



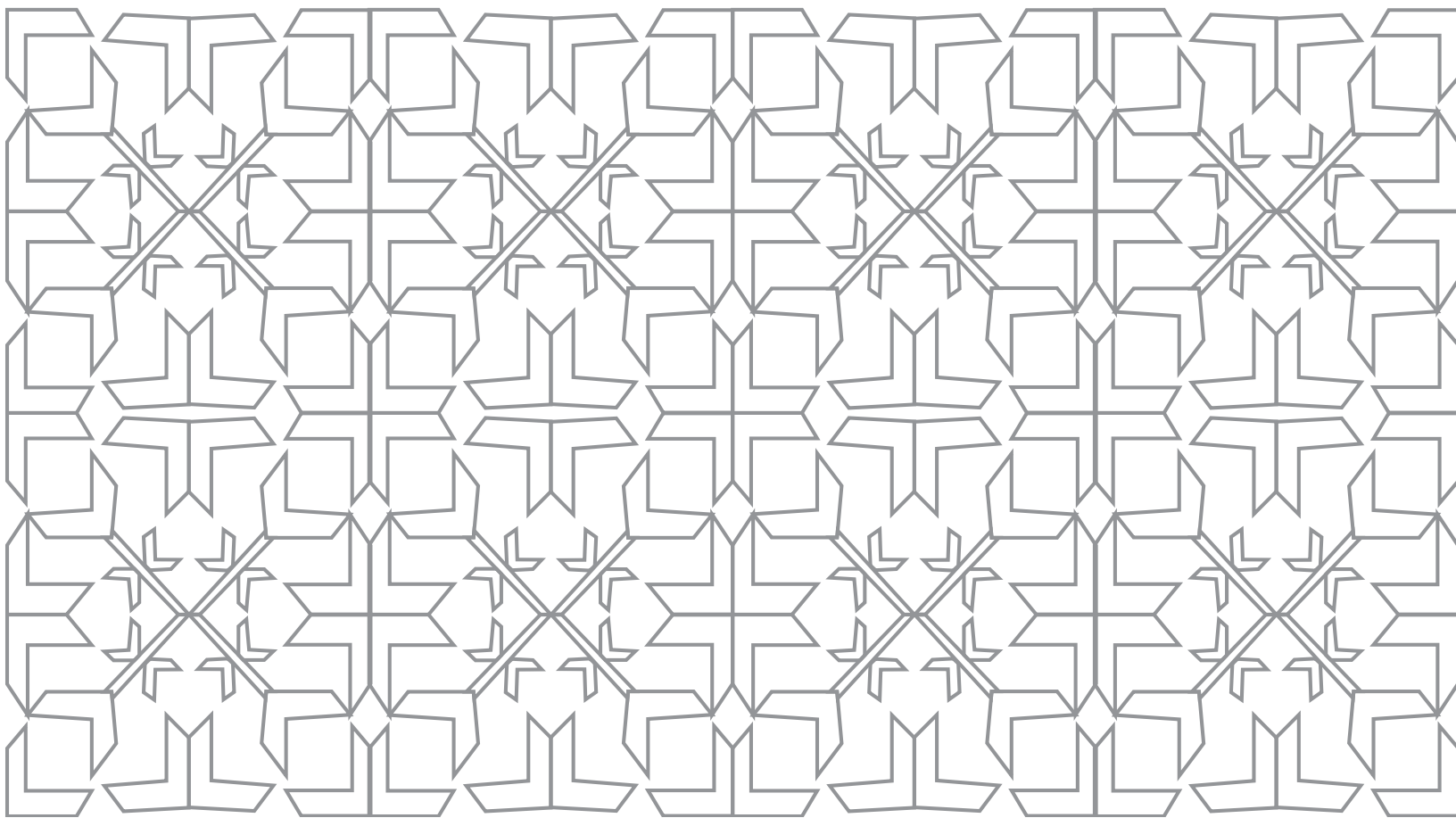
Sub-National Governance
Programme



NEEDS ASSESSMENT AND EVIDENCE BASED BUDGETING

Primary Health Care

Vehari





NEEDS ASSESSMENT AND EVIDENCE BASED BUDGETING

Primary Health Care

Vehari

Acknowledgements

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. The work on this report was led by Naveed Saleh Siddique, Governance Adviser, SNG Punjab and supported by the following research associates: Meenal Javed, Khadija Maryam, 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.

The SNG Programme acknowledges the services and support provided by all the partners in the compilation and analysis of the data.

Table of Contents

<i>Acknowledgement</i>	3
<i>List of figures</i>	6
<i>List of tables</i>	7
<i>List of abbreviations</i>	8
<i>Executive summary</i>	10
1. Background and introduction	17
1.1 Background	17
1.2 Introduction	17
1.3 Objectives	18
1.4 Scope of the needs assessment study	18
1.4.1 Physical access to primary health care facilities (BHUs)	18
1.4.2 Coverage	19
1.4.3 Quality	19
1.5 Punjab Rural Support Programme (PRSP model)	19
2. Punjab: health profile	21
2.1 Background and demography	21
2.2 Maternal health	21
2.3 Childhood mortality	22
2.4 Nutritional status	23
2.5 Workload of health facilities	23
2.6 Disease pattern	24
2.7 Medicine availability	24
2.8 Immunisation	24
2.9 Human resource	25
2.10 Conclusion: Punjab health sector status	25
3. District Vehari: background	26
3.1 History and location of the district	26
3.2 Demography	26
4. District Vehari: health sector indicators	27
4.1 Budget allocation for PHC	27
4.2 District Health Development Centre (DHDC)	27
4.3 Health facilities in district Vehari	28
4.4 Coverage	28
4.4.1 Maternal health	28

4.4.2	Child health	29
4.4.3	Vertical programmes	30
4.4.4	Disease pattern	32
4.4.5	Medicine availability	33
4.4.6	Human resource	33
4.4.7	Health facility infrastructure	34
4.4.8	Equipment	35
4.5	Quality	36
4.5.1	Workload of health facilities	37
4.5.6	Client satisfaction and perception about quality of services	39
4.6	Access	40
4.6.1	Travel time to the nearest BHU	40
4.6.2	Distance to the nearest BHU as the crow flies	42
4.6.3	Travel distance to the nearest BHU	44
4.6.4	GIS analysis by GIS Cell, Vehari	47
5.	Key findings: primary health sector service delivery gaps	49
5.1	Coverage	49
5.1.1	Immunisation	49
5.1.2	Pre natal care	49
5.1.3	Natal Care	49
5.1.4	Post-natal care	49
5.1.5	Family planning	50
5.1.6	Vertical programmes	51
5.1.7	Expanded Programme on Immunisation	51
5.1.8	Human resource	51
5.1.9	Infrastructure and equipment at BHUs	52
5.2	Quality	52
5.2.1	Client satisfaction	52
5.2.2	Workload of health facilities	52
5.2.3	Governance and management issues	53
5.3	Access	55
6.	Recommendations	56
7.	Way forward	61
	Annexures	63
	End notes	67

List of Figures

Figure 1: Comparison of IMR with other developing economies	22
Figure 2: Trends in childhood mortality (1986-2012)	23
Figure 3: Top five recorded diseases in 2013 (Punjab)	24
Figure 4: Map of District Vehari	26
Figure 5: Situation of maternal health (2013)	29
Figure 6: Top five recorded diseases (2013)	32
Figure 7: Stock-outs of tracer drugs in district Vehari	33
Figure 8: BHUs OPD workload	38
Figure 9: Total OPD visits (2010-13)	39
Figure 10: Travel time to nearest BHU with doctor	41
Figure 11: Travel time to nearest BHU – regardless of presence of a doctor	42
Figure 12: Straight-line distance to the nearest BHU with doctor	43
Figure 13: Straight-line distance to the nearest BHU–regardless of presence of a doctor	43
Figure 14: Travel distance by road to the nearest BHU with doctor	44
Figure 15: Travel distance by road to the nearest BHU regardless of presence of a doctor	45
Figure 16: Chak 214 EB	46
Figure 17: Chak 204 EB and Chak 202 EB	46
Figure 18: Other settlements as identified in maps above	47
Figure 19: Underserved villages	47
Figure 20: Gaps in PHC service delivery (Vehari)	50
Figure 21: Polio situation in Punjab	51
Figure 22: District Vehari - health facilities with composite data layers	64
Figure 23: Health facilities service area (3 Km distance from built up areas)	65
Figure 24: Health facilities accessibility analysis - travel time on foot	66

List of Tables

Table 1: Total filled positions against the sanctioned strength	25
Table 2: Vehari Budget (2013-14)	27
Table 3: Availability of vaccinators	31
Table 4: Number of cases registered at BHUs (in thousands)	33
Table 5: Total sanctioned and filled staff positions	34
Table 6: Status of BHU infrastructure	35
Table 7: Availability of equipment items available at BHUs	36
Table 8: Patients workload at BHUs	37
Table 9: Waiting time at RHCs	39
Table 10: Patient satisfaction from services at RHCs	40
Table 11: Reasons for visiting RHCs	40
Table 12: Gaps in PHC service delivery (Vehari)	50

List of abbreviations

ANC	Ante Natal Care
ARI	Acute Respiratory Infection
BHU	Basic Health Unit
BOD	Burden of Disease
CDC	Community Disease Control
CEI	Client Exit Interview
CMW	Community Midwife
CPR	Contraceptive Prevalence Rate
DCO	District Coordination Officer
DHAs	District Health Authorities
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 Systems
HFA	Health Facility Assessment
HIV	Human Immunodeficiency Virus
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
MEAs	Monitoring & Evaluation Assistants
MICS	Multiple Indicator Cluster Survey
MIS	Management Information System
MMR	Maternal Mortality Rate

MNCH	Maternal, New born and Child Health
MO	Medical Officer
MSDS	Minimum Service Delivery Standards
MTBF	Medium Term Budgetary Framework
NMNCH	National Maternal, Neonatal and Child Health
OPD	Out Patient Department
ORS	Oral Rehydration Salts
PC-1	Concept Paper-1
PDHS	Pakistan Demographic & Health Survey
PER	Performance Evaluation Report
PHC	Primary Healthcare
PHCC	Punjab Healthcare Commission
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
RHCs	Rural Health Centre
SBA	Skill Birth Attendants
SHC	Secondary Health Care
SHFP	Second Family Health Project
SH&NS	School Health and Nutrition Supervisor
SOPs	Standardized Operating Procedure
SNG	Sub National Governance
STIs	Sexually Transmitted Infection
TBA	Traditional Birth Attendants
THQs	Tehsil Head Quarter
TPI	Technology for People Initiative
TRF	Technical Resource Facility
TT	Tetanus Toxoid
U5MR	Under five Mortality Rate
UC	Union Council
UN	United Nations
UNICEF	United Nations Children's Emergency Fund
VCT	Voluntary Counselling 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's capability to deliver basic services.
- ii. To achieve these targets the SNG Programme conducted a health sector needs assessment in district Vehari 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 of the above stated dimension of service delivery. The aim was to identify the real needs of 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 Healthcare (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 EDO (H) 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 Vehari. 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 Vehari, 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. Total budget allocated for health sector in district Vehari during the year 2014-15 is Rs. 1256.59 million. This is almost 18% of the overall district budget for the financial year 2014-15. The salary budget for the same year is Rs. 976.13 million while the non-salary part consists of Rs. 289.46 million. Primary health is allocated Rs. 654.467 million during the year 2014-15 which is almost 52% of the district health budget.
- vi. In addition to this, Rs. 6.23 million is also allocated to District Health Development Centre (DHDC) while out of this amount the non-salary part

consisted of only Rs. 2.27 million therefore the non-salary budget of the district needs to be increased. The aim of DHDC is to improve district health service delivery through training, development and operational research activities.

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 the same percentage of women i.e. 73% received these services in district Vehari. As the standard for coverage of pre natal services is 100%, therefore there is a gap of 27% in coverage of the service. During the year 2013, Antenatal Care (ANC-1) coverage in Punjab was 93% while in district Vehari 100% woman availed this facility. According to the PSLM survey, during the year 2013, postnatal care services were availed by only 28% women in Punjab and 25% in district Vehari against the standard of 100% coverage, leaving a gap of 75% in the district.
- 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 97/1000 live births in district Vehari while Under 5 Mortality Rate (U5MR) was 104/1000 live births in Punjab and 125 /1000 live births in district Vehari. Additionally, 95% of the children aged 12-23 months were fully immunised in the district. Although time series data suggests that IMR is showing a downwards trend in the province, a lot needs to be done to bring the IMR down to meet the MDG target for infant mortality. During the same year, total infants deaths in BHUs of district Vehari were 1604 while 50 maternal deaths were also reported.
- ix. A child's birth weight is an important indicator for vulnerability to childhood illness. According to Multiple Cluster Indicator Survey (MICS) 2011, out of total live births, 28.1% babies in Punjab and 27.0% in district Vehari were born with low birth weight (<2.5kg). It was found that 15% of children in Punjab and 16% in Vehari 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) have important contribution in averting maternal and neonatal mortality and morbidity at the time of childbirth. During the year 2013, 75% deliveries in Punjab and 69% in district Vehari were conducted by SBAs. Therefore a gap of 31% 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 district Vehari 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 85% women in district Vehari were immunised, 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 Vehari, it was 37%. According to Pakistan Social and Living Standard Measurement (PSLM) survey, Polio 1 coverage in Punjab and Vehari was 98% and 79% respectively in 2013. These figures appear to be exaggerated as a number of polio cases 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.
- xvi. 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.
- xvii. SNG has conducted a detailed study of existing business process of EPI. The report was presented to the Health Department Punjab and other relevant stakeholders in a meeting chaired by Secretary Health. 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-Vaccs 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 Vehari district 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 22% in Vehari consulted health facilities for Family Planning (FP), indicating a huge gap of 78% % 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 less than 5 years old children. ARI was the commonly occurring disease in Punjab as well as in district Vehari. Time series analysis of data suggests that although incidence of ARI is coming down over the years in Vehari, the incidence of Diarrhoea/Dysentery and peptic ulcer disease 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 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 for the provincial health authorities. Stock out status measures the percentage of health facilities that experienced a

stock out of any tracer drug/medicine (18 essential drugs) for any number of days at any time in the year. The percentage for all drugs out of stock was 25% in Punjab and 4% in district Vehari as per the PHIS data. This shows that availability of medicines is far better in Vehari as compared to other districts of Punjab.

- xxiii. One of the major factors affecting the health care service delivery at BHUs includes staff absenteeism, limited time (from 8 AM to 2 PM) of service provision 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 those of medical officers, and women medical officers were vacant, additionally almost 51% sanctioned positions of MOs/WMOs and 20% sanctioned positions of vaccinators were vacant in Punjab during 2014. The situation in Vehari is not much different. 74 positions of MOs were sanctioned at BHU level and 58 were vacant. While all the sanctioned positions of vaccinators, SH&NS and LHVs were filled. This can probably be attributed to PRSP managing healthcare facilities and service delivery in the district.
- 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 Vehari the following vertical programmes are under implementation: Expanded Programme on Immunization (EPI), National Programme for Family Planning & Primary Health Care, HIV and AIDS prevention Programme, Universal Salt Iodization Programme, TB DOTS Programme, Communicable Disease Control Programme, Hepatitis Prevention and Control Programme, National Programme for Prevention and Control of Blindness. 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 effects, that could have been possible, are 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 and the 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, 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 are made to effectively integrate the vertical programmes with the existing district health structures and institutions.

Quality

- xxv. To assess the quality of health facility infrastructure and equipment, Technical Resource Facility (TRF) conducted a primary survey at 28 health facilities including 15 BHUs in district Vehari. The study revealed that most of the BHUs lacked basic infrastructure and equipment specified in MSDS. Client

Exit Interviews (CEIs) were also conducted where 70 clients were interviewed which showed that majority of the clients visiting the public sector primary healthcare facilities were generally satisfied with the services. 49 out of 70 clients interviewed, identified good quality of services, 49 clients attributed their visit to affordability and 49 reported staff attitude as a key reason for visiting the health facility while 38 clients identified the close proximity as a reason for assessing the health facility. 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 OPD workload of total 74 BHUs of Vehari using PHIS data. The analysis revealed that average outpatient load per working day across all BHUs in the district was 62 while majority of the BHUs in Vehari (55 out of 74) experienced a "MEDIUM" 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, workload in OPDs of the district remained the same as 662,000 cases were reported in the 2010 year while total cases observed in 2013 were 661,000.
- 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, 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.

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. On the basis of the GIS analysis the following areas were identified as underserved by a public sector primary health care facility: Chak

214EB, Chak 204EB and Chak 202EB. There is a need to undertake detailed analysis on similar lines to identify all such areas. Medical camps are proposed in order to provide health care facilities to these inaccessible localities/ villages.

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 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 monitoring tools 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 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 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.

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 DHAs proposed as a local government tier under the 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 Vehari 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 the primary healthcare sector. Primary data collected by the Director General Health Services Punjab for PHIS was also used. Additionally data was also collected from EDO (H) of the district concerned for the analysis carried out in this report. Wherever available, the latest and most reliable sources were used, and to further enrich the study 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 Vehari. 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 sectorial 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 Vehari.

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, and the third section

presents the profile of district Vehari. 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, the fifth section presents findings of the study by identifying the gaps based on the agreed standards for service delivery, provided in the EPHS and 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 the needs assessment study

The needs assessment study was conducted for district Vehari (in the southern 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 public health sector performance were considered during the needs assessment exercise:

1.4.1 Physical access to 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 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 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 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 the coverage of primary health services in district Vehari, 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 Vehari 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 health care services offered 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, 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:

- 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 10 surveyed Rural Health Centres (RHCs) in district Vehari. The HFA report described criteria of satisfaction were based on the perceptions of the clients using primary health care 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; and
- III. utilization 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).

1.5 Punjab Rural Support Programme (PRSP model)

In order to improve the delivery of services, a number of alternative models have also been implemented during recent years in the province. One such model of contracting-out of BHUs was tried out in Punjab to reorganize and restructure the management of all the BHUs in the district with a central role for community-based support groups. It started under the Chief Minister's Initiative on Primary Healthcare in district Rahim Yar Khan in 2003. The purpose of this initiative was to strengthen the curative and preventive services by handing over the management and finances of running the BHUs to the PRSP. This model was evaluated in 2005 by the World Bank, which showed positive results in increasing the utilizations rates of these facilities. However, there has been no evaluation of improved health outcomes in the catchment populations.

2. Punjab: health profile

2.1 Background and demography

Punjab is the most populous province of Pakistan. 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 tehsils.¹ Despite an extensive network of public health care facilities of 340 hospitals, 2,606 BHUs, 337 RHCs, 282 MCHCs and 1201 dispensaries; the overall health status of its population is below the desired level.² 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 2011, which is lower than the national figure of 276.³ 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 (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 services, 21% were reported to be anaemic. **TT-II (tetanus and neo-natal tetanus)** immunisation was provided to 64% women against the expected population in Punjab, in 2013⁴.

Research indicates that MMR is lower if deliveries conducted by **Skilled Birth Attendants (SBAs)**. In Punjab, 75% deliveries were conducted by the SBAs in 2013; however, the share of deliveries conducted by at the public health sector facilities was as low as 28% of the expected population in 2013.⁵ 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

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

⁴ The expected population refers to the estimated yearly target population for the relevant indicator covered in DHIS survey

⁵ Department of Health, Government of Punjab, *Health Information System Punjab Annual Report*, 2013, 1-2

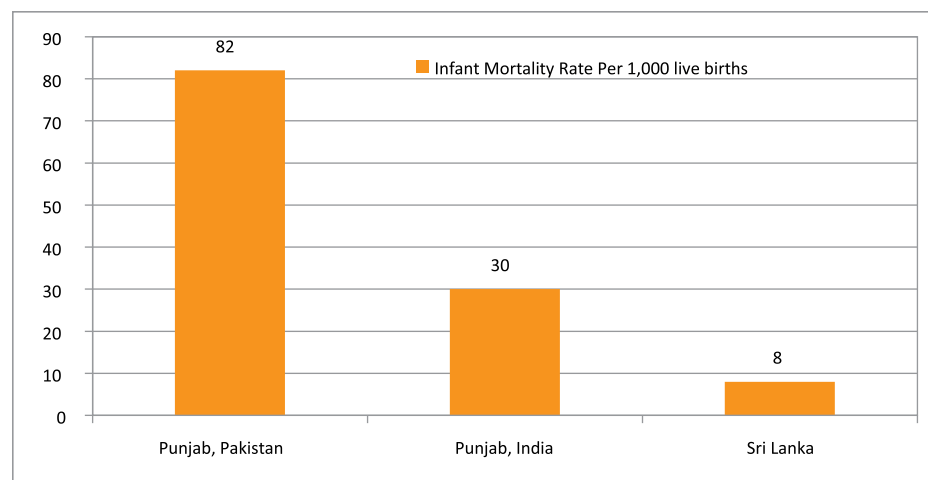
healthcare system. This can be used as a crude measure of access to maternal care. In 2013, the number of newly registered pregnant women per LHW was 20. While, **Family Planning (FP)** services were only availed by 12% of eligible couples from the public sector health facilities, against the expected population.⁶

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 2015.⁷ According to the MICS 2011 report, Punjab has an IMR of around 82 per 1000 live births, while the **Under-5 Mortality Rate (U5MR)** in the province is around 104 per 1000 live births.⁸ **Neonatal mortality rate**, i.e. the probability of dying within the first month of life, was found to be 55 per 1000 live births in the year 2012.⁹

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.¹⁰ 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.^{11 12}

Figure 1: Comparison of IMR with other developing economies



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

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

⁷ National Institute of Population Studies, *Demographic and Health Survey 2012-13*, 117

⁸ Government of Punjab, *Multiple Indicator Cluster Survey (MICS)*, 2011

⁹ National Institute of Population Studies, *Pakistan Demographic and Health Survey (PDHS) 2012-13*, 120

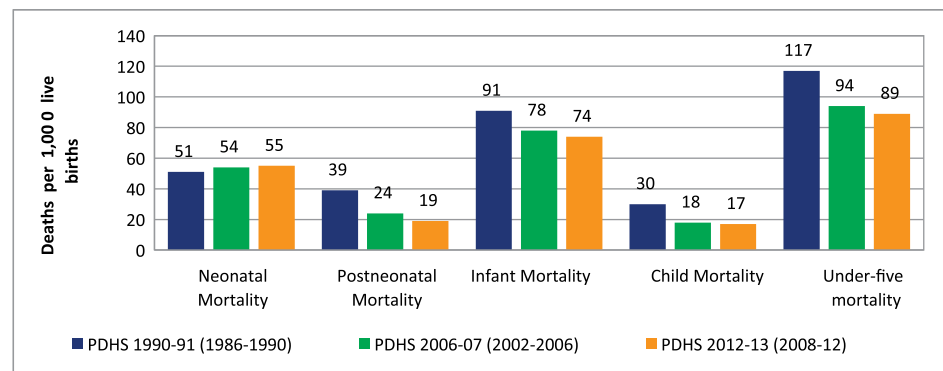
¹⁰ World Bank, <http://data.worldbank.org/indicator/SP.DYN.IMRT.IN>, (18th Nov, 2014)

¹¹ Government of Punjab, *Multiple Indicator Cluster Survey (MICS)*, 2011

¹² Government of India, Ministry of Health and Family Welfare, *National Health Mission*, 2011

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.¹³

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 illnesses.¹⁴ According 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 95 million in 2013. Additionally, the per capita OPD attendance can also 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

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

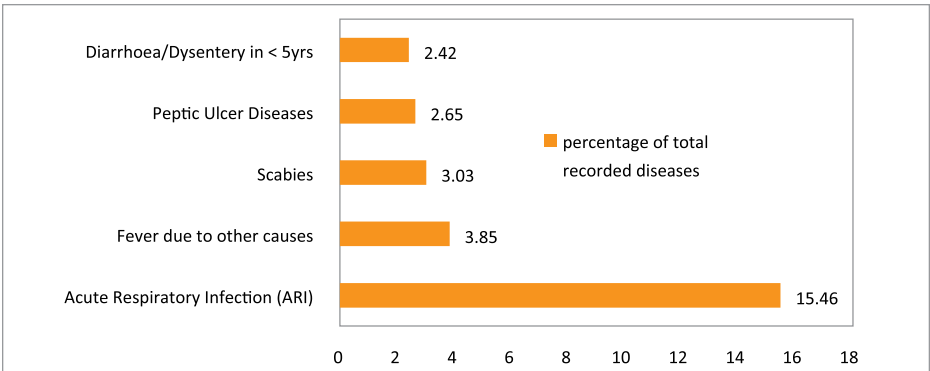
¹⁴ National Institute of Population Studies, *Pakistan Demographic and Health Survey (PDHS) 2012-13*, 124

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%.¹⁵

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 cases.¹⁶Moreover, 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.

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/medicines 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 2013.¹⁷

¹⁵ Department of Health, Government of Punjab, *Health Information System Punjab Annual Report*, 2013, 1

¹⁶ Ibid.

¹⁷ Ibid.

2.8 Immunisation

Immunisation coverage estimates provide a measure for monitoring of immunisation services, to guide disease eradication and elimination efforts, and as 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 2013.¹⁸

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	50.5%
LHV	2043	1841	202	9.9%
Dispenser	1903	1792	111	5.8%
Midwives	3527	1937	1590	45.1%
Vaccinators	3348	2702	646	19.3%
SH&NH	2006	1364	642	32.0%

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

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 Vehari fares against some of these indicators. This analysis is presented in the following sections.

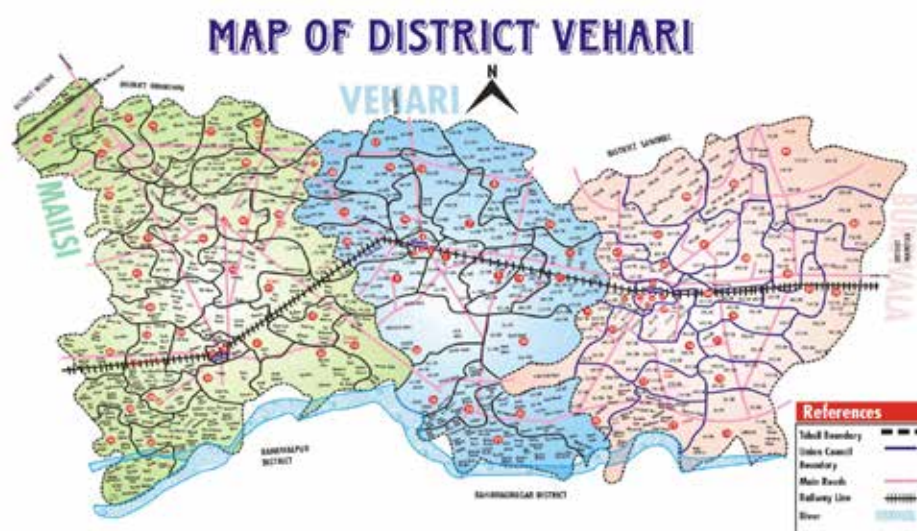
¹⁸ Ibid.

3. District Vehari: background

3.1 History and location of the district

District Vehari is situated in the Southern part of the Punjab province, with the district head quarter at Vehari City. Vehari attained the status of a district in 1976; previously it was a Tehsil of district Multan. It is spread over an area of 4,364Sq. Kms, bounded by the districts of Sahiwal, Pakpattan, Bahawalpur, Khanewal, Lodhran and Bahawalnagar. District Vehari lies in the Nili Bar which is between Ravi, Bias and Sutlej rivers; where, the right bank of river Sutlej forms the southern boundary of the district. The district consists of 3 Tehsils which include: Vehari, Burewala and Mailsi.^{19 20}

Figure 4: Map of District Vehari



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

3.2 Demography

Vehari has an estimated population of 2.9million, of which 51% are females and 49% are males. Majority of the district's population, around 65%, lives in the rural areas. The annual estimated growth rate of the population is around 2.7% and the population density in the district is estimated to be 659 persons per Sq. Km.²¹

The following section presents information on a number of key indicators related to coverage, quality and access for district Vehari; so that the current state of service delivery in the public primary health sector 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.

¹⁹ Government of Punjab, <http://www.punjab.gov.pk/vehari>, (25th Dec, 2014)

²⁰ Government of Punjab, *Three Years Rolling Plan (2010-2013)*, District Vehari, 2009, 8

²¹ ibid

4. District Vehari: health sector 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 access.²² 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 MDGs 2015, EPHS and MSDS (2008), which aim to standardize health services for more equitable access.

4.1 Budget allocation for PHC

The total budget of district Vehari for the year 2014-15 was Rs.6961.9 million and out of this Rs.1256.5 million is allocated to health sector. This is almost 18% of the total expenditure in the financial year. The salary budget for the same year is Rs.967.13 million and the non-salary part consisted of Rs.289.462 million. Primary health was allocated 654.5 million during the same year. The details are given below.

Table 2: Vehari Budget (2013-14)

Heads	Budget allocation 2014-15 (Rs. In millions)
District budget	6961.98
Health budget	1256.59
Salary budget	967.13
Non-salary budget	289.46
PHC budget	654.467

4.2 District Health Development Centre (DHDC)

Under the Second Family Health Project (SFHP) Lahore, a network of DHDCs was established in Punjab Health Department along with Provincial Health Development Centre Lahore. At that time a district based DHDC has been established in district Vehari with the aim to improve /support the district health service under the technical support of PHDC Lahore through training, development and operational research activities. The budget allocated to DHDC for the year 2014-15 is Rs.6.239 million and out of this, the non-salary part consisted of Rs.2.276 million. The total staff members of DHDC in Vehari is 9 that comprises of 1 Programme Director/ Assistant Director, 1 Multi-Purpose Paramedic Trainer, 1 LHV Trainer, and 6 other staff members.

²² Department of Health, Government of Punjab, *Essential Package of Health Services for Primary Health Care in Punjab*, 2013, 14

4.3 Health facilities in district Vehari

The health care 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 province.²³ In addition to DHQ and THQ hospital, total of 14 RHCs, 74 BHUs and 37 dispensaries are currently operating in the district²⁴ while private sector is also contributing to healthcare service delivery with 69 small sized hospitals 283 clinics and 51 other private health facilities.²⁵

4.4 Coverage

Coverage is a measure of the extent of services made available to the intended users. In case of Punjab, the MSDS and EPHS define the whole array of services that will 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 objectives.²⁶

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 the subsequent pages.

4.4.1 Maternal health

Prenatal care helps prevent complications during pregnancy and ensure healthy childbirth. In 2013, 73% of the pregnant women were given prenatal care in district Vehari. However, only 33% of those receiving prenatal services received this service from a government health facility, while 51% were provided this facility at a private hospital/clinic, and 15% consulted a TBA.^{1 27} During the year 2013, 100% of the expected population of pregnant women was covered for antenatal care (ANC-1) services in district Vehari; which is higher than the provincial figure of 93%.²⁸ Tetanus Toxoid (TT) immunisation was provided to 85% pregnant women and the district was ranked 17th in the province,²⁹ and 71% of the women were immunised against tetanus/ neonatal tetanus (TT-II).³⁰

²³ Government of Punjab, *Situation Analysis, Punjab Health Sector Strategy*, 2012, 72

²⁴ Department of Health, Government of Punjab, *Health Information System Punjab Annual Report*, 2013, 5

²⁵ EDO (H), District Vehari, 2014

²⁶ WHO, http://www.who.int/healthsystems/hss_glossary/en/index2.html (12th Nov, 2014)

²⁷ Pakistan Bureau of Statistics, *Pakistan Social And Living Standards Measurement (PSLM)*, 2012-13

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

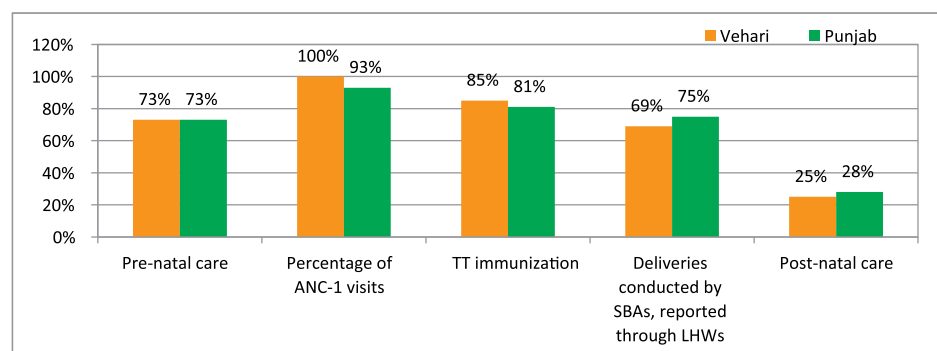
²⁹ Pakistan Bureau of Statistics, *Pakistan Social And Living Standards Measurement (PSLM)*, 2012-13

³⁰ Department of Health, Government of Punjab, *Health Information System Punjab Annual Report*, 2013, 40

Deliveries conducted by SBA are important in averting maternal and neonatal mortality and morbidity.³¹ According to the Health Information System Punjab Annual Report, in 2013, 20% of the newly pregnant women were registered by the LHWs in district Vehari. 69% of the deliveries were conducted by the SBAs as reported by the LHWs.³² Additionally, in 2013, 6% deliveries were conducted at government hospital/RHC/BHU while 47% were reportedly carried out at a private hospitals/clinics and remaining 47% took place at home.³³ Furthermore, 22% of the eligible couples availed family planning services from public sector health facility against the expected population.³⁴

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 survival.³⁵ During the year 2013, total infants deaths at BHUs of district Vehari were 1604 while 50 maternal deaths were reported at the same facility level.³⁶ According to the PSLM Survey, in the year 2013, only 25% of the mothers in district Vehari consulted a health facility for postnatal services which is slightly below the provincial figure of 28%. Out of those who received postnatal services, only 8% visited government facilities; while, 81% availed these services from private facilities/clinics.^{37 2}

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 neo-natal

³¹ National Institute of Population Studies, *Pakistan Demographic and Health Survey (PDHS) 2012-13*, 130

³² Department of Health, Government of Punjab, *Health Information System Punjab Annual Report, 2013*, 42

³³ Pakistan Bureau of Statistics, *Pakistan Social And Living Standards Measurement (PSLM)*, 2012-13

³⁴ Department of Health, Government of Punjab, *Health Information System Punjab Annual Report, 2013*, 37

³⁵ WHO, http://www.who.int/maternal_child_adolescent/topics/newborn/postnatal_care/en/ (12th Nov, 2014)

³⁶ Department of Health, Government of the Punjab, *Punjab Health Information System (PHIS)*, 2013

³⁷ Pakistan Bureau of Statistics, *Pakistan Social And Living Standards Measurement (PSLM)*, 2012-13

period.³⁸ According to MICS 2011, IMR in district Vehari is 97/1000 live births, and under 5 mortality rate is 125/1000 live births.³⁹ Additionally, 95% of the children aged 12-23 months in the district were fully immunised. It can further be added that 91% children in the urban areas while 95% children in the rural areas were fully immunised. Here, 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 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 immunisation based on memory recall is not very accurate.⁴⁰ In addition to this, neonatal tetanus protection was provided to 73% children in the district.⁴¹ These figures, however, appear to be exaggerated and different percentages are cited in different reports—generally higher figures of coverage are quoted in government reports as compared to other reports.

4.4.3 Vertical programmes⁴²

In order to buffer 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. Nine vertical programmes have been running in the district that include Extended Programme on Immunisation (EPI), National Maternal and Child Health Programme, National Programme For Family Planning & Primary Health Care, HIV and AIDS Prevention Programme, Universal Salt Iodization Programme, TB DOTS Programme, Communicable Disease Control Programme, Hepatitis Prevention and Control Programme and National Programme for Prevention and Control of Blindness.

4.4.3.1 Expanded Programme on Immunisation (EPI)

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 year.⁴³ 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 Vehari is 37%,

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

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

40 Federal Bureau of Statistics, Government of Pakistan. *Pakistan Social And Living Standards Measurement (PSLM)*, 2012-13

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

42 Government of Punjab, *Situation Analysis, Punjab Health Sector Strategy*, 2012

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

while the provincial average is around 47%.⁴⁴ 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.

Table 3: Availability of vaccinators

District	No. of UC	Government Vaccinators	Local Government Vaccinators	Total Vaccinators	No. of Vaccinators per UC
Vehari	89	84	5	89	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.

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.

⁴⁴ An unpublished presentation of the CM Health Sector Road Map, 2014

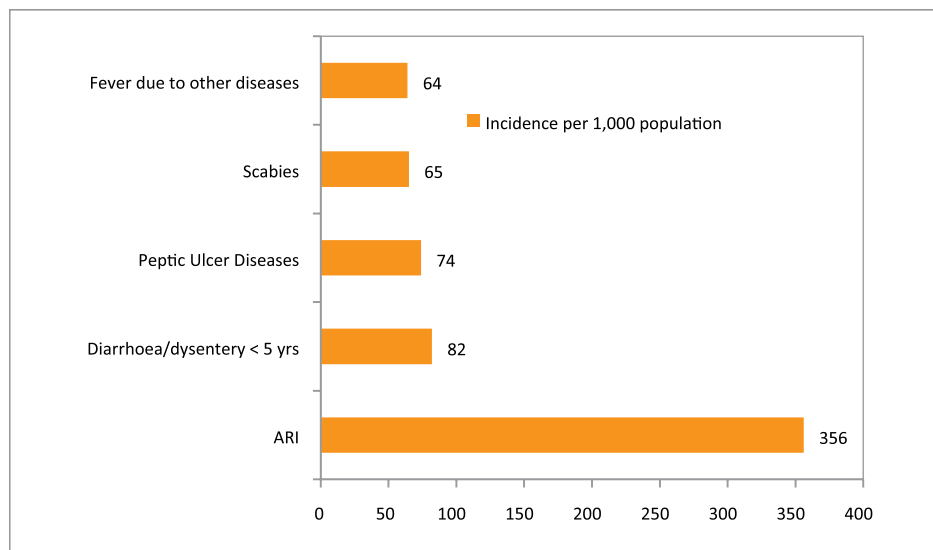
4.4.3.4 Nutrition programme

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 Vehari, 16% severe stunted prevalence and 15% severe underweight prevalence cases were recorded while out of total live births 27% babies were born with low birth weight (<2.5kg).⁴⁵

4.4.4 Disease pattern

According to the Health Information System Punjab Report 2013, the top five diseases in district Vehari 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 356/1000 population.⁴⁶ ³ 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 Vehari. It shows that ARI has been the most commonly occurring disease in the district with the highest number of cases followed by Diarrhoea/Dysentery in <5 yrs.

⁴⁵ Government of The Punjab, Multiple Indicator Cluster Survey (MICS), 2011

⁴⁶ Department of Health, Government of Punjab, Health Information System Punjab Annual Report, 2013, 24-26

Table 4: Number of cases registered at BHUs (in thousands)

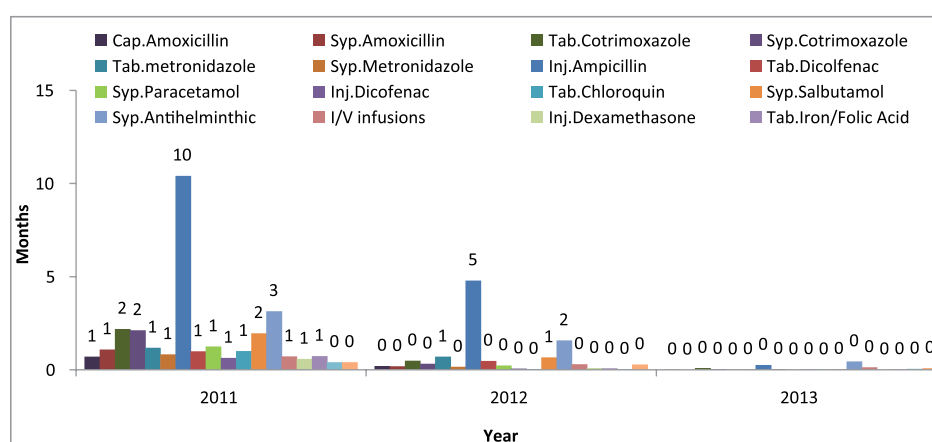
Diseases	2010	2011	2012	2013
ARI	269	238	234	266
Diarrhea/Dysentery in <5 yrs.	38	32	32	54
Diarrhea/Dysentery in >5 yrs.	40	34	34	41
Peptic Ulcer Diseases	40	32	39	55
Fever due to other causes	30	29	28	38
Scabies	79	54	48	48

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

Although, over the years, the incidence of scabies is on the decline (Table 4) but the reported occurrence of ARI and diarrhoea / dysentery in children under 5 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 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. According to the PHIS 2013, the situation in district Vehari seems favourable in terms of availability of tracer drugs at the BHUs. The stock-out position in the district was 4% in the year 2013, which is significantly lower than the provincial average of 25%. Figure 7 compares the stock-out of 18 tracer medicines in BHUs of district Vehari over the period of 2011-13. It shows that during the three year period of 2011-13, the district faced the lowest stock-outs in 2013, as can be seen in the figure below:

Figure 7: Stock-outs of tracer drugs in district Vehari

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” areas. The lack of incentives for care providers also leads to unfilled staff positions at the primary health care facilities in remote areas.⁴⁷ This is evident from the overall staff vacancies in the BHUs of district Vehari which are given below. A part from the positions given in Table 5, Vehari has 89 vaccinators and 55 School Health & Nutrition Specialist (SH&NS) and all there is no vacant position in the district.

Table 5: Total sanctioned and filled staff positions

Name of the position	Sanctioned positions in Tehsil Vehari	Vacancies in Tehsil Vehari	Sanctioned positions in Tehsil Mailsi	Vacancies in Tehsil Mailsi	Sanctioned positions in Tehsil Burewala	Vacancies in Tehsil Burewala
Medical Officer	20	9	28	4	26	3
Nutritionist	20	6	28	2	26	11
Lady Health Visitor	20	0	28	0	26	0
Dispenser	20	0	28	0	26	0
Midwife	20	0	28	1	26	0

Source: EDO (H), Vehari, 2014

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 28 health facilities in district Vehari, including 20% randomly selected BHUs (15 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 patient.⁴⁸ Table 6 reports the findings for the 15 BHUs surveyed in district Vehari:

⁴⁷ Government of Punjab, *Health Sector Reform Seminar Report*, 2006, 15-16

⁴⁸ Government of the Punjab, *Health Facility Assessment (HFA), Vehari*, 2011, 10

Table 6: Status of BHU infrastructure

Infrastructure	No. of BHUs with available building component	No. of BHUs with functional building component
1. OPD:		
Consultation area	15	15
Examination area	11	11
Hand Washing	2	2
2. LHV's room:		
Consultation area	13	13
Examination area	11	10
Hand Washing	0	0
3. Labour Room:		
Delivery room	2	2
Scrub area	0	0
Patient's washroom	0	0
4. Residence:		
Doctor	15	7
LHV	15	3

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

Note: Figures are based on the surveyed sample of 15 BHUs in district Vehari.

The data presented in the Table 6 above indicates some serious 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 scrubbing area in delivery room and a separate patient's washroom are all missing in the surveyed BHUs.

4.4.8 Equipment

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 15 surveyed BHUs in Vehari:

Table 7: Availability of equipment items available at BHUs

Facility name	General Items	OPD	LHV's room
<i>Required number of items as per PC-I</i>	3	14	12
Items available per BHU			
BHU Chak 148-EB	0	6	9
BHU Chak 199-EB	0	9	6
BHU Chak 231-EB	0	7	7
BHU Chak 317-EB	0	6	6
BHU Chak 409-EB	0	5	6
BHU Kikri Kalan	1	7	8
BHU KikriKhurd	1	6	7
BHU Lalipur	0	6	6
BHU Mitroo	1	7	5
BHU Chak 122-WB	0	7	6
BHU Chak 168-EB	0	5	7
BHU Chak 22-WB	0	5	9
BHU Chak 41-WB	2	8	8
BHU Chak 52-WB	0	6	4
BHU Chak 569-WB	0	4	7

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

Note: Figures are based on the surveyed sample of 15 BHUs in district Vehari.

Table 7 above indicates that the general BHU equipment which includes an electric water cooler, water filter and incinerator, were missing from all except for 4 BHUs out of the 15 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 OPD and the LHV rooms in a number of BHUs. Also, it can be noted that the complete set of required equipment items mentioned in the standard list were not available at any of the surveyed BHUs.⁴⁹

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 account.⁵⁰ Some of the key indicators of quality relate to the utilization and workload of health facilities; while the governance related aspects of quality include management practices to support the delivery of health care at local level.

⁴⁹ Government of the Punjab, *Health Facility Assessment (HFA)*, Vehari, 2011, 11

⁵⁰ WHO, http://www.who.int/management/quality/assurance/QualityCare_B.Def.pdf, (19th Nov, 2014)

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 at over-burdened facilities. According to the OPD data obtained from the Punjab Health Information System (PHIS),⁵¹ majority of the BHUs in Vehari (55 out of 74) experienced a "MEDIUM"⁴ outpatient load per working day relative to the average across all BHUs in the district and 9 out of the 74 BHUs in the district experienced a "LOW" outpatient load per working day. Furthermore, only 4 BHUs in district Vehari experienced a "VERY HIGH" outpatient load per working day relative to all the others in the district. Only 1 BHU out of the 74 BHUs in the district experienced a "VERY LOW" outpatient load per working day relative to the average across all BHUs in the district.

Table 8: Patients workload at BHUs

OPD workload	Number of BHUs
VERY LOW	1
LOW	9
MEDIUM	55
HIGH	5
VERY HIGH	4

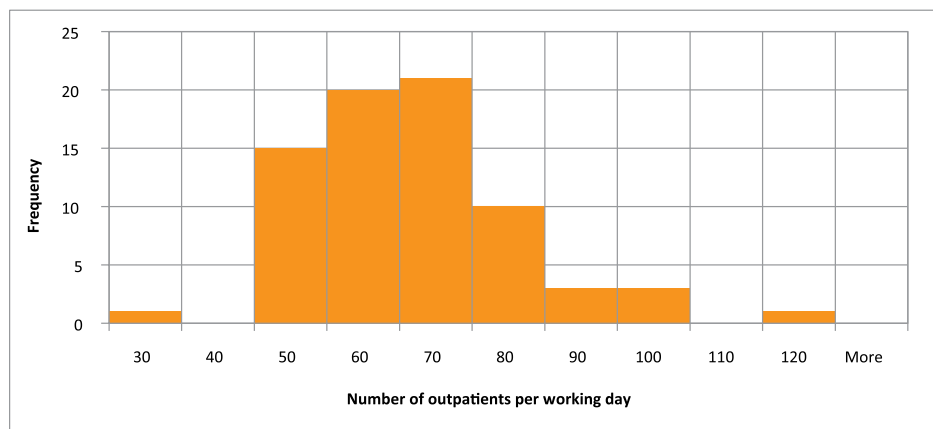
Source: Department of Health, PHIS, 2013

Note: The BHUs have been grouped into "LOW", "VERY LOW", and "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 Vehari can be further examined by plotting the frequency distribution of the outpatient load per working day for the 74 BHUs in district Vehari.

⁵¹ The workload only includes new cases registered at BHUs in district Vehari

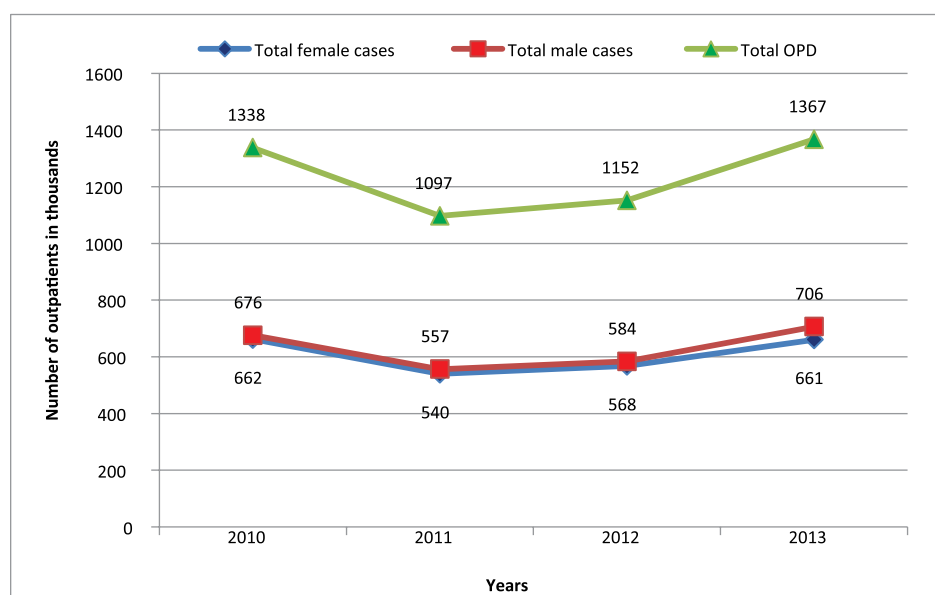
Figure 8: BHUs OPD workload



Source: Department of Health, PHIS, 2013

The average outpatient load per working day across all BHUs in the district was found to be 62. The histogram above (Figure 8) displays a slightly uneven distribution around the mean, with the frequency distribution being slightly skewed to the right of the mean. This further demonstrates the overall medium-to-high patient load per working day at many BHUs in Vehari, which could be closely related to many factors, including, for instance, the adequate 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 9 below indicates that the total number of OPD visits stood at their lowest during 2011, however, the OPD visits have increased significantly during 2013. A number of factors could be responsible for this increase, including improved coverage and quality of health services being provided at the facilities as well as the resulting increase in public preference for the facilities.

Figure 9: Total OPD visits (2010-13)

Source: Department of Health, PHIS, 2013

4.5.6 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 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 Vehari. In order to assess the perception of clients about the quality of public health services, especially MNCH care provided at the health facilities, under, HFA 2011 Client Exit Interviews (CEIs) were conducted in 10 RHCs of Vehari where 70 clients were interviewed. The findings from these interviews are given below (Table 9, 10, 11).⁵² Majority of the respondents of CEIs reported that they had to wait for less than 10 minutes in order to be checked by a health service provider whereas; most of the respondents had to pay for the services they were receiving at the RHCs.

Table 9: Waiting time at RHCs

Waiting time at the RHCs	Number of clients with an affirmative response
less than 10 minutes	37
10 minutes to 20 minutes	5
20 minutes to 30 minutes	1
More than 30 minutes	2
Paid fee for service	62
Received educational material	1

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

⁵² Government of the Punjab, *Health Facility Assessment (HFA) - Punjab, Vehari, 2011*, 50

However, overall 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 Table 10 below:

Table 10: Patient satisfaction from services at RHCs

Overall satisfaction	Number of clients with an affirmative response
Very satisfied	27
Satisfied	23
Not satisfied	0

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

The findings suggest that, 49 out of the 70 clients interviewed identified “good quality” of services as the main reason for visiting the RHCs, 49 clients interviewed attributed their visits to the RHCs to affordability of the health services and 49 clients reported the “Staff Attitude” as a key reason for accessing the facility; while, 38 clients identified the close proximity as the reason for accessing the facility, as shown in Table 11 below:

Table 11: Reasons for visiting RHCs

Reasons for visiting the RHCs	Number of clients with an affirmative response
Close to home	38
Good quality	49
Staff attitude	49
Affordability	49
Lack of choice	1

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

4.6 Access

Access to health facilities is an important aspect of the health care system and has direct implications for the burden of disease. 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).⁵³

As a part of this study, with the technical support of the World Bank, the issue of access to health facilities was explored through the use of 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

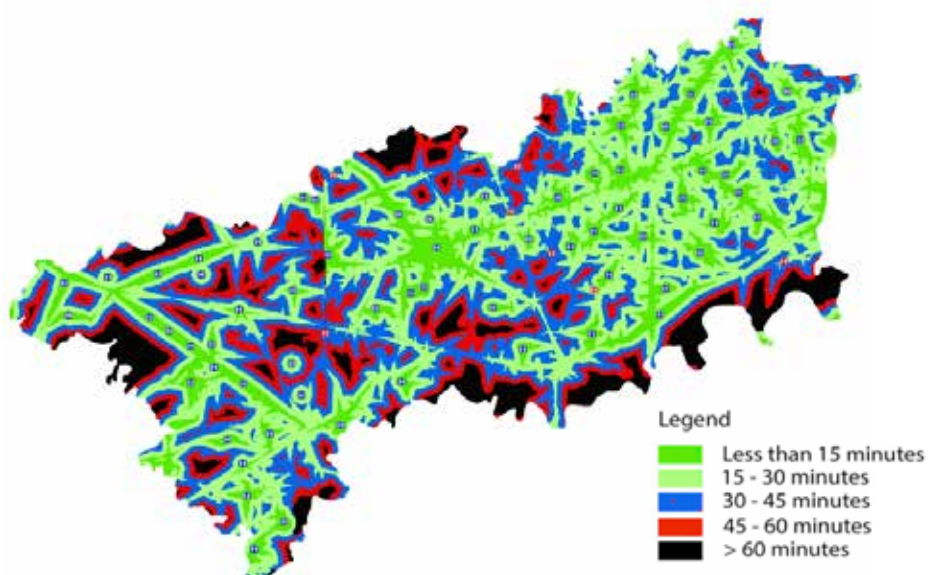
⁵³ Government of Punjab, *Minimum Service Delivery Standards (MSDS) for Primary and Secondary Health Care in Punjab*, 2008, 28

nearest BHU where time is estimated based on the travel speed on and off roads.

The road network is derived from a crowd-sourced road layer 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.⁵⁴ For the purpose 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 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 also been worked out (Figure 10).

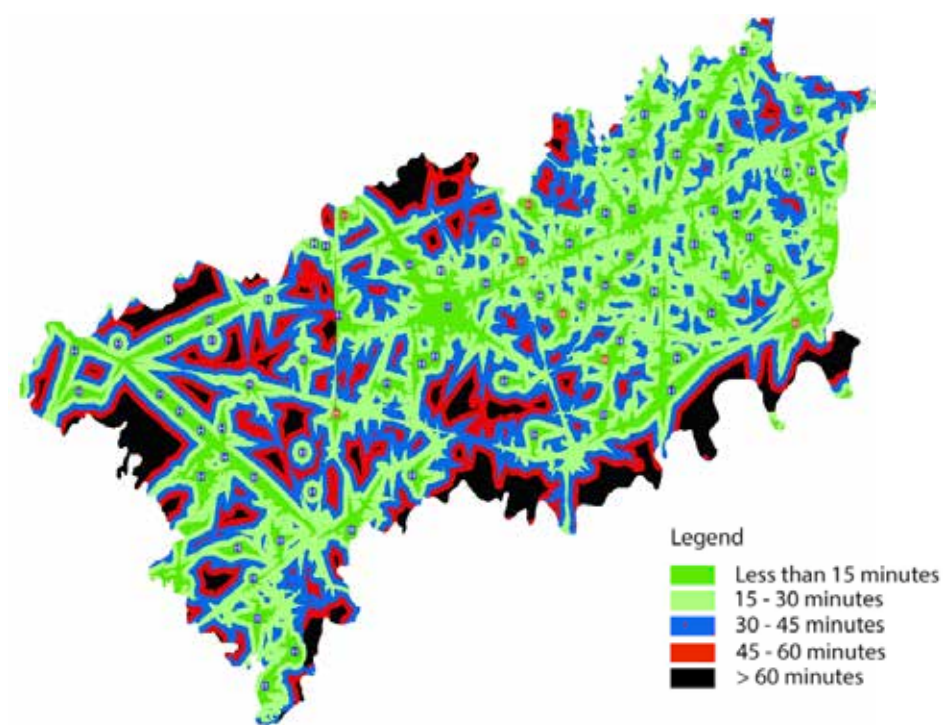
Figure 10: Travel time to nearest BHU with doctor



Figures 10 and 11 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.

⁵⁴ Technology for People (TPI) initiative has an offline version of the road layer provided by Google that was last updated in 2012

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



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

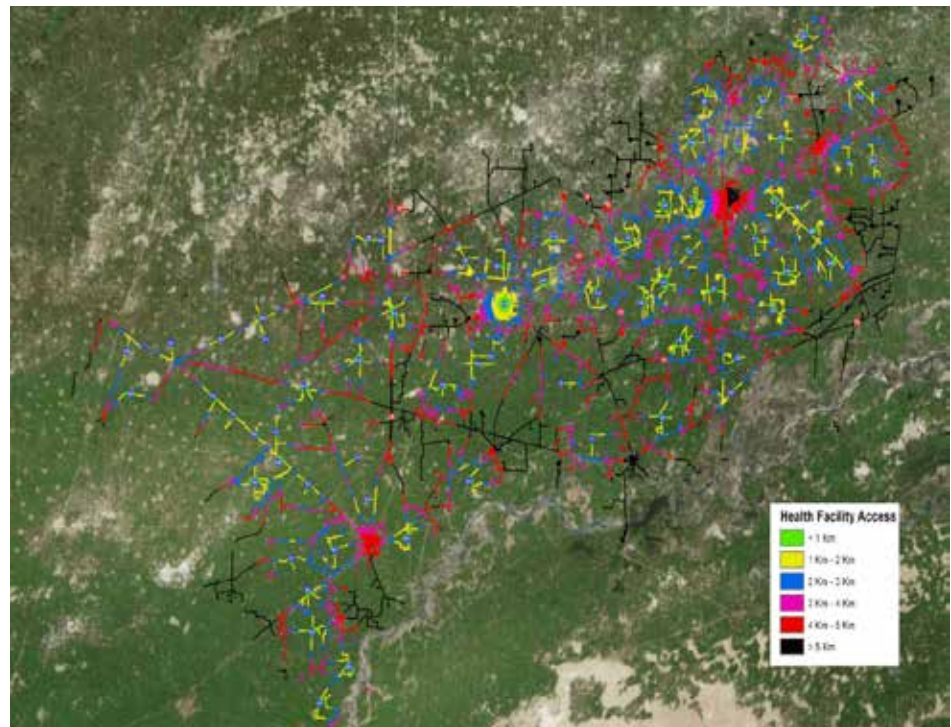
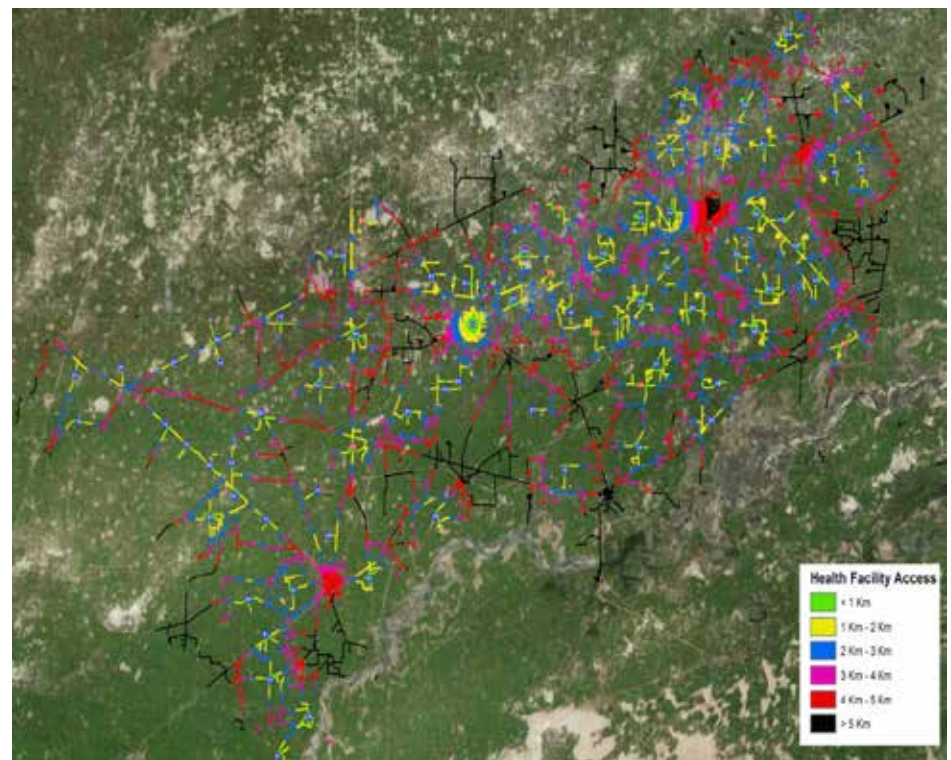


Figure 13: Straight-line distance to the nearest BHU—regardless of presence of a doctor



4.6.3 Travel distance to the nearest BHU

For the purpose 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

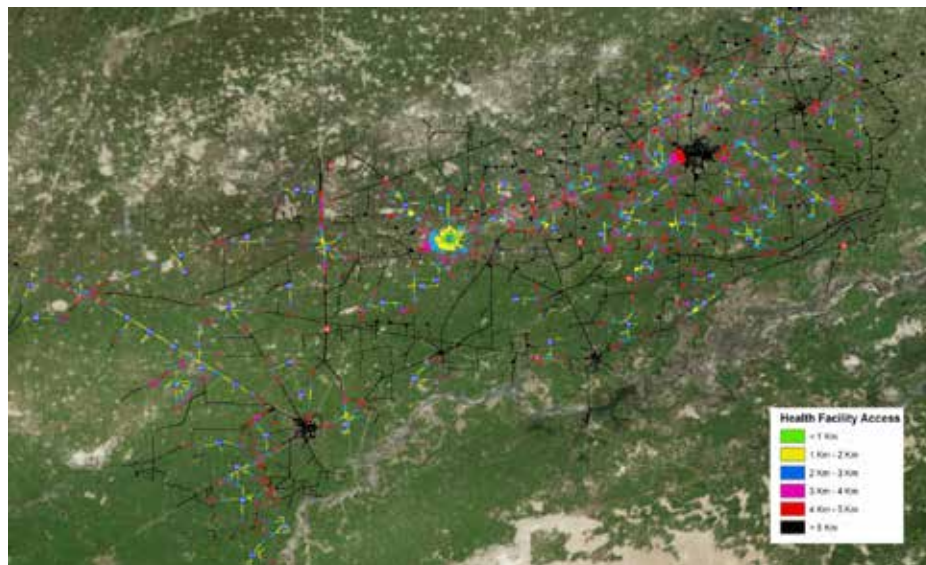
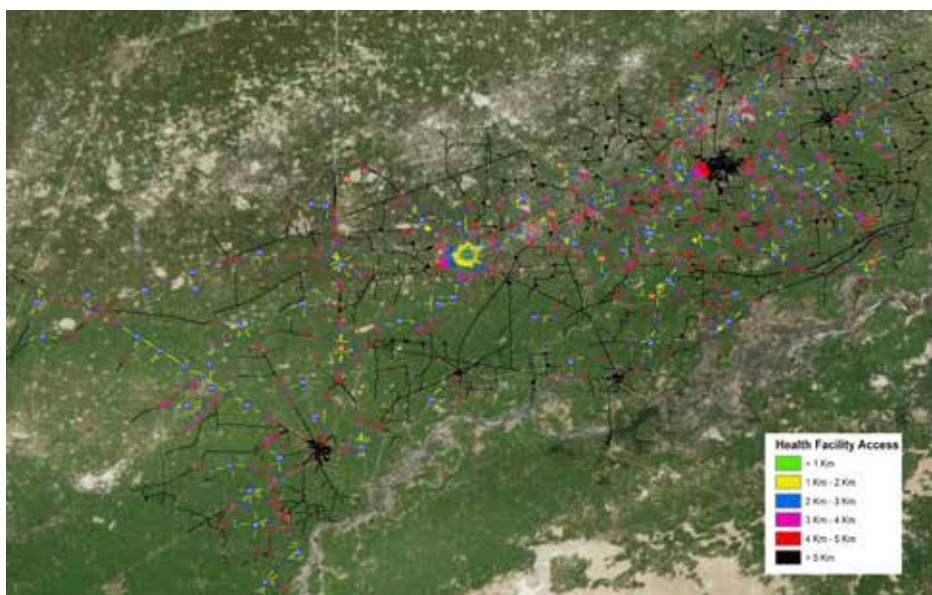


Figure 15: Travel distance by road to the nearest BHU regardless of presence of a doctor



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 been identified that do not have access to a BHU as they are at a distance of between 4-5 km 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 represent BHUs, and the villages that are under served are named as follows

Figure 16: Chak 214 EB



Figure 17: Chak 204 EB and Chak 202 EB



Figure 18: Other settlements as identified in maps above

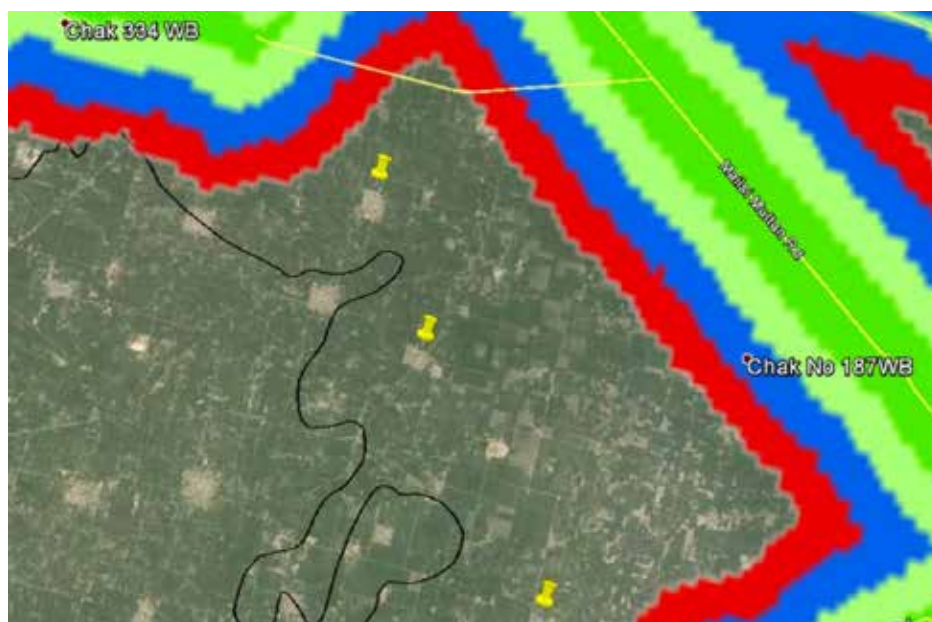
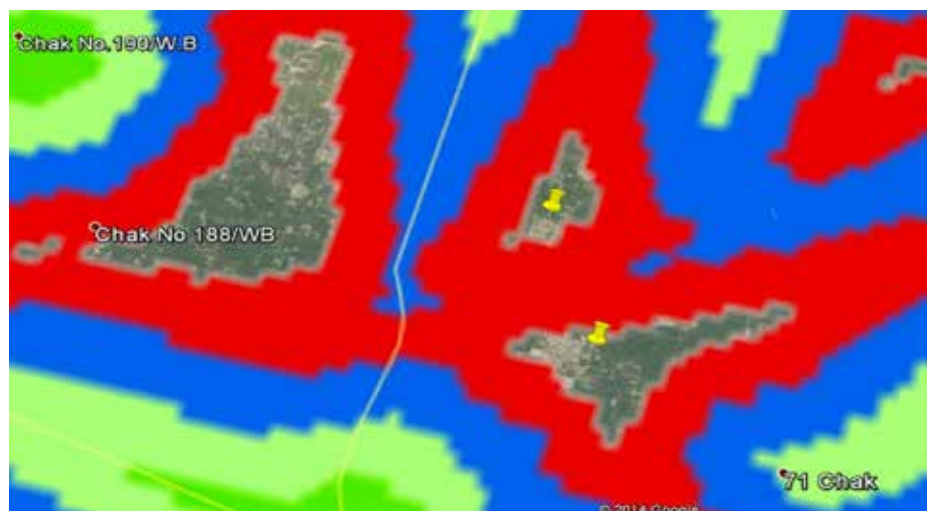


Figure 19: Underserved villages



4.6.4 GIS analysis by GIS Cell, Vehari

With the technical support of the Urban Unit, and through the GIS Cell established in February, 2015 by SNG in Vehari, a more comprehensive GIS analysis has been carried out to look at the access to health facilities in the district. A total of 77 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 22). 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 23 displays the service area of health facilities for district Vehari. 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 24). 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 85 % of the women were immunised against TT in district Vehari, so the gap of 15% still exists. Despite this gap, the district is fulfilling the minimum standard set by the province in this regard i.e. 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 Vehari, as only 73% 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, 69% of the deliveries were conducted by SBAs in district Vehari during the year 2013, so a gap of 31% 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 Vehari the situation of post-natal care is distressing, as only 25% 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 8% women were treated in a public sector facility.

5.1.5 Family planning

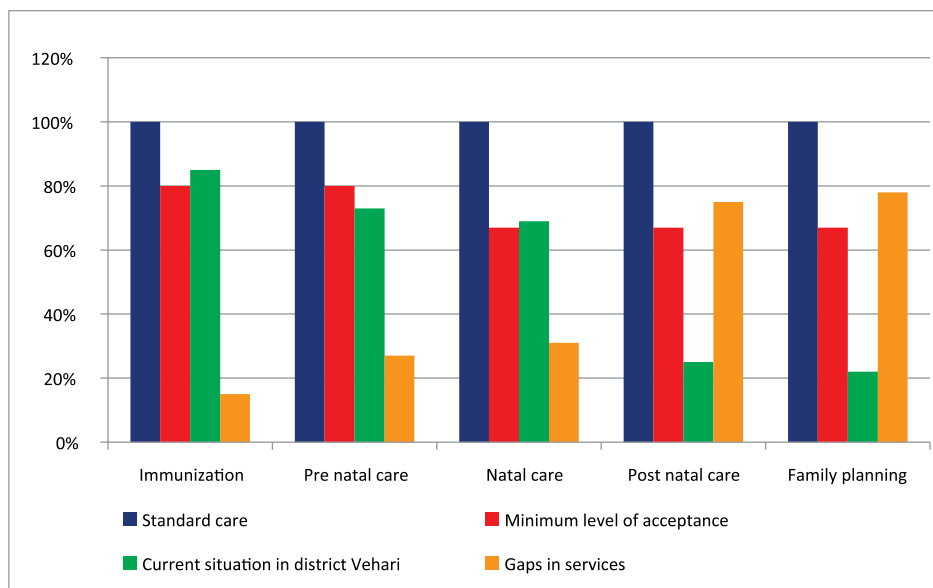
The provision of family planning services in the district also leaves a gap of 78%, as only 22% of the couples availed this facility in 2013, while, the service provision standards indicate that all couples should be provided with necessary information and services regarding family planning. Furthermore, according to MSDS, the minimum service provision standard is that least two-third of all the eligible couples should be provided with the awareness on family planning. The gaps in service delivery in the district are presented below in tabular form:

Table 12: Gaps in PHC service delivery (Vehari)

Services	Standard care	Minimum level of acceptance ⁵	Current situation in district Vehari	Gap in the services	Current status in Punjab
Immunisation	100%	80%	85%	15%	81%
Pre natal care	100%	<80%.	73%	27%	73%
Natal Care	100%	More than 2/3 rd deliveries by SBAs	69%	31%	74%
Post natal care	2 postpartum visits; first visit within 24 hours of delivery.	67% or 2/3 rd of all women should receive postpartum care	25%	75%	28%
Family planning	100%	67% or 2/3 rd of all eligible couples	22%	78%	12%

Source: MSDS, 2008, Punjab DHIS Annual Report 2013

Figure 20: Gaps in PHC service delivery (Vehari)



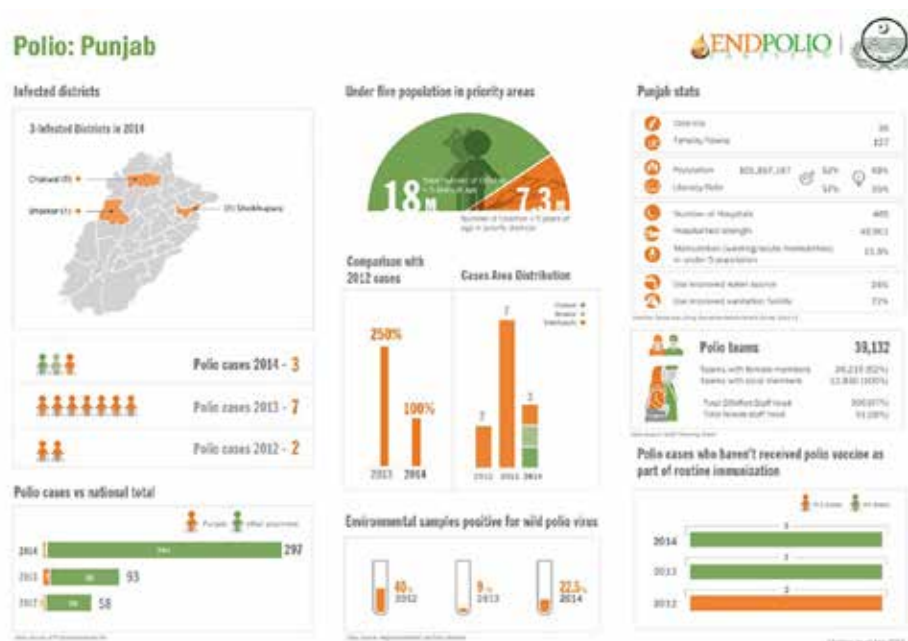
5.1.6 Vertical programmes ⁵⁵

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 Vehari.

5.1.7 Expanded Programme on Immunisation

The EPI Programme under implementation 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.

Figure 21: Polio situation in Punjab



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

5.1.8 Human resource

The HR profile of BHUs in district Vehari indicates that gaps in MNCH services exist in Tehsils Vehari and Burewala. The filled positions for the required staff did not match the minimum human resource requirements, as laid out in the EPHS, Punjab.

⁵⁵ Sub National Governance (SNG) Programme, *Needs Assessment in Primary Health Sector, Bahawalnagar*, 2014

According to the data provided by the EDO (H) Vehari, around half of the sanctioned positions for a Medical Officer were vacant in Tehsil Vehari. There is a significant shortage of nutritionists at the BHUs in Tehsils Vehari and Burewala. The unfilled positions of Nutritionists are especially worrying as the cases of malnutrition among children are on the rise in district Vehari.

5.1.9 Infrastructure and equipment at BHUs

As indicated by the HFA 2011 survey conducted in district Vehari, 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 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 4 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

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 facilities were generally satisfied with the services being provided. Their 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 PHIS for 2013; majority of the BHUs in district Vehari experienced a "MEDIUM" outpatient load per working day compared to the average across all BHUs in the district. While, only 4 BHUs out of 74 in the district experienced a "VERY HIGH" outpatient load per working day. The reasons for

this imbalance in outpatient load among the BHUs could be closely related to the adequate coverage and quality of the health care provided at the BHUs. Additionally, the outpatient load day has increased significantly in 2013, which can be due to many reasons including better performance by the public facilities leading to an increasing preference for the 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 Vehari. Some of the issues found are discussed below:

5.2.3.1 Limited evidence based planning⁵⁶

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.

5.2.3.2 Performance management system⁵⁷

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.

⁵⁶ Sub National Governance (SNG) Programme, *Needs Assessment in Primary Health Sector Bahawalnagar*, 2014

⁵⁷ *ibid*

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 had 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 hamper effective monitoring of service delivery. Moreover, delay in provision of resources, constrained 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.

5.2.3.3 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.

5.2.3.4 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 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.

5.2.3.5 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.

5.2.3.6 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 Programme 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 Vehari 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 medicines at BHU level.

Quality of medicines was compromised due to flaws in the planning process as the focus had always been on acquiring medicines at cheaper rates. Additionally, improper handling of medicines by not properly 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 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 Health Department. It is also possible that the DG of Vehari may start the pilot and gauge the results to see the efficacy of 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 Vehari 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 Vehari 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 stock.⁵⁸ 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 the wrong types of contraceptives are being procured i.e. more of short-term contraceptives against long term. Interestingly, all four contraceptives 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

⁵⁸ Stock Analysis at Service Delivery Points for USAID-Supported Contraceptives, 2013

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 and 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 difference.⁵⁹ 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. Although there is no shortage of medicines in the district still it is important to ensure that medicine is available at the BHUs. For that purpose, 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 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

⁵⁹ 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.

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 found that the existing equipment is also not properly maintained, therefore it is proposed that adequate allocations 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 that most of the BHUs in the district experience a medium patient load when compared with the district OPD average. Out of the 74 BHUs only 4 BHUs had 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 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 report that 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**

The study found that there are populated areas in the district that have limited or no access to a health facility due to either its distance from locality or due to poor conditions of roads. In order to provide some health care services 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 SNG office Vehari on 20th February 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 22: District Vehari - health facilities with composite data layers

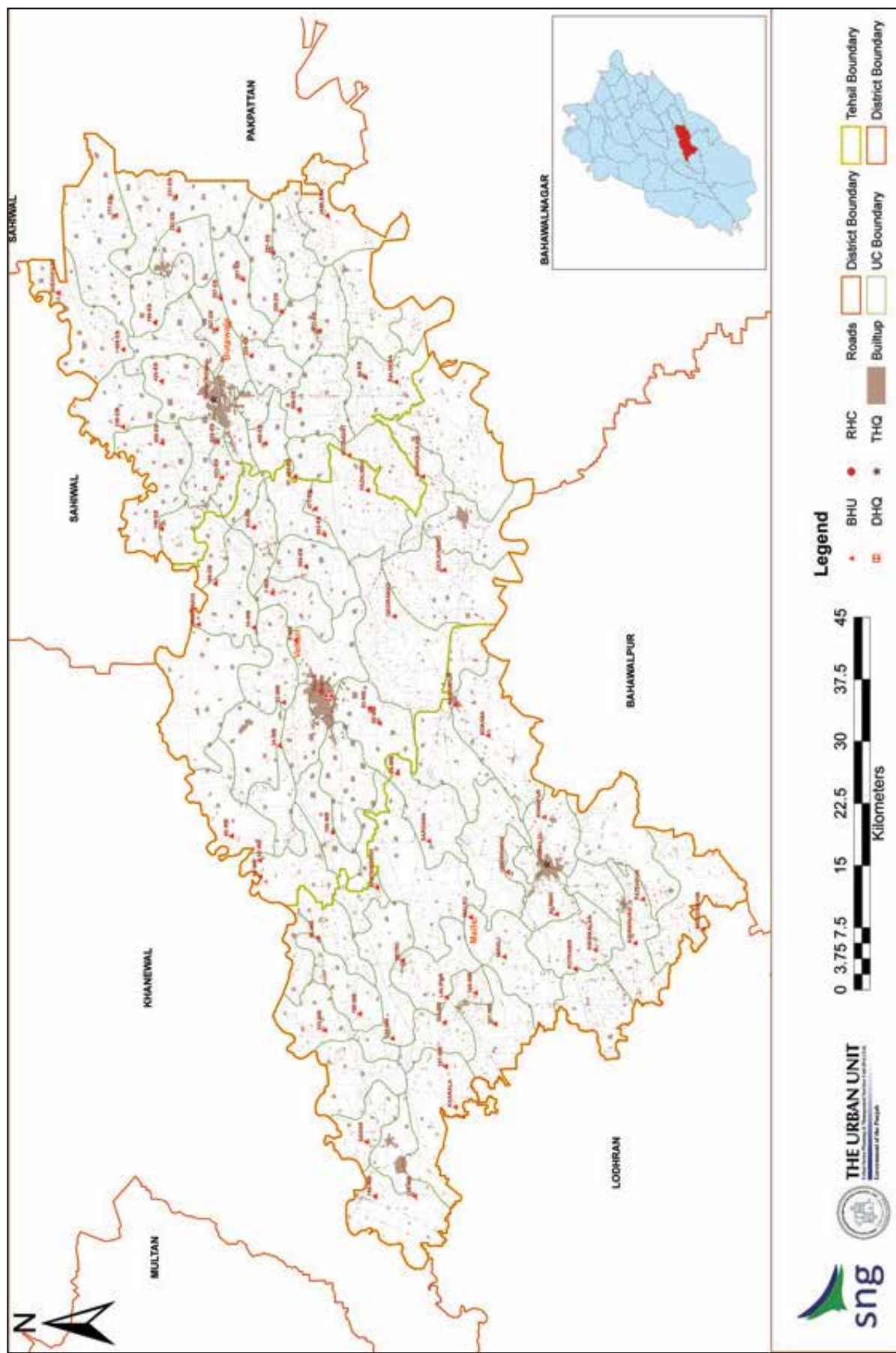


Figure 23: Health facilities service area (3 Km distance from built up areas)

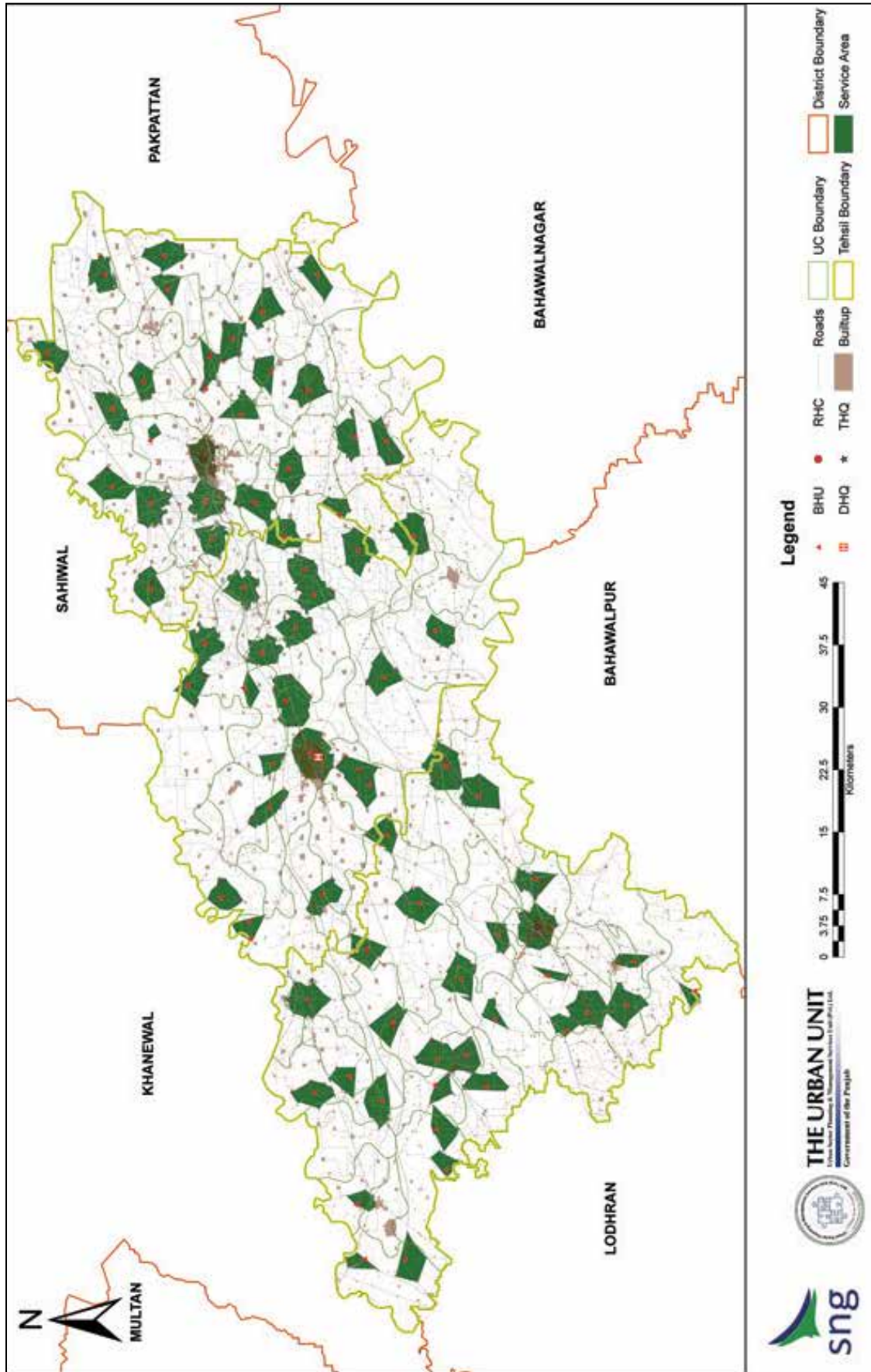
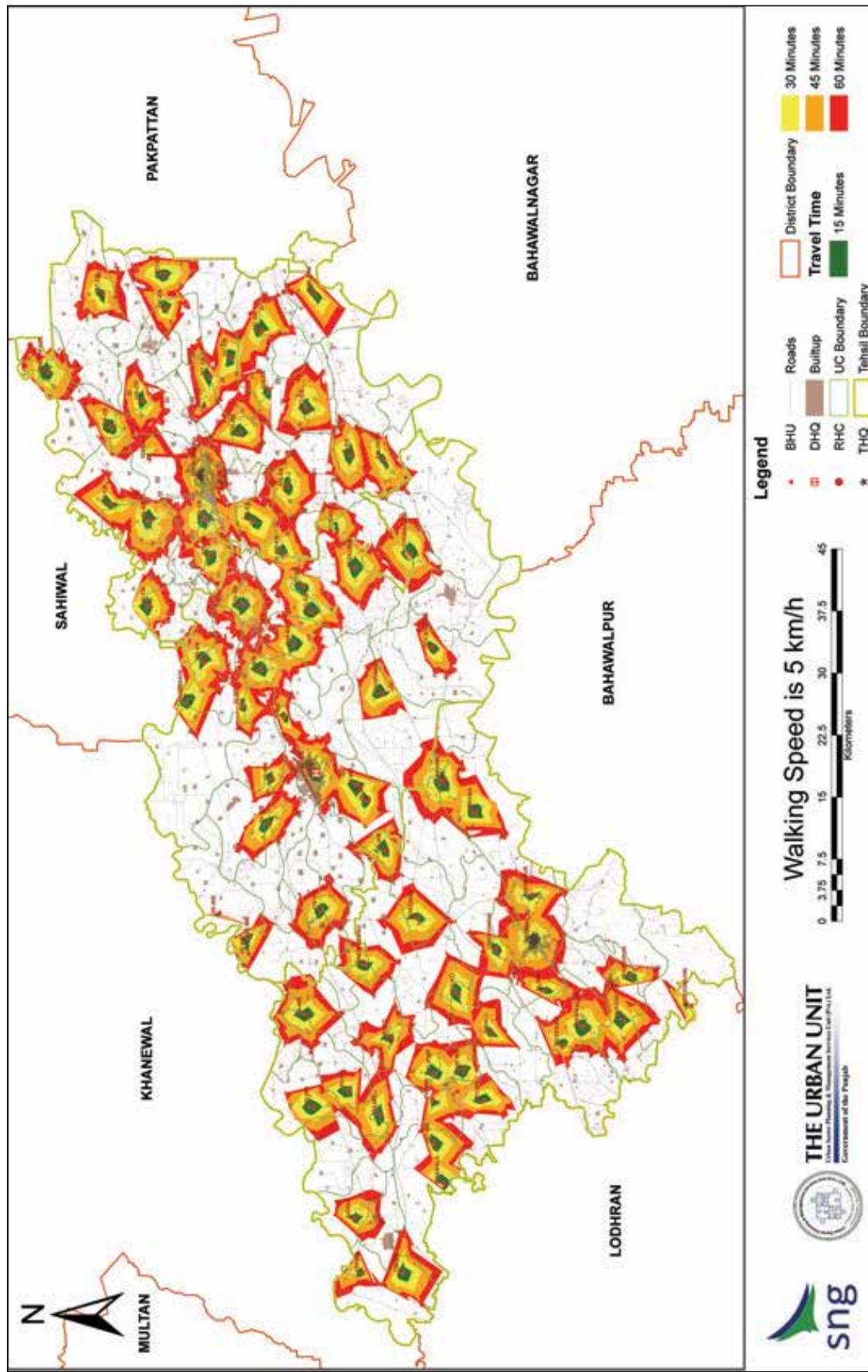


Figure 24: Health facilities accessibility analysis - travel time on foot



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).

