM), 2012-13

43 Government of The Punjab, Multiple Indicator Cluster Survey (MICS), 2011

reports as compared to other reports.

4.4.3 Vertical programmes⁴⁴

In order to augment service delivery in key areas of healthcare, the government has been implementing special programmes. These programmes work in areas that are neglected or that require specific attention due to policy priority. Seven vertical programmes have been running in the district that include Epidemics Prevention and Control Programme, Extended Programme on Immunisation (EPI), National Maternal and Child Health Programme, National Programme For Family Planning & Primary Health Care, Nutrition Programme, Prevention and Control of Hepatitis and TB control Programme. Some of these programmes are briefly described below:

4.4.3.1 Expanded Programme on Immunisation (EPI)

The Expanded Programme on Immunisation (EPI) is a disease prevention activity aimed at reducing illness, disability and mortality from childhood diseases preventable by immunisation. These diseases are referred to as 8 EPI target diseases and cause millions of ailments, disabilities and deaths each year⁴⁵. Approximately 6000 EPI fixed centres in the country provide immunisation services to the people. However, these are not uniformly distributed. One in every 10 union councils (UCs) in Punjab province is without any EPI fixed centre. While at least 2 vaccinators are required in each UC according to the national EPI policy, the real number is lower (1 per UC). According to data available in the CM Health Sector Road Map documents the average EPI coverage in Sheikhupura is 59%, while the provincial average is around 47%⁴⁶. It is worth mentioning that the data for coverage of full immunisation in children aged 12-23 months ranges between 47% (Punjab Health Roadmap) to 76% by EPI Coverage Evaluation Survey. However, PSLM surveys show higher achievements. The latest round of PSLM Survey 2012-13 gives a figure of 89% for immunisation coverage in Punjab, with 90% coverage for males and 88% coverage for females. The rural urban disparity is also reflected in the coverage percentage, which is 88% for urban areas of Punjab and 89% for rural areas.

44 Government of Punjab, Situation Analysis, Punjab Health Sector Strategy, 2012

45 Health Department, Government of The Punjab, <http://health.punjab.gov.pk/?q=epi> (13th Nov, 2014)

46 An unpublished presentation of the CM Health Sector Road Map, 2014

Table 4: Availability of Vaccinators

District	No. of UC	Government Vaccinators	Local Government Vaccinators	Total Vaccinators	No. of Vaccinators per UC
Sheikhupura	101	114	7	121	1.0

Source: Government of the Punjab, Situation Analysis, Punjab Health Sector Strategy, 2012

4.4.3.2 Programme for MNCH

The National Maternal, Neonatal and Child Health Programme (NMNCHP) was initiated in 2006 with an objective to improve maternal, new-born and child health of the population, particularly among its poor, marginalized and disadvantaged segments. The Programme has taken a number of measures in the province including construction and renovation of infrastructure in the health facilities; provision of key MNCH staff including specialists, doctors, paramedics and ambulance drivers; their capacity building and provision of equipment, drugs and supplies at selected health facilities to ensure delivery of MNCH services. The Programme has provided MNCH related staff at 8 DHQ hospitals, 13 THQ hospitals and 250 RHCs in the province.

4.4.3.3 Programme for HIV/AIDS control

Provincial AIDS Control Programme is amongst the priority public health programme in Punjab for effective disease prevention and control. It was started in 1986-87 with a focus on diagnosis of cases that came to hospitals, but progressively began to shift towards a community focus.

The Government of Punjab scaled up its AIDS Control Programme under the Enhanced HIV/AIDS Control Programme initiative, through a PC-I of Rs.632.523 million after a credit arrangement with the World Bank. The Programme provides comprehensive HIV treatment and care services for adults and paediatric cases including free antiretroviral therapy, management of opportunistic infections, voluntary counselling and testing (VCT) services and management of acute/chronic care of HIV related infections to HIV positive people and their families.

4.4.3.4 Nutrition programme

Pakistan has an alarmingly high level of malnutrition. Results of National Nutritional Survey-2011 reflect that two out of every five children are malnourished in Punjab. It is estimated that 23 percent are severely stunted and among these children, a high percentage of children aged 12 to 35 months are underweight compared to

younger and older children. MICS (2011) reveals that in district Sheikhupura, 17% severe stunted prevalence and 8.8% severe underweight prevalence cases were recorded while out of total live births 27.7% babies were born with low birth weight (<2.5 kg).⁴⁷

4.4.4 Disease pattern

According to the Health Information System Punjab Report (2013), the top five diseases in district Sheikhupura during the year 2013 were Acute Respiratory Infections (ARI), Fever due to other causes, Scabies, Peptic Ulcer Diseases and Diarrhoea/Dysentery in <5 yrs. It was observed that ARI was the most common disease in the district with incidence rate of 157/1000 population.^{48 iii} Following figure shows the incidence rate of top 5 diseases in the year 2013:

Figure 6: Top five recorded diseases (2013)



Source: Department of Health, Government of the Punjab, Health Information System Punjab Annual Report 2013

The table below shows the year wise comparison of top diseases along with the number of cases reported from year 2010 to 2013 at BHU level in district Sheikhupura. It shows that ARI has been the most commonly occurring disease in the district with the highest number of cases followed by Scabies. Table 5 further show that cases of diarrhoea and peptic ulcer have decreased over the years

⁴⁷ Government of The Punjab, Multiple Indicator Cluster Survey (MICS), 2011

⁴⁸ Department of Health, Government of Punjab, Health Information System Punjab Annual Report, 2013, 24-26

Table 5: Number of cases registered at BHUs (in thousands)

Diseases	2010	2011	2012	2013
ARI	208	159	164	145
Diarrhea/Dysentery in <5 yrs.	33	19	22	22
Diarrhea/Dysentery in >5 yrs.	29	18	20	22
Peptic Ulcer Diseases	29	19	15	10
Fever due to other causes	32	21	27	33
Scabies	89	41	37	33

Source: Health Department, Government of the Punjab, Punjab Health Information System (PHIS)

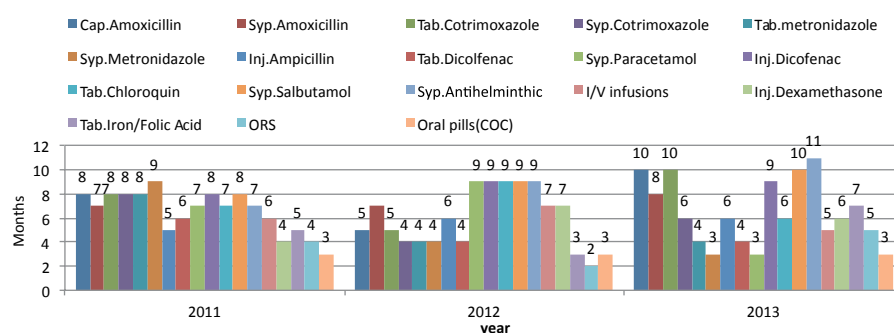
It is alarming to note that although, over the years, the incidence of ARI is on the decline whereas the reported occurrence of diarrhoea/dysentery in children less than 5 years of age is on the increase. Additionally, the incidence of fever due to other causes is also increasing. There is a need to investigate this further to ascertain the actual causes of these variations.

4.4.5 Medicine availability

EPHS provides a list of medicines for BHUs and RHCs. According to this list, a BHU must have 150 essential medicines/ drugs throughout the year. PHIS has identified 18 tracer drugs from this list, presence of these tracer drugs indicates the presence of all 150 essential drugs at BHU at any point in time. However, the situation in district Sheikhpura is not very good in terms of availability of tracer drugs at the BHUs. The stock-out position in the district was 51% in the year 2013 as compared to the provincial average of 25%⁴⁹. Figure 8 compares the stock-out of 18 tracer medicines in BHUs of district Sheikhpura. The data collected by PHIS reveals that Syrup Anthelmintic, ORS, I/V infusions, Tab. Metronidazole and Syrup Metronidazole were reported to be out stock for 11, 5, 5, 4, 3 times in 2013. All of these medicines can be used for the treatment of diarrhoea which was one of the top five diseases in the district during the year 2013. Similarly, for the treatment of ARI, Peptic Ulcer, Fever and Diarrhoea, Antibiotic drugs are prescribed which includes Cap. Amoxicillin, Syrup Amoxicillin and Inj. Ampicillin while these drugs were reported to be out of stock 10, 8, 6 times as can be seen in the figure below:

49 Department of Health, Government of Punjab, Health Information System Punjab Annual Report, 2013, 2, 46

Figure 7: Stock-outs of tracer drugs



Source: Government of the Punjab, Department of Health, PHIS, 2011-13

4.4.6 Human resource

One of the major factors affecting the quality of health care at the BHUs and RHCs include staff absenteeism, part-time service and poorly trained staff. Moreover, the attrition amongst the primary health service providers is another important issue, which stems from the lack of incentive based salary packages for serving in “hard” areas⁵⁰. The lack of incentives for care providers also leads to unfilled staff positions at the primary health care facilities in remote areas. This is evident from the overall staff vacancies in the BHUs of district Sheikhpura which are given below. Apart from the positions given in Table 6, Sheikhpura has 84 vaccinators against 109 sanctioned positions and 67 School Health & Nutrition Specialist (SH&NS) against 79 sanctioned posts.

Table 6: Total sanctioned and filled staff positions

Name of the position	Sanctioned positions in district Sheikhpura	Vacancies in district Sheikhpura
MO/WMO	79	35
LNutritionist	79	22
LHV	79	9
Dispenser	79	9
Midwife	158	76

Source: EDO (H), Sheikhpura, 2014

50 Government of Punjab, Health Sector Reform Seminar Report, 2006, 15-16

4.4.7 Health facility infrastructure

The quality of health facility infrastructure is one of the essential inputs that enables health facilities to deliver their 'level-specific' services. The Health Facility Assessment (HFA) 2011, which was conducted by the Technical Resource Facility (TRF), assessed a total of 22 health facilities in district Sheikhpura, including 20% randomly selected BHUs (13 BHUs) within the district. The HFA 2011 assessed the infrastructure of the BHUs for the availability of an OPD, LHV room, labour room, service provision areas and residences for the required staff. Furthermore, OPD and LHV rooms were assessed for availability of facilities for consultation, examination and hand washing. A labour room was also assessed for having facilities for delivery, a scrub area and attached toilet facility for the patient⁵¹. Table 7 below reports the findings for the 13 BHUs surveyed in district Sheikhpura:

Table 7: Status of BHU infrastructure		
Infrastructure	No. of BHUs with available building component	No. of BHUs with functional building component
OPD:		
1. Consultation area	13	13
2. Examination area	10	9
3. Hand Washing	4	4
LHV's room:		
1. Consultation area	13	13
2. Examination area	10	8
3. Hand Washing	4	4
Labour Room:		
1. Delivery room	7	7
2. Scrub area	1	1
3. Patient's washroom	0	0
Residence:		
Doctor	10	6
Residence:		
LHV	13	10

Source: Government of Punjab, Health Facility Assessment (HFA), Sheikhpura, 2011

Note: Figures are based on the surveyed sample of 13 BHUs in district Sheikhpura.

The data presented in Table 7 above indicates shortcomings in the current infrastructure at the surveyed BHUs. Particularly, the lack of hand washing facility offered at the OPD and LHV's room, shortage of delivery room and scrubbing area in delivery room and a separate patient's washroom are all missing in the surveyed BHUs.

51 Government of the Punjab, Health Facility Assessment (HFA), Sheikhpura, 2011, 11

4.4.8 Equipment

The Health Facility Assessment (HFA) 2011 also assessed the functional quantity of the essential equipment items (general items, equipment for OPD and LHV room) for BHUs in relation to the standard list specified in the PC-1 of the NMNCH Programme, in order to enable acceptable quality MNCH service provision. The following table presents the number of required items that were available at each of the 13 surveyed BHUs in Sheikhpura:

Table 8: Availability of equipment at BHUs

Facility name (Sampled BHUs)	General Items	OPD	LHV's room
Required number of items as per PC-I	3	14	12
Items available per BHU			
BHU Adhian	0	8	9
BHU Burj Attari	0	6	9
BHU Sharqpur Khurd	0	3	3
BHU Jandiala Kalsan	0	9	10
BHU Kathiala Virkan	0	10	7
BHU Kirto	0	11	10
BHU Kot Mahmood	0	8	7
BHU Ajniawala	1	10	7
BHU Chappa	0	11	10
BHU Ferozew Wattwan	0	10	12
BHU Ghang	0	10	7
BHU Ghajiana Nau	0	10	7
BHU Mirza Virkan	0	9	3

Source: Government of the Punjab, Health Facility Assessment (HFA), Sheikhpura, 2011 Note: Figures are based on the surveyed sample of 13 BHUs in district Sheikhpura.

Table 8 above indicates that the general BHU equipment which includes an electric water cooler, water filter and incinerator, were missing from all except for 1 BHU out

of the 13 BHUs surveyed for the HFA 2011. Furthermore, the figures presented above indicate that there was also a gross shortage of the required equipment for the LHV room in a number of BHUs. Also, it can be noted that the required equipment items mentioned in the standard list were not fully available at any of the surveyed BHUs⁵².

4.5 Quality

The six areas or dimensions of 'quality' require that the primary health services should be effective, efficient, accessible, patient-centric, equitable and safe. This working definition of quality takes a whole-systems perspective, which aims to reflect that the outcomes for both individual service users and whole communities have been taken into account⁵³. Some of the key indicators of quality relate to the utilization and workload of health facilities; while the governance related aspects of quality include the management practices to support the delivery of health care at local level.

4.5.1 Workload of health facilities

The number of outpatients treated at a facility per working day is a helpful indicator of the workload of a BHU, which can help differentiate between over-burdened and under-utilized facilities within a district. The community's ease of access and the quality of basic health care services is adversely affected by overburdened facilities. According to the OPD data obtained from the Punjab Health Information System (PHIS)⁵⁴, majority of the BHUs in Sheikhpura (43 out of 79) experienced a "LOW"^{iv} outpatient load per working day relative to the average across all BHUs in the district, and 21 out of the 79 BHUs in the district experienced a "MEDIUM" outpatient load per working day. Furthermore, only 4 BHUs in district Sheikhpura experienced a "VERY HIGH" outpatient load per working day relative to the other BHUs in the district. Only 3 out of the 79 BHUs experienced a "VERY LOW" outpatient load per working day relative to the average in the district.

52 Government of the Punjab, Health Facility Assessment (HFA), Sheikhpura, 2011, 12

53 WHO, http://www.who.int/management/quality/assurance/QualityCare_B.Def.pdf, (19th Nov, 2014)

54 The workload only includes new cases registered at BHUs in district Sheikhpura

Table 9: Patient Work load BHUs

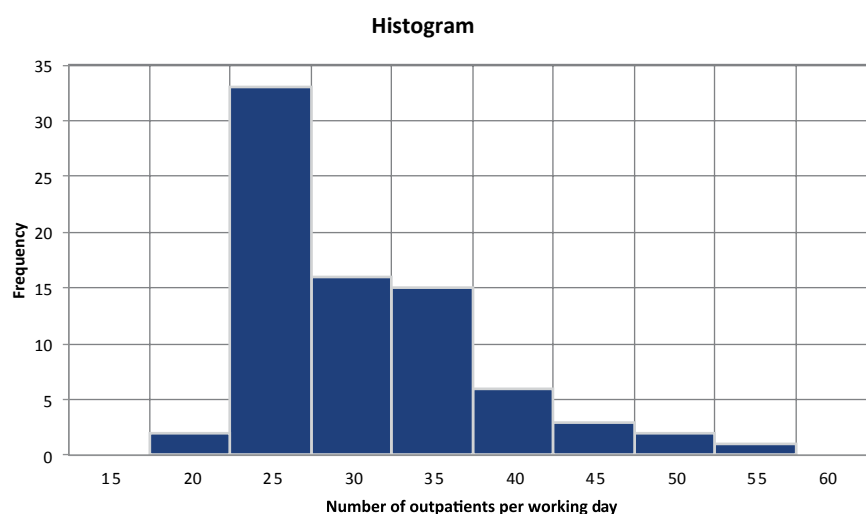
OPD Workload	Number of BHUs
VERY LOW	3
LOW	43
MEDIUM	21
HIGH	8
VERY HIGH	4

Source: Department of Health, PHIS, 2013

Note: The BHUs have been grouped into “LOW”, “VERY LOW”, “HIGH” and “VERY HIGH” based on the 1st and 2nd standard deviations from the average OPD visits per working day across all BHUs in the district.

The overall patient load per working day at the BHUs in district Sheikhpura can be further examined by plotting the frequency distribution of the outpatient load per working day for the 79 BHUs in district Sheikhpura.

Figure 8: BHUs OPD patient workload



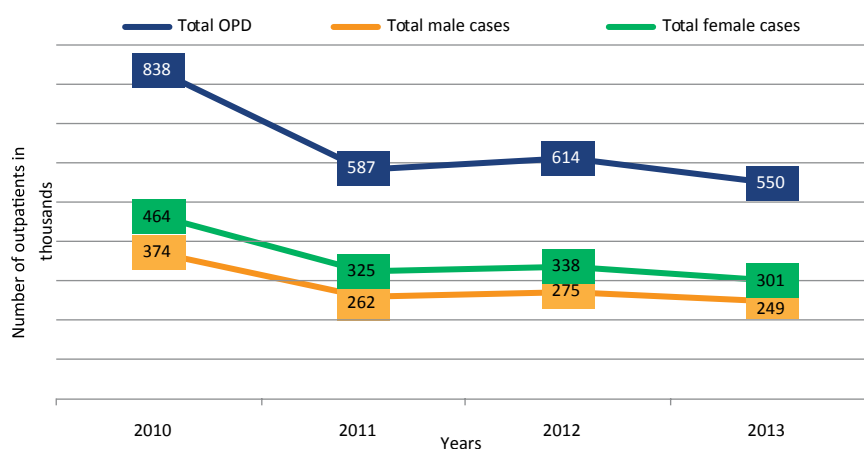
Source: Department of Health, PHIS, 2013

The average outpatient load per working day across all BHUs in the district was found to be 23. The histogram above (Figure 10) displays a slightly uneven distribution around the mean, with the frequency distribution being slightly skewed to the left of the mean. This further demonstrates the overall low patient load

per working day at many BHUs in Sheikhpura. The reasons for this imbalance in outpatient load among the BHUs could be related to many factors, including, for instance, the coverage and the quality of health care at the BHUs.

Additionally, the OPD visits can also be used as an indirect indicator of public trust and satisfaction in relation to the health services being provided at the facilities. A time series analysis of OPD data shown in Figure 10 below indicates that the total OPD visits have fallen drastically since 2010. A number of factors could be responsible for this decline including the coverage and quality of health services at the facilities as well as the increasing preference for private health facilities.

Figure 9: Total OPD visits (2010-13)



Source: Department of Health, PHIS, 2013

4.5.2 Client satisfaction and perception about quality of services

The data on client satisfaction and perceptions regarding quality of services provided at the BHU level is not available; however under the HFA 2011 a quality perception survey was carried out for RHCs. The same has been used as a proxy for client satisfaction and perception with regard to service delivery at the BHU level in district Sheikhpura, which is the other health care facility at the PHC level.

In order to assess the perception of clients about the quality of public health services, especially MNCH care, being provided at the health facilities, under HFA 2011 Client Exit Interviews (CEIs) were conducted at 7 Rural Health Centres (RHCs) of district Sheikhpura where 50 clients were interviewed. The findings of these interviews are given below (Table 10, 11, 12)⁵⁵:

55 Government of the Punjab, Health Facility Assessment (HFA) - Punjab, Sheikhpura, 2011, 50

Table 10: Waiting time at RHCs

Waiting time at the RHCs	Number of clients with an affirmative response
Less than 10 minutes	7
10 minutes to 20 minutes	22
20 minutes to 30 minutes	2
More than 30 minutes	44
Paid fee for services	35
Received educational material	1

Source: Government of Punjab, Health Facility Assessment (HFA), Sheikhpura, 2011

A large majority of respondents of CEIs reported that they had to wait 10-20 minutes before receiving health care services at the surveyed RHCs. This is very close to the 15 minutes average waiting time reported for BHUs through the CEIs conducted by the SNG, Punjab for the needs assessment study at Hafizabad and Bahawalnagar.

However, the interviewed clients expressed satisfaction in relation to the services they were receiving at the surveyed RHCs, as indicated by the figures reflecting their responses in the table 11.

Table 11: Patient satisfaction from services at RHCs

Overall satisfaction	Number of clients with an affirmative response
Very satisfied	1
Satisfied	34
Not satisfied	0

Source: Government of Punjab, Health Facility Assessment (HFA), Sheikhpura, 2011

The findings suggest that 22 out of the 50 clients interviewed identified “good quality” of services as the main reason for visiting the RHCs, while 24 clients out of the 50 interviewed attributed their visits to the RHCs to affordability of the health services, as shown in Table 12 below:

Table 12: Reasons for visiting RHCs

Reasons for visiting the RHCs	Number of clients with an affirmative response
Close to home	7
Good quality	22
Staff attitude	3
Affordability	24
Lack of choice	1

Source: Government of Punjab, Health Facility Assessment (HFA), Sheikhpura, 2011

4.6 Access

Access to health facilities is an important aspect of health care system and has direct implications for the burden of disease⁵⁶. Some of the important aspects of accessibility can be measured through indicators related to the physical access of BHUs to a catchment population, availability of transport and road infrastructure; the defined standards of which have been laid out in the MSDS (2008)⁵⁷.

As a part of this study, with the technical support of the World Bank, the issue of access to health facilities was looked at using GIS maps and by deploying various layers of data, such as BHU locations, presence of roads and availability of doctors etc. to determine whether a health facility is accessible or not and providing requisite service to the catchment area population.

4.6.1 Travel time to the nearest BHU

In this component, access is defined in terms of the time it takes to travel to the nearest BHU; whereas time is estimated based on travel speed on and off roads.

The road network is derived from a crowd-sourced road layer⁵⁸ that categorizes roads into nine types, namely primary highway, major arterial, minor arterial, secondary road, local road, controlled access, limited access, non-traffic and terminal. For the purposes of analysis each category was assigned an average speed of travel using a motor vehicle. Where roads were not available, an average walking speed of 3 km/h was assumed. Based on these speeds, an average 'cost', i.e., time of

56 WHO, http://www.who.int/healthsystems/hss_glossary/en/, (19th Nov, 2014)

57 Government of Punjab, Minimum Service Delivery Standards (MSDS) for Primary and Secondary Health Care in Punjab, 2008, 28

58 Technology for People Initiative (TPI) has an offline version of the road layer provided by Google that was last updated in 2012

travelling on each road, was estimated.

By using spatial least cost distance calculation algorithms with this cost layer, a surface was generated that represents the minimum time it takes to travel to a health facility from any location in the district (Figure 11). Even when a BHU is accessible, it will be of little use to a patient in need unless a qualified health care provider i.e. a doctor is present in the facility; therefore, the access to BHU where a doctor is available has been worked out (Figure 10).

Figure 10: Travel time to nearest BHU with doctor

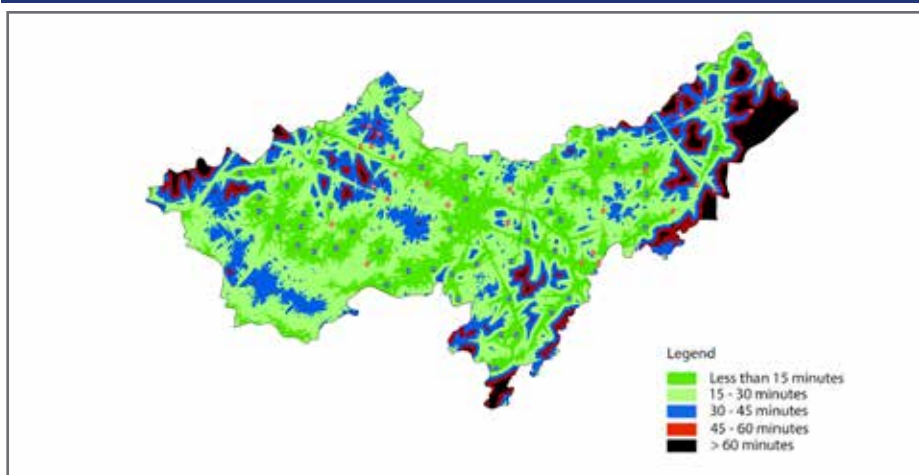
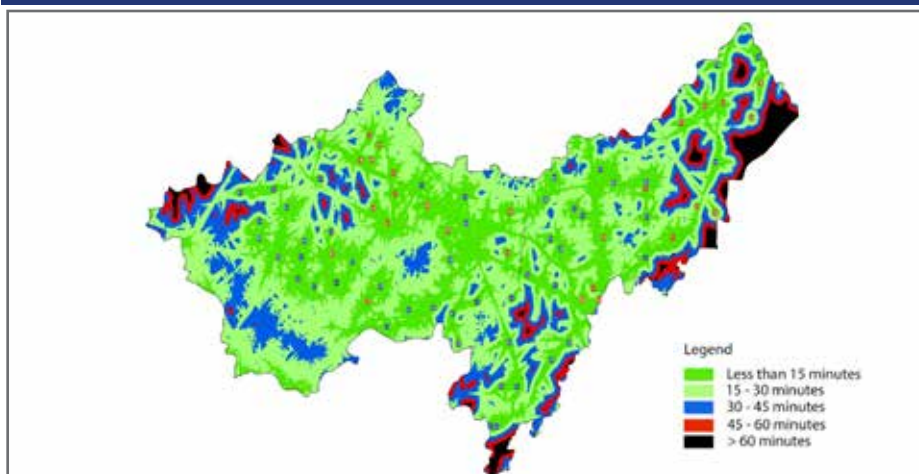


Figure 11: Travel time to nearest BHU – regardless of presence of a doctor



Figures 11 and 12 depict areas that are within 15, 30, 45 and 60 minutes of travel time to the nearest BHU. Regions in black are such that people living in these areas need more than 60 minutes to reach a health facility and therefore represent potentially underserved areas. Any settlements lying in these regions do not have realistic access to a public health facility.

4.6.2 Distance to the nearest BHU as the crow flies

In this component, access is defined according to how far a citizen is from the nearest health facility by straight-line distance.

This was calculated by creating circular zones of 1 km radii up to 5 km around each health facility. These zones were subsequently overlaid with the road network to identify the roads falling in each zone, as well as those roads that are beyond a 5 km radius of any health facility.

In Figures 12 & 13, settlements served by the road segments in black are those that are beyond 5 km of straight line distance of the nearest health facility, and can be considered as underserved regions.

Figure 12: Straight-line distance to the nearest BHU with doctor

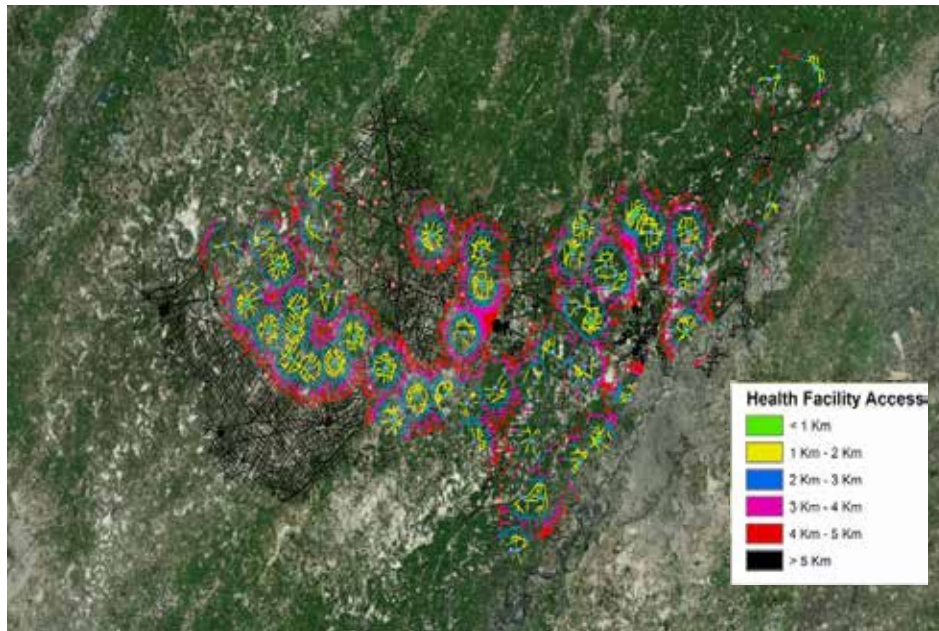
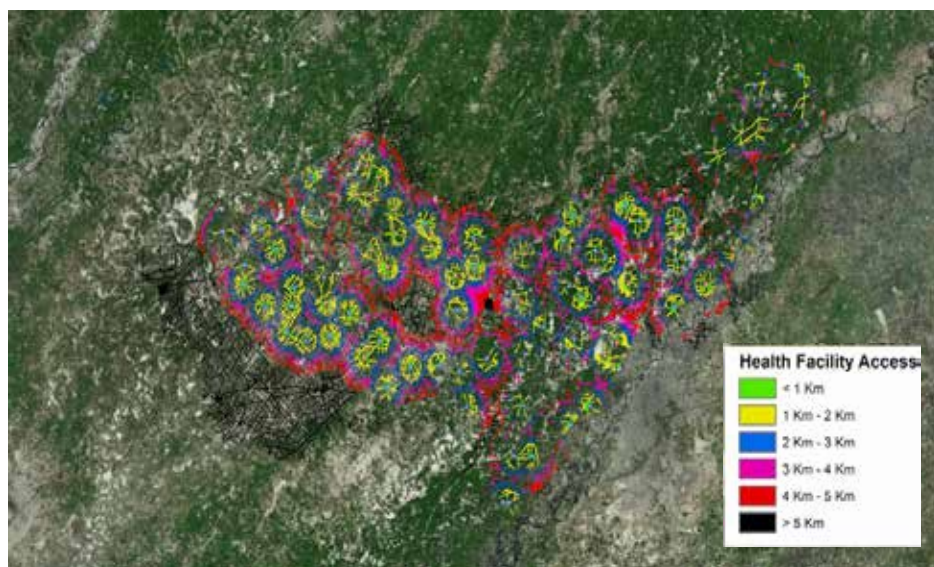


Figure 13: Straight-line distance to the nearest BHU—regardless of presence of a doctor



4.6.3 Travel distance to the nearest BHU

For the purposes of this analysis access is defined according to how far a citizen has to travel from any location along the road network to reach the nearest health facility, assuming that he travels along roads where they are available and on foot otherwise.

Using a crowd-sourced road network layer and spatial least cost distance algorithms, the minimum distance that needs to be travelled to reach a health facility along roads was calculated. Road segments were then categorized according to this minimum distance.

Figure 14 and 15 depict the travel distance by roads to the nearest BHUs. The settlements in black are those that are beyond 5 km of straight line distance of the nearest health facility and can be served as underserved region.

Figure 14: Travel distance by road to the nearest BHU with doctor

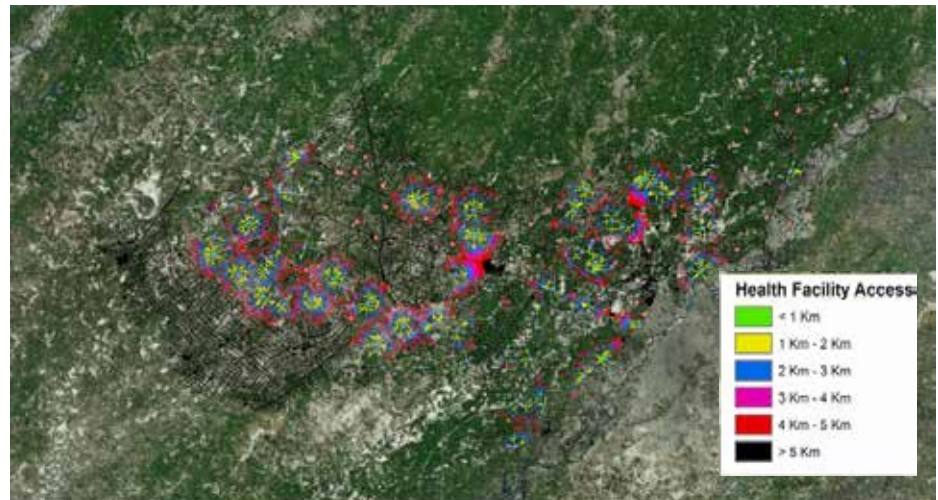
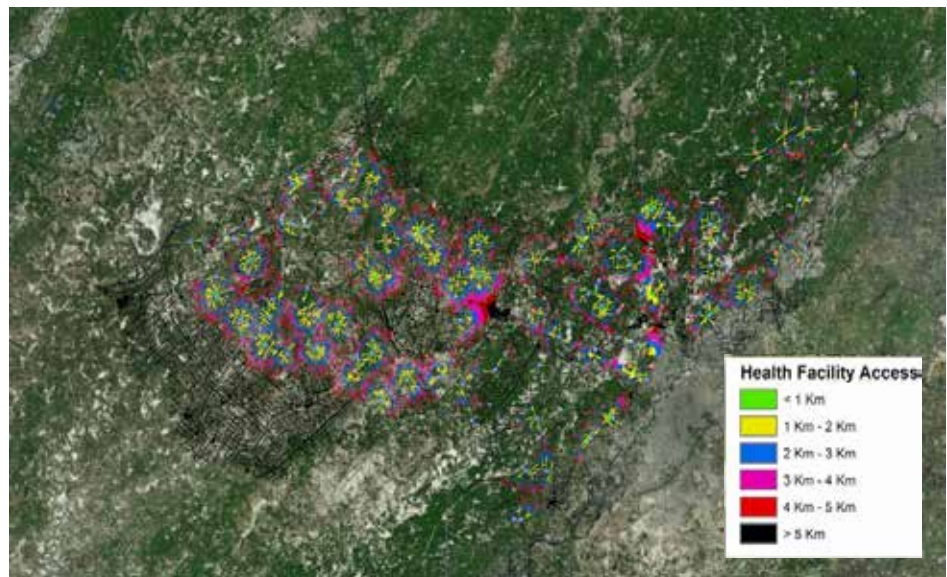


Figure 15: Travel distance by road to the nearest BHU regardless of presence of a doctor



On the basis of the GIS analysis in the preceding pages, and to demonstrate the utility of this analysis, a few areas/villages were also identified that do not have access to a BHU as they are at a distance of between 4-5 kms from the locality and the average travel time to the BHU is 45 minutes and above making these facilities practically inaccessible at the time of an emergency. The same is presented below through GIS maps. The yellow pins on the maps represent BHUs.

Figure 16: Ladhar 116



Figure 17: Dhoop Sari

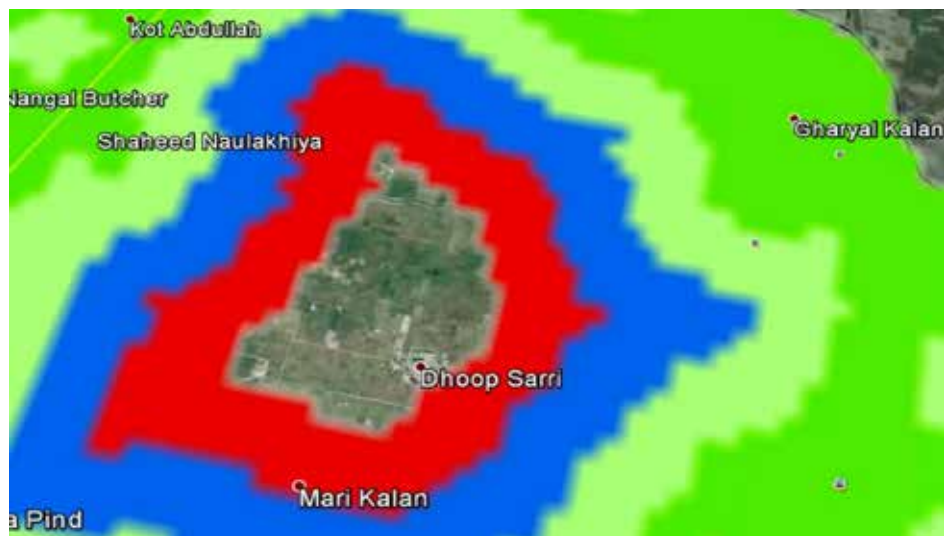
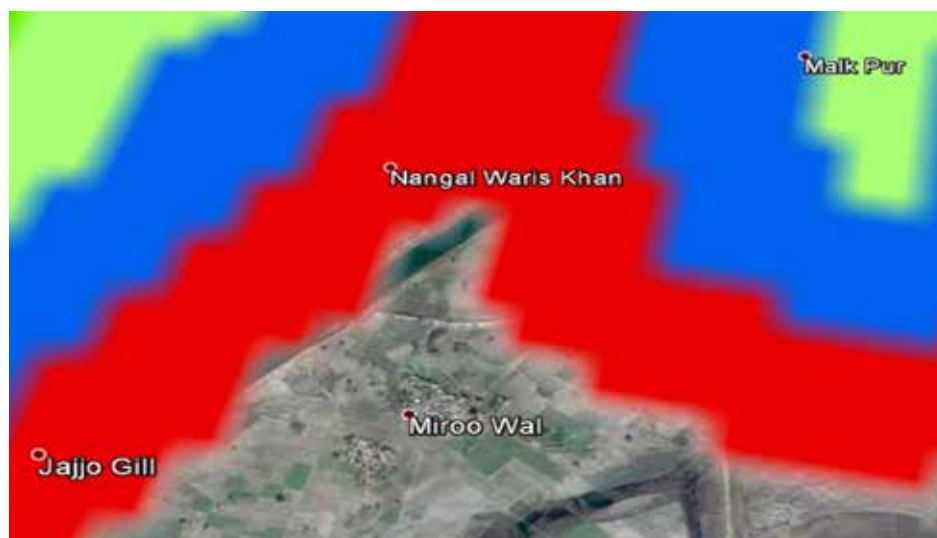


Figure 18: Miroo Wal



4.6.4 GIS analysis by GIS Cell, Sheikhpura

With the technical support of the Urban Unit, and through the GIS Cell established in February, 2015 by SNG in Sheikhpura, a more comprehensive GIS analysis has been carried out to look at the access to health facilities in the district. A total of 92 health facilities including BHUs and RHCs have been mapped, and a composite map of health facilities has been prepared by plotting all the health facilities along with the road network, built up area, district, tehsil and union council boundaries (Figure 21). Further, GIS analysis of accessibility has been carried out using the World Bank guideline that a health facility is accessible if it is at a distance of 3 km for the population that it is supposed to serve. Figure 22 displays the service area of health facilities for district Sheikhpura. Additionally, for health facilities, accessibility analysis has also been done to indicate where the travel time to the health facility is 15 minutes, 30 minutes, 45 minutes and 60 minutes at an average speed of 5 km per hour (Figure 23). Both these Figures (GIS maps) are annexed at the end of report.

5. Key findings: primary health sector service delivery gaps

5.1 Coverage

5.1.1 Immunisation

The universally accepted standard for TT immunisation is that every mother of child bearing age should receive 5 or 2 doses of TT during pregnancy. As 86 % of the women were immunised against TT in district Sheikhpura, so the gap of 14% still exists. Despite this gap, the district is fulfilling the minimum level of acceptance for province which is that a minimum of 80% mothers of child bearing age must receive 5 or 2 doses of TT during pregnancy.

5.1.2 Pre-natal care

Similarly, the standard set for pre-natal care is that every pregnant woman should have four properly spaced antenatal care assessments by or under the supervision of a skilled attendant. A gap exists in the provision of prenatal services in district Sheikhpura as only 76% pregnant women availed this service during 2013 against the target of 100% coverage.

5.1.3 Natal care

Natal care includes normal deliveries conducted by SBAs, recognition of complications and referral to other health facilities. According to the MSDS, all deliveries should be conducted by SBAs with adequate privacy and a separate partitioned room should be reserved exclusively for this purpose while the minimum level of acceptance is that two third of the deliveries should be conducted by SBAs at home or at institutions. As already discussed in an earlier section, 75% of the deliveries were conducted by SBAs in district Sheikhpura during the year 2013, so a gap of 25% exists in the provision of natal care against the standard prescribed by MSDS.

5.1.4 Post-natal care

According to the standard, for post-natal care, two postpartum visits are necessary and the first visit should be within 24 hours of delivery by a skilled personnel. Whereas, the minimum level of acceptance is that at least two third of all women should receive postpartum care on prescribed criteria. In district Sheikhpura, the situation of post-natal care is very distressing. Only 24% of the women were

provided with this facility in 2013 which even does not meet the minimum level of acceptance. Moreover, out of these women, only 33% women were treated in a public sector facility.

5.1.5 Family planning

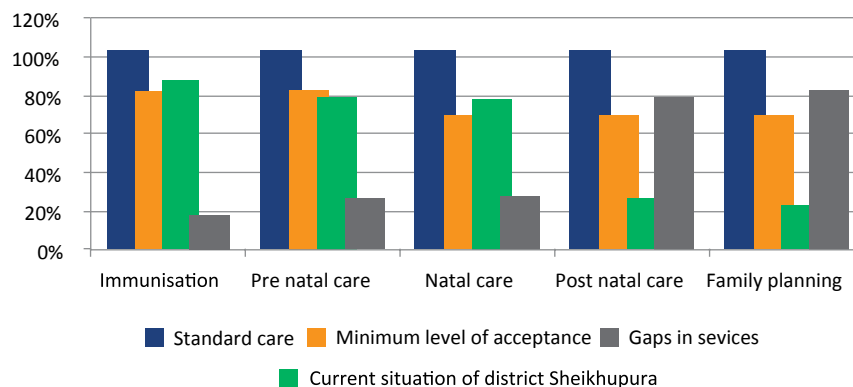
The provision of FP services in the district also leaves a gap of 80% as only 20% of the couples availed this facility in 2013, whereas, according to the standard all couples will be provided necessary information and services regarding family planning. Furthermore, according to MSDS, the minimum acceptable level is that nearly two third of all the eligible couples will be provided awareness and information on family planning methods. The gaps in service delivery in the district are presented below in tabular form:

Table 13: Gaps in PHC service delivery (Sheikhupura)

Services	Standard care	Minimum level of acceptance ^v	Current situation in district Sheikhupura	Gap in the services	Current status in Punjab
Immunisation	100%	80%	86%	14%	81%
Pre natal care	100%	<80%.	76%	24%	73%
Natal Care	100%	More than 2/3rd deliveries by SBAs	75%	25%	74%
Post natal care	2 postpartum visits; first visit within 24 hours of delivery.	67% or 2/3rd of all women should receive postpartum care	24%	76%	28%
Family planning	100%	67% or 2/3rd of all eligible couples	20%	80%	12%

Source: MSDS, 2008, Punjab DHIS Annual Report 2013

Figure 19: Gaps in PHC service delivery (Sheikhpura)



5.1.6 Medicine availability

Medicine availability is another issue identified during this study. According to PHIS, most of the medicines were reported to be out of stock from the BHUs of district Sheikhpura. ARI, Diarrhoea/Dysentery, Peptic Ulcer, Scabies and Fever were top five diseases in the district during the year 2013 and all BHUs were facing stock out of medicines/drugs that could be used for the treatment of these diseases.

5.1.7 Vertical Programmes⁵⁹

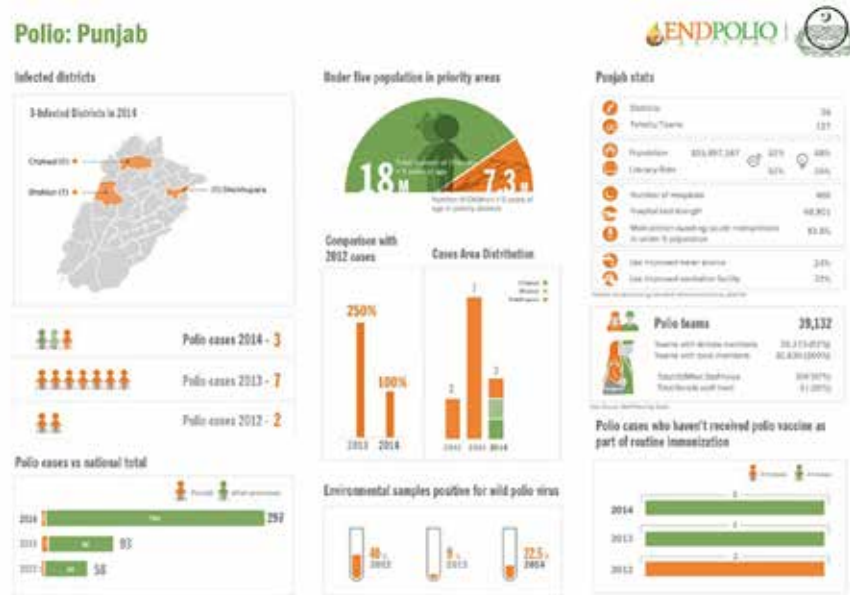
A needs assessment study conducted by the SNG for districts Hafizabad and Bahawalnagar indicates low level of coordination between regular health department and vertical programmes at the district level. This has raised issues like duplication of resources and services. Most of the vertical programmes with their own management, reporting and monitoring mechanism are usually working in isolation with low level of coordination with each other. The situation is not much different in district Sheikhpura.

5.1.8 Expanded Programme on Immunisation

The EPI Programme under implementation in the district also has its share of problems. A national emergency has been declared by the Federal Government to combat polio in the country and a National Emergency Action Plan 2014 for Polio Eradication has been prepared. In 2014, 3 cases of polio were reported in Sheikhpura, Chakkwal and Bhakkar districts as compared to the year 2013, where 7 cases were reported in the province.

59 Sub National Governance (SNG) Programme, Needs Assessment in Primary Health Sector Bahawalnagar, 2014

Figure 20: Polio situation in Punjab



Source: EndPolio.com.pk at URL: <http://www.endpolio.com.pk/polio-in-punjab>

5.1.9 Human resource

The HR profile of BHUs in district Sheikhupura indicates significant gaps in MNCH services, despite the fact that the sanctioned posts match the minimum human resource requirements envisaged for effective MNCH service delivery at the primary health care level, as laid out in the EPHS, Punjab. However, when the filled positions of the MNCH related staff were assessed against the sanctioned posts provided in the notified yardsticks of the provincial health Department; the required staff was not available at the BHUs in Tehsil Sheikhupura, Tehsil Ferozswala and Tehsil Safdarabad.

According to the data provided by the EDO (H) Sheikhupura, more than half of the sanctioned BHU positions were vacant in each of the three Tehsils in district Sheikhupura. There is a significant shortage of nutritionists, lady health visitors and dispensers at the BHUs in each of the three Tehsils of the district. It is alarming to note that no nutritionist was reported to be present in Tehsil Sheikhupura which is especially worrying as the cases of malnutrition among children are on the rise.

5.1.10 Infrastructure and equipment at BHUs

As indicated by the HFA 2011 survey conducted in district Sheikhupura, the current infrastructure at the surveyed BHU was not adequate in terms of compliance with the specified minimum standards for infrastructure provided in the EPHS. Main infrastructure issues at the surveyed BHUs were lack of hand washing facility at the OPD and LHV's room; labour room, scrubbing area in a delivery room and a separate patient's washroom, all of which are missing in majority of the surveyed BHUs. These are all part of the essential infrastructure at health facilities according to the EPHS.

The functional quantity of the essential equipment items (general items, equipment for OPD and LHV room) for BHUs in relation to the standard list specified in the PC-1 of the NMNCH Programme was also found to be inadequate at majority of the BHUs surveyed by the HFA 2011. The general BHU equipment were missing in almost all the surveyed BHUs except 1 and the equipment items for the LHV's room were also missing in a number of BHUs; while, the complete list of essential items was not available at any of the surveyed BHUs.

5.2 Quality

5.2.1 Client satisfaction

Although, the CEIs conducted by the HFA 2011 and for the needs assessment study conducted by the SNG for districts Bahawalnagar and Hafizabad indicated that the clients visiting the surveyed RHCs were generally satisfied with the services being provided, their respective responses should be taken with caution while drawing conclusions about the quality of services at government health facilities. This is due to an inherent selection bias, where only those clients were interviewed who were going to a government facility and all those who decided not to go to a government facility or to attend a private facility were not interviewed, thus barring any comparisons in terms of satisfaction/dissatisfaction levels and reasons and motivation for attending one facility against the other. In view of this limitation, no meaningful conclusions can be drawn by only considering the responses of clients who had visited a government facility. All that can be inferred is that people who attend a government health facility are generally satisfied with the quality of service offered.

5.2.2 Workload of health facilities

According to the OPD data obtained from the PHIS for 2013, majority of the BHUs in district Sheikhpura experienced a "LOW" outpatient load per working day compared to the average across all BHUs in the district. While, only 3 BHUs out of 79 in the district experienced a "VERY HIGH" outpatient load per working day. The reason for this imbalance in outpatient load among the BHUs could be closely related to the coverage and quality of the health care provided at the BHUs. Additionally, the outpatient load has decreased drastically since 2010, which can be due to many reasons including an increasing preference for private facilities.

5.2.3 Governance and Management issues

The study revealed that health sector is facing major managerial issues at all levels especially at PHC level in district Sheikhpura. Some of the issues found are discussed below:

5.2.3.1 Limited evidence based planning⁶⁰

Most of the stakeholders involved at the centre of policy and decision-making in Punjab reported limited use of data for planning health services. Absence of collated information and cross tabulation of data coming from different sources (Population Welfare Department, DoH, Vertical Programmes etc.) was stated as one of the major issues impeding effective use of evidence for decision making. Moreover, low quality of reporting system had resulted in constrained decision making and planning at the provincial level.

In relation to the allocation of finances for health sector, it was observed that no evidence or data was used while making a budgetary plan for a facility in a district. Moreover, prevalence of diseases and incidences in the district were not considered during the process of allocating finance resources.

5.2.3.2 Lack of management skills

Lack of management skills and capacity issues were reported at the provincial and district level. It was observed that health managers and members of their teams had clinical backgrounds, but very few of them were trained in public health planning or management. Furthermore, no management guidelines had been provided to them to perform their management and leadership roles in a befitting manner.

5.2.3.3 Performance management system⁶¹

Traditionally, performance of the district managers and health care provider is judged on the basis of 'Performance Evaluation Report' (PER). However, it was observed that such reports are usually stereotyped giving 'good' remarks to everyone, irrespective of actual performance. Even if negative remarks were mentioned in PER for any act of gross violation of rules, poor performance or for disobedience, these were more often expunged sooner or later. Promotions were made as per routine, on seniority basis, and were never linked with performance, according to existing civil service rules. It was reported that present system did not distinguish between good, average and bad performers. There were no incentive system in place to motivate managers and employees to perform better.

It was highlighted in the study that as the vertical programmes received their budget directly from the province, HR of vertical programmes like LHWs did not consider themselves bound to be answerable to those in-charge of the BHUs, working under the control of district DoH. This situation has resulted in lack of coordination and also monitoring of outreach staff by district health staff.

Lack of an adequate monitoring system had failed to achieve the optimal service delivery outputs. Lack of funds and human resources hampered effective monitoring of service delivery. Moreover, delay in provision of resources, constrained

60 Sub National Governance (SNG) Programme, Needs Assessment in Primary Health Sector Bahawalnagar, 2014

61 *ibid.*

from regular monitoring visits & evaluation of workers. Although monitoring manuals have been designed for service providers, but due to restricted resources they were not being followed. As no proper mechanism of monitoring existed, so adherence to operational guidelines could not be ensured. Moreover, no grievance redress mechanism had been established at BHU level till now, as Punjab Healthcare Commission (PHCC) was not taking up this task, because of limited resources.

5.2.3.4 Political interference

The management and administration of health services in the district is the responsibility of EDO (H). He has the authority to manage and implement all the health projects in the district and is supervisor to District Officer Health (DOH), but political interference at the district level has restricted the authority to be exercised by these health managers. This results in delayed health projects causing problems to the end users.

5.2.3.5 Medicine availability at health care facilities

Medicine availability and proper management of available medicine is an issue which needs to be addressed. Adequate budget is often not provided to the district governments to purchase medicine and necessary equipment, as defined in the EPHS, MSDS and according to the local needs of the population. In addition to this, purchase of medicines is not in accordance with the requirement of a particular health facility, keeping in view the disease pattern. This is also probably because of the fact that all medicine purchases take place at the EDO level; whereas the Drawing and Disbursing Officer for the BHUs is the DO (H) and as the responsible officer for BHUs, he needs to be involved in medicine procurements.

5.2.3.6 Lack of effective human resource management

Performance and benefits, that a health system can deliver, depend largely upon the knowledge, skills and motivation of individuals running the system. Lack of effective HR management has undermined the service delivery in the district. People at district level are not trained in administrative and HR policies. The HR positions sanctioned by the Health Department are not filled as doctors and other staff is unwilling to serve in rural areas despite the incentives offered by the government. This causes overstaffing in urban areas and understaffing in rural areas. Moreover, chronic staff absenteeism and critical shortage of female health professionals from health facilities is also hampering the output of health sector. Moreover, poor referral system between PHC and SHC has undermined the quality of health service in the district. In addition to this, lack of transportation facilities such as effective ambulance service has compounded this weak referral link between PHC and SHC tiers.

5.2.3.7 Procurement

PPRA Rules 2009 detail the procurement process that needs to be followed by the Health Department to procure supplies and medicines. However it was observed that the Rules were not properly followed primarily because of inadequate planning, monitoring and supervision.

Primary data collected by SNG from the PHIS revealed that the procurement process of medicines was not in accordance with the requirement of the community. As discussed above, the stock out situation in district Sheikhpura clearly reflects this situation as most of the tracer medicines/drugs remained out of stock. Moreover, disease pattern of the district was not considered while processing demand and distributing the medicine at BHU level.

Quality of medicine was compromised due to flaws in the planning process as the focus had always been on acquiring medicine at cheaper rates. Additionally, improper handling of medicine by not maintaining cold chains (and also due to frequent power outages) at BHU level also affected the quality.

5.3 Access

With the support of the World Bank, GIS analysis was carried out to assess the access of the district population to health facilities (BHUs). On the basis of this analysis, it was found that quite a few BHUs are too far off from population/villages, and it takes over 45 minutes for patients from these villages to reach BHUs, making them virtually inaccessible in time of an emergency. A number of such villages were also identified as part of our analysis; however a comprehensive GIS analysis needs to be undertaken to identify all such villages. The GIS Cells to be established at 6 SNG districts can support this work.

6. Recommendations

Following recommendations are presented on the basis of the needs assessment and the gaps analysis carried out in the preceding sections:

i) Immunisation

The data presented in earlier sections indicated gap in immunisation coverage in the district. However the extent of gap varies according the source of data that is looked at. This creates doubts on the authenticity of the data. Therefore, the first recommendation is to ensure that the data is collected through an independent agency, using robust data collection methodology, at least on an annual basis, if not earlier. This would ensure that the data collected is authentic and reflects the actual situation on ground enabling effective planning to increase immunisation coverage.

Additionally, as found during the study, one of the major reasons for vaccinators' poor performance is that the funding for POL is not released on time, resultantly the vaccinators are not able to visit their beats for vaccinations. Therefore, it is recommended that the POL for vaccinators may be reflected as a separate head in the budget, and not made part of the overall health sector budget, additionally fleet cards are recommended to be issued to the vaccinators for POL.

The vaccinators are spending a lot of days on non-routine vaccination, which is affecting their routine vaccination. There is a need to reduce their days spent in non-routine vaccination. A decision in this regard has to be made by the provincial health department.

The SNG has conducted a detailed study of the existing business process of EPI. The report was presented to Health Department and other relevant stakeholders such as select EDOs (Health), DG Health services, WHO, PITB etc. in a meeting chaired by Secretary Health Department. It was agreed in the meeting by all the stakeholders that the suggested model is workable and likely to improve coverage. It is therefore recommended that work on piloting the model proposed in the SNG report may be taken forward on priority basis by the Health Department. It is also possible that district Sheikhpura may start the pilot and gauges the results to see the efficacy of the proposed model.

E-Vaccs monitoring system rolled out in the districts with the help of PITB needs to be strengthened by imparting additional trainings to the vaccinators. Monthly report generated by PITB of this data must be shared with the DCOs concerned and the EDO (H). The district officers need to be trained to effectively use these reports to undertake effective planning for increasing coverage. Implementation of the best practices shared with

the EDOs and DOH for improving coverage of immunisation needs to be effectively monitored.

It is further proposed that in Sheikhpura district the UCs with low coverage and with incidence of polio and measles should be marked as hot-spots and special focus, in terms of manpower and other resources should be given to these hotspots to improve immunisation coverage and control the incidence of disease.

ii) **MNCH**

MNCH is a priority area under the Provincial Health Roadmap. This is also an area that needs special focus of the district in order to improve healthcare of MNCH related services and to reduce IMR and MMR. In order to improve coverage and outcomes of MNCH related indicators, it is recommended that MNCH related vacant positions in the district must be filled on priority basis. In accordance with our social norms, women find it difficult to seek treatment from male doctors; therefore the district may fill vacant positions of WMOs on priority. In case it is not possible to fill all positions, it is recommended that a cluster approach may be adopted and a WMO may be allocated to three or four BHUs. Additionally, as the data suggests that most of the deliveries are taking place at home, therefore it would be useful to train the TBAs and group them with LHWs, where referrals are made in case of complications. District can utilize the DHDC to train the TBA, so that they can play a better and effective role.

The most important and relatively ignored component of MNCH is advocacy and awareness rising. It is recommended that district Sheikhpura may devise a comprehensive advocacy and awareness raising campaign to communicate MNCH related messages to the public. The local cable network can be used for this campaign. These advocacy and awareness campaigns can also be used by the district for raising awareness about non-communicable diseases in the district.

iii) **Family planning**

The current Contraceptive Prevalence Rate (CPR) in the province is 40% and there are three million women in Punjab who want to use contraceptives but do not have access to it. It has been reported that the stock outs for contraceptives have been relatively quite high. A study carried out for USAID supported contraceptives in 2013 found out that 20% of the surveyed BHUs/RHCs had no contraceptives in stock, 40% had some contraceptives in stock and only 40% had all contraceptives in stock⁶². The situation is even more alarming when the availability of contraceptives with the LHW is looked at. The same study found that 4 out of 5 women who visit an LHW do not get contraceptives. The PDHS 2012-13 found that

62 Stock Analysis at Service Delivery Points for USAID-Supported Contraceptives, 2013

the wrong types of contraceptives are being procured i.e. more of short-term contraceptives against long term. Interestingly, all four contraceptive methods have been made available at 100% of the Family Planning Centres in the province against only 40% of the healthcare facilities. Increase in CPR can be achieved through improvement in availability of contraceptives at the health facilities, and through referrals. There is a need to establish robust stock monitoring system to ensure that the right stock reaches the right healthcare facilities where it is in demand. Additionally, proper protocols do not exist for referral of FP clients. There is a need to develop these protocols. LHWs are discouraged not to refer clients to healthcare facilities for contraceptives due to shortage of contraceptives at these facilities. Supplies need to be improved to create right incentive for LHWs to undertake referrals. LHWs must also refer women for long-term methods against referrals for short-term methods. Likewise, targets can be set by the district for provision and referrals for family planning services. Proper data recording will be essential to monitor that the targets are achieved. Therefore, recording of FP information can be made a part of the data collected by the MEAs.

iv) **Vertical programmes**

The needs assessment and subsequent gaps analysis carried out indicated that there was very limited, if any, integration between the health department at the district level and staff of the vertical programmes. One of the main reasons for this is that although various vertical programmes have been devolved to the provincial government, they have not been appropriately devolved to the district level and their reorganization that is required to integrate them with the existing health structures at the district level has not taken place. Resultantly parallel structures exist at district level, working in silos with very little communication or exchange of operational information. Therefore, it is recommended that a provincial level assessment may be carried out and organizational changes are made to effectively integrate the vertical programmes with the existing district health structures and institutions.

v) **Medicine and HR availability**

Availability of medicine and doctor at a healthcare facility is observed to make a big difference⁶³. The patients' visits and the referrals from LHWs also doubled at these BHUs, after communities were well informed about the availability of a doctor on a particular day. In order to ensure that medicine is available at the BHUs, it is proposed that the allocation for medicine for each BHU in the district must be increased. Procurement of medicine also needs to be streamlined. Timely completion of procurement is essential for ensuring that medicine is made available. The district must

63 Based on the results of a pilot work in 9 BHUs at Okara district, where a doctor now attends a BHU for two days a week

develop expertise for forecasting medicine requirements and for its timely distribution in accordance with the burden of disease (BOD). A district audit can also be undertaken to assess problems that are being faced and reasons for these problems can also be identified.

As already stated availability of a doctor at a health facility makes a big difference in terms of access of that facility by the patients. Data presented in the last pages indicated shortage of BHU related staff in the district. As it is within the purview of the district to undertake recruitments therefore it is proposed that the district may fill essential vacant positions over time. Recruitment must be preceded by a drive to rationalize staff at various BHUs. Additionally, the non-salary allocation of DHDC in the district is proposed to be enhanced enabling it to train staff and overcome shortages.

vi) Equipment and infrastructure at BHUs

The study very clearly indicated shortage of essential equipment and diagnostic facilities at the BHU level to provide BHU related services and to meet the requirements of the MSDS and EPHS. Additionally, it was also found that the existing equipment is also not properly maintained, therefore adequate allocation for maintenance and repair must be provided in the district budget. This was also a finding of the needs assessment study carried out for Bahawalnagar and Hafizabad. It appears that although the EPHS and MSDS have been notified but no serious attempt has been made to enforce them, and to provide funding to districts and the healthcare facilities, enabling them to meet these standards over time.

vii) Workload of BHUs

As already stated in earlier sections of the report, most of the BHUs in the district experience a low patient load when compared with the district OPD average. Out of the 79 BHUs only 3 BHUs showed a very high outpatient workload. There is a need to investigate this further and assess the reason for the same, in case the workload is low due to issues of accessibility or lack of services at the BHU. The district must assess the cost of providing the missing facilities at the BHU. In case the cost is too high, the district may decide to consolidate BHUs. This would also spare staff and other resources that could be utilized elsewhere in the district.

viii) Evidence based planning

It has been found in this study that evidence based planning is not being practiced in the district. This is for various reasons - lack of capacity and lack of credibility of the available data being few such reasons. In order to improve the quality of health sector data PITB is also involved in a number of initiatives. Punjab Health Watch and Medicine Inventory Management System are two such initiatives that are in various stages of development. Some capacity development has also been carried out by PITB in this

regard, but feedback from the field suggests that a lot needs to be done to enable the health sector managers at the district level to use the initiatives to improve service delivery in their districts. One major drawback of these systems is that they have been designed as a monitoring tool and thus lack the information and detailed data needed for effective planning. Additionally, the health sector planners do not have any incentive to use the data for planning. The Punjab Health Roadmap team has now prepared disaggregated targets for each of the districts in the province against selected indicators. Once the results are tracked over time and rewards and punishment linked with the performance of health sector managers, they will have an incentive to use the data to improve health service delivery.

ix) Effective performance management system

The study found that the present system of performance management is not effective and resultantly the health care managers have no incentive to perform better as their posting, transfer or promotion is not linked to their performance against some well-defined key indicators. Therefore it is proposed that the appointment of officers must be on merit and for a fixed tenure subject to achievement of performance targets. This system will work effectively if a robust data gathering system is also in place and credible data is collected to determine the performance of health care staff against service delivery indicators. A move in this regard is already on the cards under the Health Roadmap Punjab.

x) Improve working of BHUs

BHUs are the first port of call for a large majority of population of the district when it comes to medical treatment. A large number of MNCH related services are also provided at BHU, therefore there is a need to improve the working of the BHUs. In order to improve the performance, community based monitoring of BHUs is proposed. Additionally, a cluster approach is recommended where a few BHUs are tied up with an RHC and the RHC is to support the working of BHU and be responsible for its performance.

xi) Governance issues

As already stated in the that report most of the bottlenecks in PHC service delivery are governance related issues and improvement in governance is likely to improve the quality of service delivery. It is recommended that the DHAs proposed as a local government tier under the PLGA 2013 must be implemented forthwith in letter and spirit. Service delivery at the district level is severely affected by over centralization at the provincial level. If DHAs are established and sufficient decentralization of authority and power is allowed along with a robust monitoring and evaluation system, the PHC service delivery is likely to improve.

xii) Medical camps

This study identified that there are populated areas in the district that have limited or no access to a health facility due to either its distance from the locality or due to poor conditions of roads. In order to provide some healthcare service to these underserved areas medical camps are proposed.

7. Way forward

On the finalization of the needs assessment report and the budget proposals a pre-budget consultative workshop was held at DCO Office Sheikhpura on 4th March, 2015. The objective was to share the findings and budget proposals with the DRG members consisting DCO, sector EDOs, civil society members and local NGOs. The workshop participants were generally happy with the findings and recommendations, and the DCO and sector EDOs expressed their willingness to include these budget proposals in the upcoming budget for FY 2015-16. It was also agreed in the workshop that support and capacity building would be undertaken of the district government officials in evidence based budgeting i.e. needs assessment and budget analysis.

Figure 21: District Sheikhpura - health facilities with composite data layers

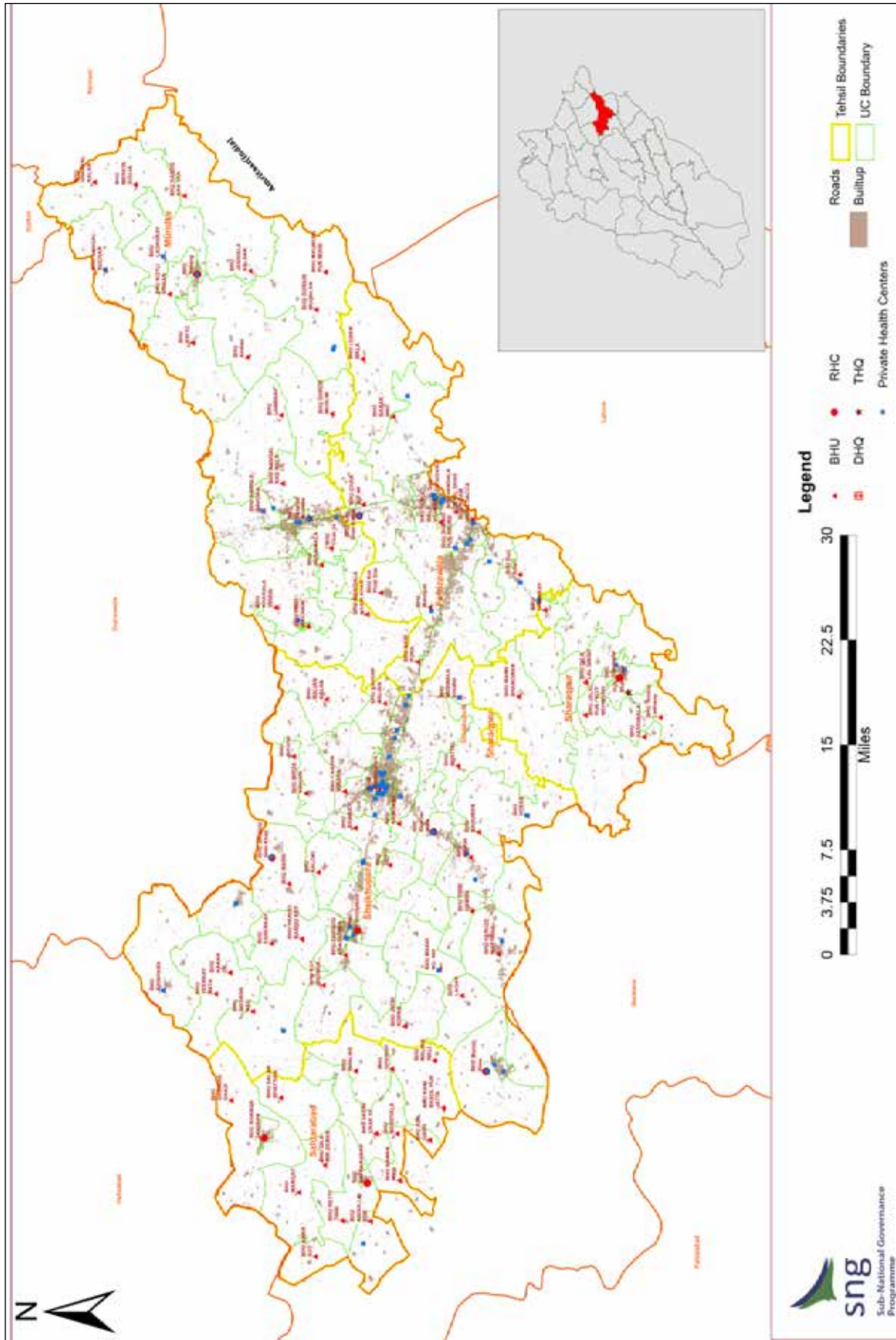


Figure 22: Health facilities service area (3 Km distance from built up areas)

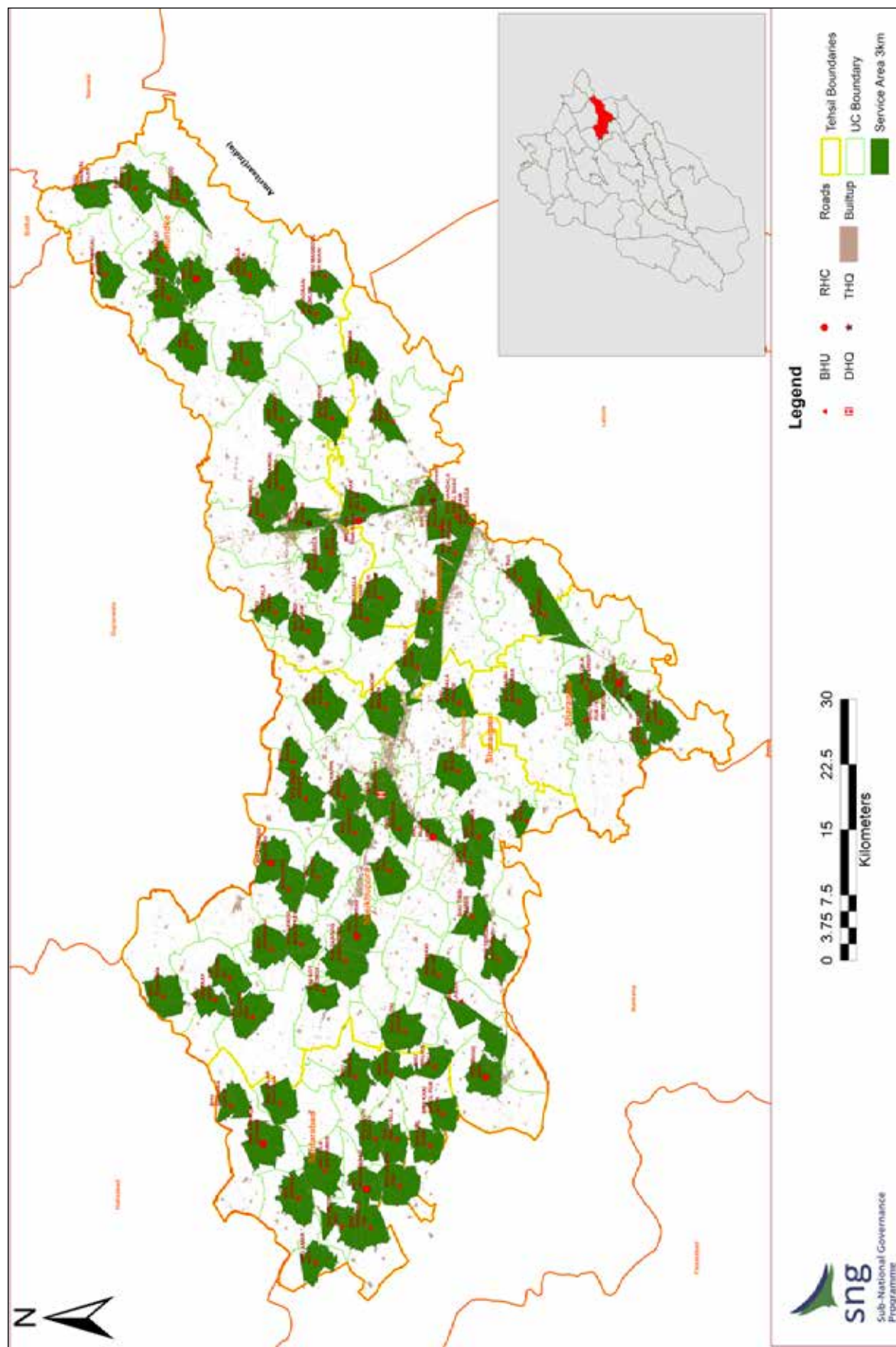
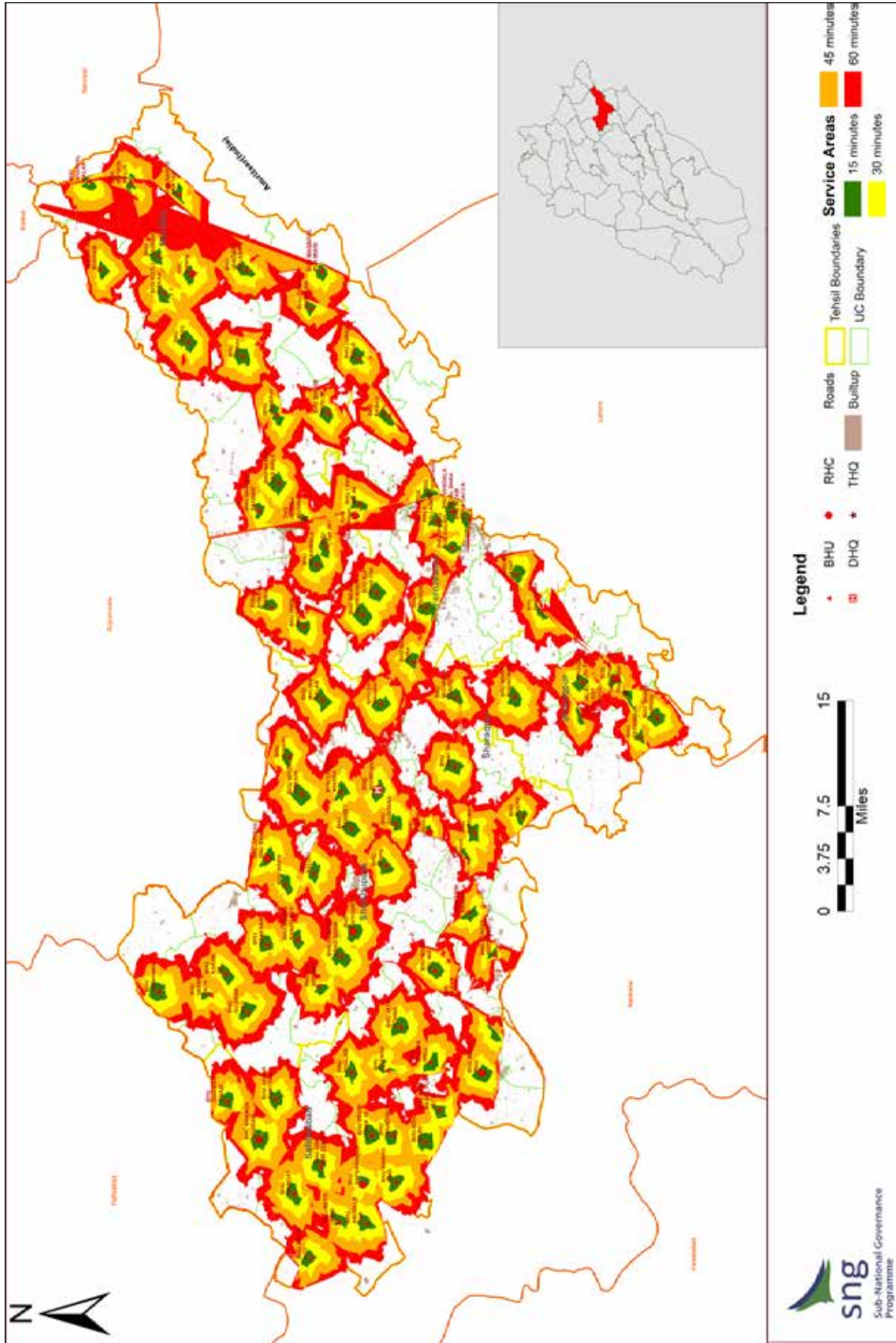


Figure 23: Health facilities accessibility analysis - travel time on foot



End notes

^{i & ii} Government facility includes government hospitals/RHC/BHU, home LHV, home LHW while private facility includes private hospitals/clinics and home doctor.

ⁱⁱⁱ Incidence rate is the probability of developing a particular disease during a given period: the numerator is the number of new cases during the specific time and the denominator is the population at risk during the period.

^{iv} A “MEDIUM” outpatient load per working day at a BHU indicates that the number of outpatients/working day is greater than or equal to the mean across all BHUs in the district, a “HIGH” outpatient load per working day at a BHU indicates that the number of outpatients/working day is greater than or equal to one standard deviation from the mean and a “VERY HIGH” outpatient load indicates that the number of outpatients/working day is greater than or equal to two standard deviations from the mean. Similarly, A “LOW” outpatient load per working day at a BHU indicates that the outpatient load per working day is smaller than or equal to 1 standard deviation from the mean, while a “VERY LOW” outpatient load at a BHU indicates that the outpatient load per working day is smaller than or equal to two standard deviations from the mean across all BHUs in the district.

^v Minimum level of acceptance is a measure of expected performance and the figures quoted are taken (lower figure) from the international practices as for example Sri Lanka, DPR Korea. Their evaluation has been interlinked to Medium Term Budgetary Frame work (MTBF).

