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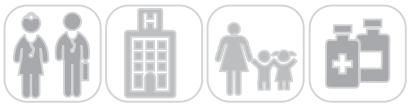
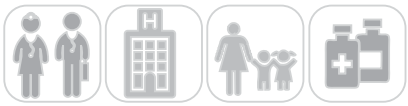
Sub-National Governance Programme



NEEDS ASSESSMENT AND EVIDENCE BASED BUDGETING

Primary Health Care

Sahiwal



NEEDS ASSESSMENT AND EVIDENCE BASED BUDGETING

Primary Health Care

Sahiwal

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 study 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 World Bank's team working on IT solutions for improving governance supported the Geographic Information Systems (GIS) maps and analyses. The Sub-National Government (SNG) Programme Punjab team also undertook the analyses of budget and financial statements 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

List of Figures

List of Tables

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 Health Care
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
SBAs	Skill Birth Attendants
SHC	Secondary Healthcare
SHFP	Second Family Health Project
SH&NS	School Health and Nutrition Supervisor
SOPs	Standardized Operating Procedure
SNG	Sub National Governance
STIs	Sexually Transmitted Infection
TBAs	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 and Testing
WHO	World Health Organization
WMO	Women Medical Officer

Executive Summary

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

ii. To achieve these targets the SNG Programme conducted a health sector needs assessment in district Sahiwal 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 Health Care (PHC) sector. Additionally, primary data collected by the Directorate General of Health Services in Punjab for the Punjab Health Information System (PHIS) and the data collected from 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 Sahiwal. 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 Sahiwal, fifth section provides findings of the study and gaps identified in service delivery at the PHC level, while the last section gives recommendations to bridge these gaps.

Budget allocations

v. Out of the total district budget allocated to district Sahiwal, Rs. 594.3 million was spent in the health sector. This is almost 10 % of the total expenditure in the financial year 2013-2014. The health sector salary expenditure for the same year was Rs. 456.9 million and the non-salary part consisted of Rs. 137.4 million. Primary health was allocated Rs. 416.3 million during the same year while the utilization of budget in PHC was 90%.

vi. In addition to this, Rs. 5.36 million was also allocated to District Health

Development Centre (DHDC) while out of this amount the non-salary part consisted of only Rs. 0.69 million. The aim of DHDC is to improve district health service delivery through training, development and operational research activities, therefore, the non-salary budget of the district needs to be increased.

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 82% received the same service in district Sahiwal. As the standard for coverage of pre natal services is 100%; therefore, a gap of 18% exists in coverage of the service. During the year 2013, Antenatal Care (ANC-1) coverage in Punjab was 93% while in district Sahiwal 79% 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 39% in district Sahiwal against the standard of 100% coverage, leaving a gap of 61% in the district.

viii. Safe childbirth and effective neonatal care are essential to prevent child mortality. According to Multiple Indicator Cluster Survey (MICS) 2011, Infant Mortality Rate (IMR) in Punjab was 82/1000 live births, and 93/1000 live births in district Sahiwal while under 5-mortality rate was 104/1000 live births in Punjab and 119 /1000 live births in district Sahiwal. Additionally, 96% 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 Sahiwal were 1750 while 67 maternal deaths were also reported.

ix. A child's birth weight is an important indicator for vulnerability to childhood illness. According to MICS (2011), out of total live births, 28.1% babies in Punjab and 28.7% in Sahiwal were born with low birth weight (<2.5kg). It was found that 15% of children in Punjab and 16% in Sahiwal 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, 74% deliveries in Punjab and 72% in district Sahiwal were conducted by SBAs against the expected population i.e. 2.9%. Therefore a gap of 28% 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 (TBAs) and group them with Lady Health Worker (LHWs), where referrals are made in case of complications. The district can also utilize the DHDC to train the 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 Sahiwal 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 70% women in district Sahiwal 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 Sahiwal it was 53%. According to Pakistan Social and Living Standard Measurements (PSLM) survey, Polio 1 coverage in Punjab and Sahiwal was 98% and 91% 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 Sahiwal 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 20% in Sahiwal consulted health facilities for Family Planning (FP), indicating a huge gap of 80% in district against the MSDS prescribed standards. Increase in Contraceptive Prevalence Rate (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 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 Sahiwal. Time series analysis of data suggests that incidence of all these five diseases has increased over the years, 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. 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 and13% in district Sahiwal as per the PHIS data. This shows that availability of medicines is relatively better in Sahiwal 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 Sahiwal is better than other districts. All the positions sanctioned in the district were filled and there was no shortage of staff. 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 Sahiwal the following vertical programmes are under implementation: Expanded Programme on Immunisation (EPI), National Programme for Family Planning & Primary Health Care, Nutrition Programme, Prevention and Control of Hepatitis, TB DOT (control Programme), Community Disease Control Programme (CDC) and Integrated Reproductive Maternal and New-born Child Health Programme. The study found that most of the vertical programmes are working in isolation having very little coordination with the District Health Department. This has diminished the utility of these programmes and the synergized 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 level 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 be made to effectively integrate the vertical programmes with the exiting district health structures and institutions.

Quality

xxv. To assess the quality of health facility infrastructure and equipment, Technical Resource Facility (TRF) conducted a primary survey at 28 health facilities

including 15 BHUs in district Sahiwal. The study revealed that most of the BHUs lacked basic infrastructure and equipment in terms of compliance with the specified minimum standards laid down in MSDS. Client Exit Interviews (CEIs) were also conducted which showed that majority of the clients visiting the public sector primary healthcare facilities were generally satisfied with the services. 90% of the staff was satisfied with the attitude of the staff and care provided, and 92% were also satisfied with their clinical examination. On the other hand only 42% were satisfied with provision of medicine and laboratory/diagnostic facilities at the healthcare facilities. 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 75 BHUs of Sahiwal using PHIS data. The analysis revealed that average outpatient load per working day across all BHUs in the district was 45 while majority of the BHUs in Sahiwal (51 out of 75) 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 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 BHUs. In case the cost is too high, the district may decide to consolidate BHUs. This would also spare staff and other resources that could be utilized elsewhere in the district. In addition to that, it was also observed that total OPD cases have significantly increased from 759,000 in the year 2011 to 100,000 million in the year 2013.

xxvii. BHUs are the first port of call for a large majority of population of the district when it comes to medical treatment. A large number of MNCH related services are also provided at the BHU, therefore there is a need to improve the working of BHUs. In order to improve the performance of BHUs, community based monitoring 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. The following areas were identified as under covered by a public sector primary health care facility: Chak Jummay Wala, Chak No. 65/4-R, Chak No. 67/4-R, Chak No. 64/4 Khurd, Chak No. 64/4-R, Chak No. 73-A/5-L, and Chak No. 43/42 Rodda. 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 the 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 mangers, they will have an incentive to use the data to improve health service delivery.

xxx. Most of the bottlenecks in PHC service delivery are governance related issues, and improvement in governance is likely to improve the quality of service delivery. It is recommended that the District Health Authorities (DHAs) proposed as a local government tier under the provincial Local Government Act (PLGA) 2013, must be implemented forthwith in letter and spirit. The service delivery at the district level is severely affected by over centralization at the provincial level. If DHAs are established and sufficient decentralization of authority and power is allowed along with a robust monitoring and evaluation system, the PHC service delivery is likely to improve.

1. Background and introduction

1.1 Background

The 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 Sahiwal district, Punjab to: identify gaps and issues in the access, coverage and quality of primary health services; highlight gaps in health sector performance indicators and identify the factors influencing these gaps (planning, budgeting and management processes); and inform relevant stakeholders about the service delivery gaps and identified needs.

1.2 Introduction

This needs assessment was carried out in-house using the latest secondary data available from published sources on primary healthcare sector. Primary data collected by the Director General Health Services Punjab for 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 Sahiwal. 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 Sahiwal.

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. The 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 Sahiwal. In the fourth section an analysis has been

carried out of PHC service delivery by the BHUs using key indicators for access, coverage and quality, while, fifth section presents the findings of the study by identifying the gaps based on the agreed standards for service delivery, provided in the EPHS and the 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 by providing specific budget proposals. 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 Sahiwal (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 the GIS based analysis; and

III. availability of a doctor at the BHU: Mere access to a BHU is of a very limited use for a patient unless a doctor is also available at the facility. This aspect was also examined with the GIS analysis.

1.4.2 Coverage

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

I. implementation of MSDS, the EPHS and other service packages in accordance with the local needs;

II. overview of disease patterns of district Sahiwal 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.

III. availability of requisite staff, medicine, and diagnostic services at facility level in accordance with requirements of the MSDS and the EPHS; where, the information on the BHU doctors, other staff and medicine were obtained from the district health managers (EDOs).

1.4.3 Quality

The needs assessment study focused on service delivery 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 Sahiwal. The HFA report described satisfaction 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 Basic Health Units (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 the country. Its current population is estimated to be over 100 million. It has an area of 205,345 square kilometres, consisting of 36 districts and 127 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 health.

The MMR in Punjab was estimated to be 227 per 100,000 live births in 2013-13, which is lower than the national figure of 276.[3] Complications during pregnancy and childbirth are recognized as a leading cause of death and disability among women of reproductive age.

In order to reduce morbidity risk, antenatal care is essential during pregnancy. **Antenatal care coverage (ANC-1)** is used as an indicator of access and utilization of health care services during pregnancy. Overall **ANC-1 coverage** in Punjab was 93% of the total expected population. Out of the women who availed ANC-1 services, 21% were reported to be anaemic.[4] **TT-II** (tetanus and neo-natal tetanus) immunisation was provided to 64% women against the expected population in Punjab, in 2013[5].

Delivery by **Skilled Birth Attendants (SBAs)** is one of the pre-requisites for lowering MMR. In Punjab, 75% deliveries were conducted by the SBAs in 2013; however, the share of deliveries conducted at public health sector facilities was as low as 28% of the expected population in 2013.[6] The number of pregnant women registered by Lady Health Workers (LHWs) reflects the extent to which pregnant women in the

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 the Punjab, *Statistical Pocket Book of The Punjab,* 201

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

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

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

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

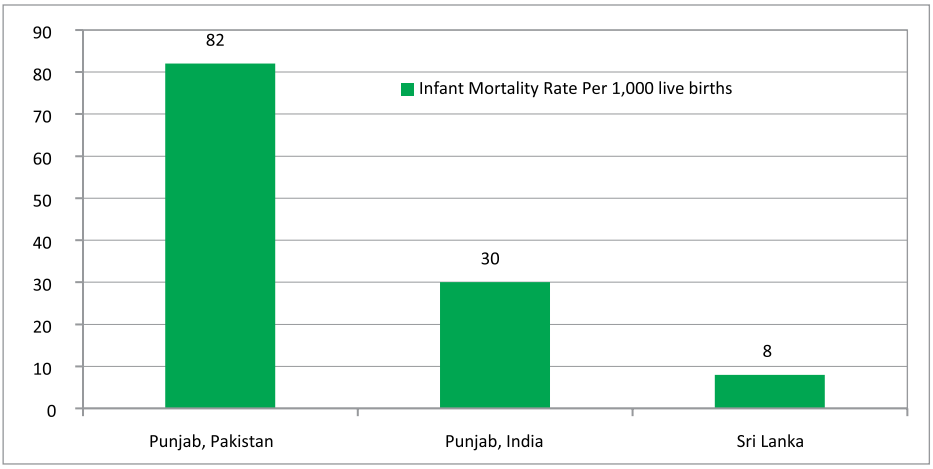
catchment area have come in contact with the public healthcare system, which can be used as a crude measure of access to maternal care. In 2013, the number of newly registered pregnant women per LHW was 20. While, **Family Planning (FP)** services were only availed by 12% of eligible couples from the public sector health facilities, against the expected population.[7]

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.[8]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.[9] **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.[10]

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

Figure 1: Comparison of IMR with other developing economies



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

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

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

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

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

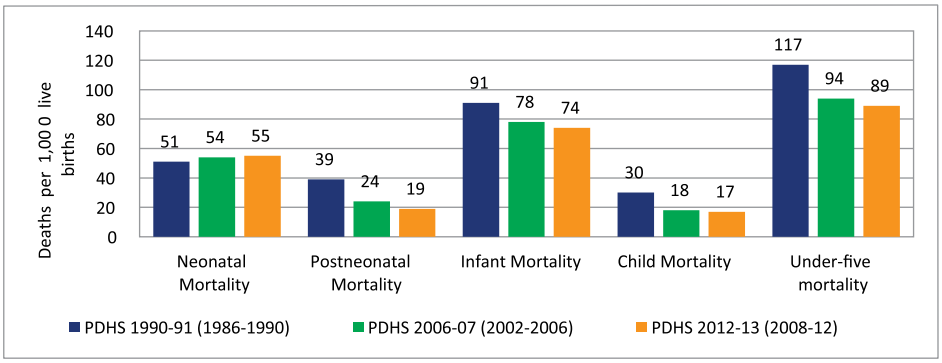
11 World Bank, http://data.worldbank.org/indicator/SP.DYN.IMRT.IN, (18th Nov, 2014)

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

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

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

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



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

2.4 Nutritional status

Malnutrition is a major contributor to the high number of infant deaths. A child's birth weight defines the child's chances of survival, in addition to being an important indicator for the child's vulnerability to childhood illnesses.[15]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 94.5 million in 2013. Additionally, the per capita OPD attendance can be used as an indirect indicator of public trust on the health services. The overall per capita OPD attendance was 1 in the province, which had increased from previous years. The average per day OPD attendance in BHUs and the RHCs was reported to be 47 and 151 visits per day respectively. Furthermore, the overall age and gender wise

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

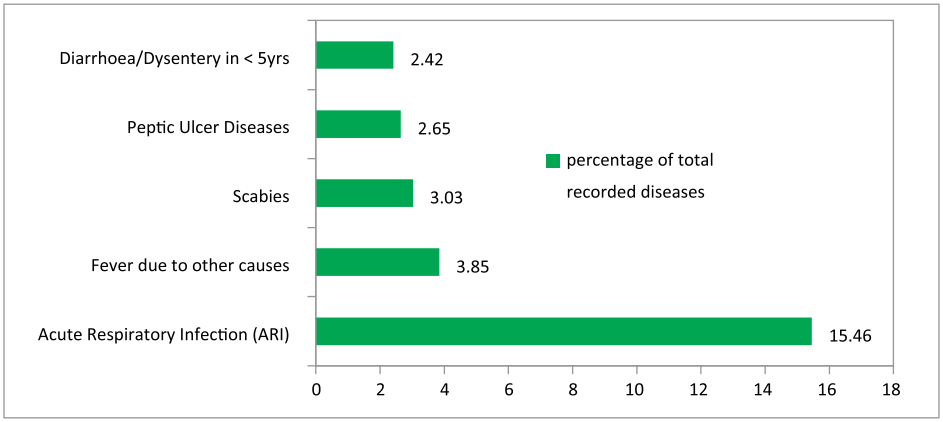
15 National Institute of Population Studies, *Pakistan Demographic and Health Survey (PDHS) 2012-13*, 124

distribution of the patients visiting the health facilities shows that the percentage of female patients was comparatively higher (55%); while the highest number of patients was reported within the age group of 15-49 years, out of which female were 29% and male 18%.[16]

2.6 Disease pattern

The top five diseases out of a total of 43 reported in the Health Information System Punjab Annual Report (2013) were: Acute (upper) Respiratory Infection (ARI), Fever due to other causes, Scabies, Peptic Ulcer Diseases and Diarrhoea/Dysentery in ages under and above 5 years. The total cases of ARI alone constituted around 15% of the reported cases.[17] Moreover, the majority of the top reported diseases are communicable, with certain diseases disproportionately affecting the poor more due to their prevailing environment and socio-economic conditions.

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 medicine specified by the Essential Package of Health Services (EPHS) for primary health care in Punjabis a key factor due to which many patients at the BHUs do not get the basic care that they require. Stock-out status is an indicator of the percentage of health facilities that experienced a stock-out of any tracer drugs/medicine 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/medicine in 2013.[18]

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

17 Ibid.

18 Ibid.

2.8 Immunisation

Immunisation coverage estimates provide a measure for monitoring of immunisation services, to guide disease eradication and elimination efforts, and is a good indicator of public health sector performance. Expanding immunisation coverage is also crucial for the country's progress towards achieving the MDG 4, which requires reaching the target of above 90% immunisation coverage for children between the ages of 12-23 months. The immunisation coverage for children between the ages of 12-23 months in Punjab was reported to be 89% in 2013.[19]

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

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

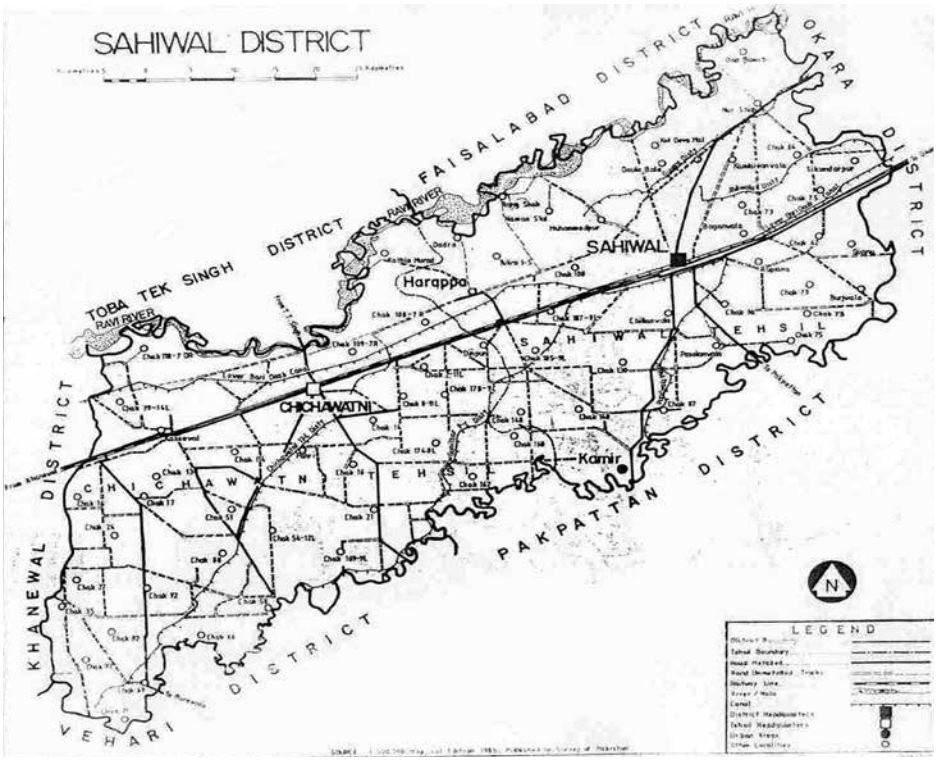
3. District Sahiwal: background

3.1 History and location of the district

Sahiwal is spread over an area of 3201 sq. km and is approximately 500 ft. above sea level. It roughly forms a parallelogram lying generally NE-SW along the River Ravi. District Sahiwal is bounded by district Khanewal on the west, by district Okara on the East, by district Vehari on the Southwest, by district Pakpattan on Southeast and district Bahawalnagar on the South. River Ravi flows on its North side.

Sahiwal is famous for the presence of the remains of one of the oldest Indus valley civilizations, Harappa, dating back 3000 - 5000 B.C. It is situated 15 miles west of Sahiwal city. The district comprises two tehsils namely Sahiwal and Chichawatni while it also contains many suburban towns like Qadirabad, Yousafwala, Iqbalnagar, Kassowal, Noorshah, Harappa and Ghaziabad. There are transport connections via road and Pakistan Railways to Lahore, and a regional airport is also under construction in the district. Agriculture is important to the local economy, particularly the growing of cotton and grains.[20] [21]

Figure 4: Map of district Sahiwal



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

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

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

3.2 Demography

Sahiwal has an estimated population of 3.3 million, of which 48 % are females and 52 % are males. Majority of the district's population, around 85 %, lives in the rural areas. The annual estimated growth rate of the population is around 2.00 % and the population density in the district is estimated to be 518 persons per Sq. Km.[22] District Sahiwal has total 89 Union councils (UC), of which 52 UC are in tehsil Sahiwal and 37 UC are in tehsil Chichawatni.

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

22 ibid

4. District Sahiwal: 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 effective PHC services are coverage, quality and access.[23] 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 the MSDS 2008; which aim to standardize health services for more equitable access.

4.1 Budget allocation for PHC

The total expenditure of district Sahiwal for the year 2013-14 was Rs. 5888.1 million and out of this Rs. 594.3 million was spent on health sector. This is almost 10% of the total expenditure in the financial year. The health salary expenditure for the same year was Rs. 456.9 million and the non-salary part consisted of Rs. 137.4 million. Primary health was allocated Rs. 416.3 million during the same year while the utilization of budget in this sector was 90%. The details are given in Table 2 below:

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

(Rs. In millions)

Heads	Budget estimates	Actual expenditure
District budget	5892.8	5888.1
Health sector budget	662.5	594.3
Health - Salary budget	569.6	456.9
Health - Non-salary budget	92.9	137.4
PHC budget	416.3	376.1

4.2 District Health Development Centre (DHDC)

Under the Second Family Health Project (SFHP) Lahore, a network of DHDCs was established in Punjab along with a Provincial Health Development Centre (PHDC) at Lahore. At that time a DHDC was also established in Sahiwal 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.5.36 million and out of this the non-salary part consisted of Rs.0.69 million. The sanctioned staff strength of DHDC Sahiwal is 9 - it comprises a Programme Director, 2 paramedic trainers and 6 multi-purpose trainers.

4.3 Health facilities

The healthcare service is delivered through both public and private healthcare

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

facilities providers. 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, private sector provision is not optimally regulated and there are wide variations in quality; however, a clear picture is not available due to inadequate documentation, monitoring and reporting mechanisms on working of private sector healthcare facilities. The 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.[24] In addition to a THQ hospital, total of 11 RHCs, 75 BHUs and 21 dispensaries are currently operating in the district[25] while private sector is also contributing to healthcare service delivery with 67 small sized hospitals and 13 clinics.[26]

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 the 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 the desired objectives.[27]

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, 82% of the pregnant women were given prenatal care in district Sahiwal. However, only 36 % of those receiving prenatal services received this service from a government health facility, while 45 % were provided this facility at a private hospital/clinic, 18% of the women consulted a TBA for pre natal care and 1% reported to avail these services from other facilities.[1] [28] During the year 2013, 79% pregnant women in district Sahiwal were covered for antenatal care (ANC-1) services; which is lower than the provincial figure of 93%.[29] Tetanus Toxoid (TT) immunisation was provided to 70% pregnant women and the district ranked 33rd in the province[30]. While 84% of the women were immunised against tetanus/ neonatal tetanus (TT-II)[31]

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

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

26 EDO (H), District Sahiwal, 2014

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

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

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

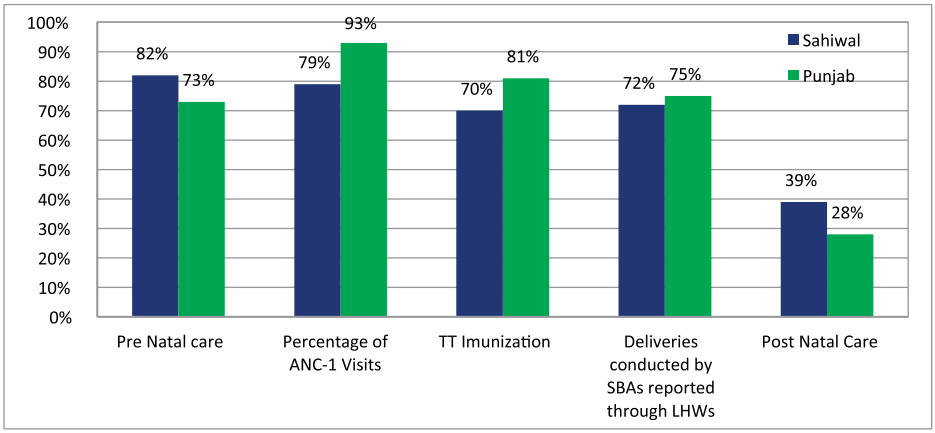
30 Pakistan Bureau of Statistics, *Pakistan Social And Living Standards Measurement (PSLM)*, 2012-13

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

Delivery conducted by a SBA is essential in averting maternal and neonatal mortality and morbidity.[32] According to the PHIS Annual Report, in 2013, 21% of the newly pregnant women were registered by the LHWs in district Sahiwal. 72% of the deliveries were conducted by SBAs as reported by LHWs.[33] Additionally, in 2013, 6% deliveries were conducted at government hospital/RHC/BHU while 37% were reportedly carried out at a private hospital/clinic and remaining 57% took place at home.[34] Furthermore, 12% of the eligible couples availed family planning services from public sector health.[35]

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 the immediate postnatal period are the most critical for new-born and maternal survival.[36] During the year 2013, total infants deaths in the BHUs of district Sahiwal were 1750 while 67 maternal deaths were also reported at the same facility level during the same period.[37] According to the PSLM Survey, in the year 2013, only 39% of the mothers in district Sahiwal consulted a health facility for postnatal services, which is higher than the provincial figure of 28%. Out of those who received postnatal services, 19% went to government facilities, 54% visited private facilities/clinics, 27% consulted a TBA and 1% availed these services from other facilities.[38] [2]

Figure 5: Situation of maternal health in Sahiwal (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,

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

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

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

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

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

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

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

44% of child deaths under the age of five take place during the neonatal period.[39] According to MICS (2011), IMR in district Sahiwal is 93 /1000 live births, and under 5 mortality rate is 119 /1000 live births.[40] Additionally, 96 % of the children aged 12-23 months in the district were fully immunised. It can further be added that 86 % children in the urban areas while 97 % children in the rural areas were fully immunised. Full immunisation means that the child has received vaccination of BCG, DPT1, DPT2, DPT3, Polio 1, Polio 2, Polio 3 and measles. Furthermore, this percentage is based on recall and records i.e. the children who reported to have received full immunisation and also have an immunisation card. It is important to note that even the record-based measures cannot be based exclusively on vaccinations recorded on the health card. Rather 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.[41] In addition to this, neonatal tetanus protection was provided to 82 % children in the district.[42] 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 programmes [43]

In order to augment service delivery in key areas of healthcare, the government has been implementing special programmes. These programmes work in areas that are neglected or that require specific attention due to policy priority. Seven vertical programmes have been running in the district including Expanded Programme on Immunisation (EPI), National Programme for Family Planning & Primary Health Care, Nutrition Programme, Prevention and Control of Hepatitis, TB DOT (Control Programme), Community Disease Control Programme (CDC), and Integrated Reproductive Maternal and New-born Child Health Programme.

4.4.3.1 Expanded Programme on Immunisation (EPI)

The Expanded Programme on Immunisation (EPI) is 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.[44] 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 the data available in the CM Health Sector Road Map documents the average EPI

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

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

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

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

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

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

coverage in Sahiwal is 53%, while the provincial average is around 47%.[45] 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 UCs	Government Vaccinators	Local Government Vaccinators	Total Vaccinators	No. of Vaccinators per UC
Sahiwal	89	85	4	89	1.0

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

4.4.3.2 Programme for MNCH

The 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 of health facilities; provision of key MNCH staff including specialists, doctors, paramedics and ambulance drivers, and their capacity building, provision of equipment, drugs and supplies at selected health facilities to ensure delivery of MNCH services. The Programme has provided MNCH related staff at 8 DHQ hospitals, 13 THQ hospitals and 250 RHCs in Punjab.

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 initiated in 1986-87 with focus on diagnosis of cases that came to hospitals, but progressively began to shift towards a community focus.

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

4.4.3.4 Nutrition programme

Pakistan has an alarmingly high level of malnutrition. Results of National Nutritional

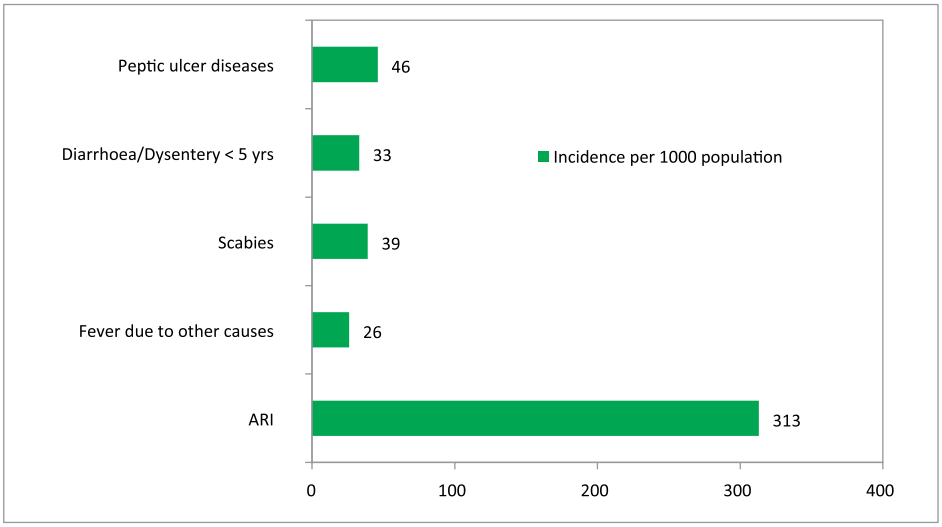
45 An unpublished presentation of the CM Health Sector Road Map, Punjab, 2014

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 16% severe stunted prevalence and 9.9% severe underweight prevalence in district Sahiwal.[46]

4.4.4 Disease pattern

According to the Health Information System Punjab Report 2013, the top five diseases in district Sahiwal 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 313 /1000 population.[47] [3] Following Figure 6 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*

Table 4 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 Sahiwal. It shows that ARI has been the most commonly occurring disease in the district with highest number of cases followed by Scabies.

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

47 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	208	219	237	278
Diarrhoea/Dysentery in <5 yrs.	23	25	25	29
Diarrhoea/Dysentery in >5 yrs.	21	21	20	23
Peptic Ulcer Diseases	19	22	27	31
Fever due to other causes	5	6	8	10
Scabies	43	33	26	35

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

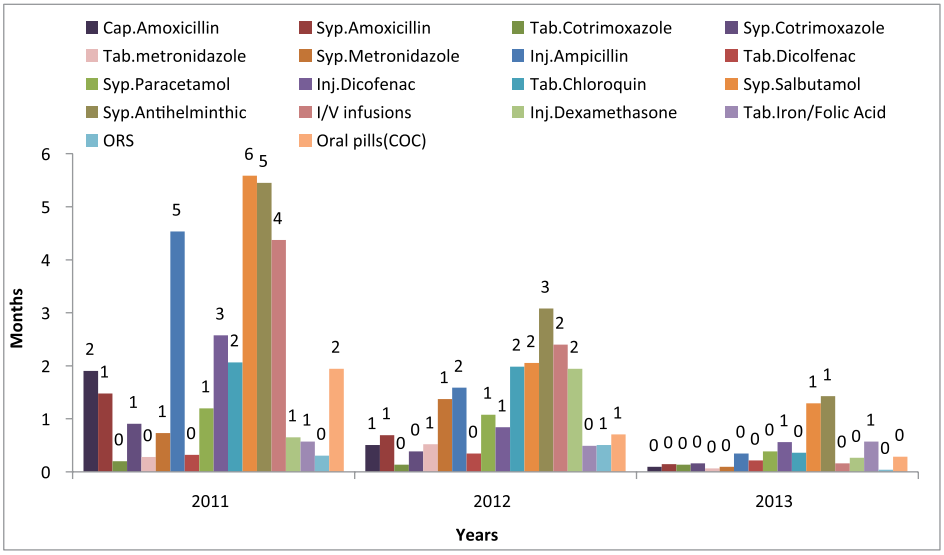
Although, over the years, the incidence of scabies declined (Table 4) but it is again on the increase, similarly reported occurrence of ARI and diarrhoea/dysentery in children under 5 is on the increase. Additionally, the incidence of fever due to other causes is also on the increase. There is a need to investigate this further to ascertain the causes of these variations.

4.4.5 Medicine availability

The EPHS provides a list of medicine for BHUs and RHCs. According to this list, a BHU must have 150 essential medicine / drugs around the year. The presence of 18 tracer drugs (a sub-set of 18 drugs from the essential drug list of 150) is used as an indicator of presence of 150 essential drugs at BHU at any point in time. The situation in district Sahiwal is good in terms of availability of tracer drugs at the BHUs. The stock-out position in the district was 13 % in the year 2013 as compared to the provincial average of 25%.[48] Figure 7 compares the stock-out of the 18 tracer drugs in BHUs of district Sahiwal. It shows that the situation of stock out has improved over the years. The data collected by PHIS reveals that out of 18 medicines, Syrup Anthelminthic, Syrup Salbutamol, Injection Diclofenac and Tablet Iron/Folic Acid were reported to be out of stock only 1 time in the district while all other tracer drugs were available throughout the year.

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

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



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.[49] In case of district Sahiwal, this is not an issue as, at least, all the HR positions are filled and there is no shortage of staff in BHUs. This is evident from the overall staff vacancies in the BHUs of district Sahiwal that are given below (Table 5). Apart from the positions given in Table 5, Sahiwal has 90 vaccinators and there is no vacant post.[50]

Table 5: Total sanctioned and filled staff positions

Staff positions	Sanctioned positions in Tehsil Sahiwal	Vacant positions in Tehsil Sahiwal	Sanctioned positions in Tehsil Chichawatni	Vacant positions in Tehsil Chichawatni
Medical Officer	39	0	36	0
Nutritionist	39	0	36	0
LHV	39	0	36	0
Dispenser	39	0	36	0
Midwife	78	0	72	0

Source: EDO (H), Sahiwal 2014

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

50 EDO (H), Sahiwal, 2014

4.4.7 Health facility infrastructure

The quality of health facility infrastructure determines, to some extent, the quality of service that health facilities will be able to deliver. The Health Facility Assessment (HFA) 2011, which was conducted by the Technical Resource Facility (TRF), assessed a total of 28 health facilities in district Sahiwal, including 20% randomly selected BHUs (15) within the district. The HFA 2011 assessed the infrastructure of the BHUs to determine 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. The labour room was also assessed for having necessary facilities for delivery such as a scrub area and attached toilet facility for patient.[51] Table 6 shows the findings for the 15 BHUs surveyed in district Sahiwal:

Table 6: Status of BHU infrastructure

Infrastructure	No. of BHUs with available building component	No. of BHUs with functional building component
OPD:		
1. Consultation area	15	13
2. Examination area	1	1
3. Hand Washing	1	1
LHV's room:		
1. Consultation area	14	13
2. Examination area	3	3
3. Hand Washing	4	3
Labour Room:		
1. Delivery room	14	13
2. Scrub area	12	11
3. Patient's washroom	0	0
Residence:		
Doctor	1	1
Residence:		
LHV	14	4

Source: Government of Punjab, Health Facility Assessment (HFA), Sahiwal, 2011
Note: Figures are based on the surveyed sample of 15 BHUs in district Sahiwal.

The data presented above indicates serious shortcomings in the available infrastructure at the surveyed BHUs. Particularly, the lack of hand washing facility offered at the OPD and LHV's room, shortage of examination area in OPD and LHV's room and a separate patient's washroom are all missing in majority of the surveyed BHUs. There is also a serious shortage of doctor's residences.

4.4.8 Equipment

The 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

51 Government of the Punjab, *Health Facility Assessment (HFA), Sahiwal*, 2011, 8

acceptable quality MNCH service provision. Table 7 presents the number of required items that were available at each of the 13-surveyed BHUs in Sahiwal:

Table 7: Availability of equipment items available at BHUs

Equipment	Total items required at each BHU	Sample BHUs (District Sahiwal)														
		BHU Chak 28-14L	BHU Chak 33-12L	BHU Chak 83-12L	BHU Chak 111-12L	BHU Chak 107-7R	BHU Chak 166-9L	BHU Chak 182-9L	BHU Chak 1-10L	BHU Chak 65-A-GD	BHU Chak 62-4R	BHU Chak 61-4R	BHU Chak71-5L	BHU Chak 53-5L	BHU Mir Dad Mufi	BHU Tibbi Jay Singh
General Items	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OPD	14	0	0	0	0	0	0	0	0	0	8	0	4	0	0	0
LHV's room	12	0	5	6	7	7	8	7	3	5	9	7	4	8	5	8

Source: Government of the Punjab, Health Facility Assessment (HFA), Sahiwal, 2011
Note: Figures are based on the surveyed sample of 15 BHUs in district Sahiwal.

Table 7 above indicates that general BHU equipment, which includes an electric water cooler, water filter and incinerator, were missing from all 15 BHUs surveyed for the HFA 2011. Similarly, the table also reflects the unavailability of OPD equipment from almost all the surveyed BHUs except from two localities. Furthermore, the figures presented above indicate that there was also a gross shortage of the required equipment for the LHV room in all 15 surveyed BHUs. Also, it can be noted that the required equipment items mentioned in the standard list were not fully available at any of the surveyed BHUs.[52]

52 Government of the Punjab, *Health Facility Assessment (HFA), Sahiwal*, 2011, 10

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

4.5.1 Workload of health facilities

The number of outpatients treated at a facility per working day is a helpful indicator of the workload of a BHU, which can help differentiate between over-burdened and under-utilized facilities within a district. The community's ease of access and the quality of basic health care services is adversely affected at over-burdened facilities. According to the OPD data obtained from the PHIS[54], majority of the BHUs in Sahiwal (51 out of 75) experienced a "MEDIUM "[4] outpatient load per working day relative to the average across all BHUs in the district; and, 11 out of the 75 BHUs in the district experienced a "LOW " outpatient load per working day. Furthermore, only 3 BHUs in district Sahiwal experienced a "VERY HIGH" outpatient load per working day relative to all the other BHUs in the district. No BHU in the district had "VERY LOW" OPD status.

Table 8: Patient's work load at BHUs

OPD workload	Number of BHUs
VERY LOW	0
LOW	11
MEDIUM	51
HIGH"	10
"VERY HIGH	3

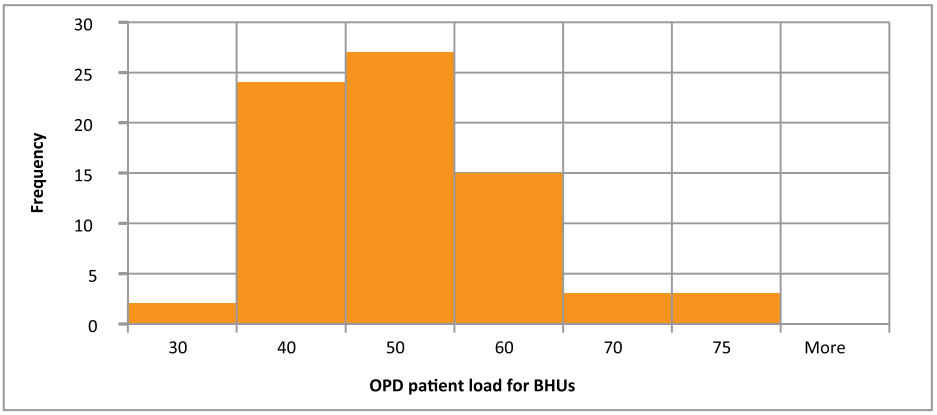
Source: Department of Health, PHIS, 2013
Note: The BHUs have been grouped into "LOW", "VERY LOW", and "HIGH" and "VERY HIGH" based on the 1st and 2nd standard deviations from the average OPD visits per working day across all BHUs in the district.

The overall patient load per working day at the BHUs in district Sahiwal can be further examined by plotting the frequency distribution of the outpatient load per working day for the 75 BHUs in Sahiwal.

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

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

Figure 8: Patient workload

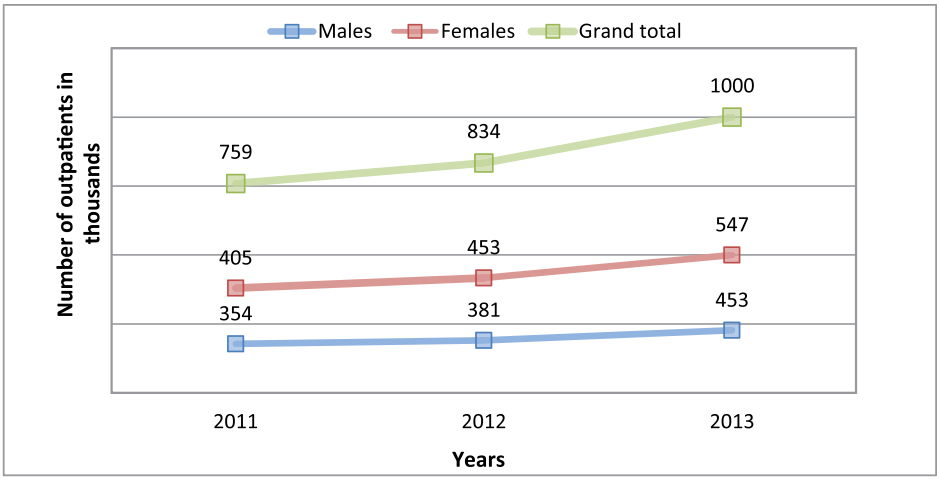


Source: Department of Health, PHIS, 2013

The average outpatient load per working day across all BHUs in the district was found to be 45. 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 demonstrates that most of the BHUs in Sahiwal have OPD workload that is very close to mean of the district and few BHUs have "HIGH" to "VERY HIGH" workload. The reasons for this imbalance in outpatient load among the BHUs could be closely related to many factors, including, for instance, the coverage and the quality of health care at the BHUs.

Additionally, the OPD visits can also be used as an indirect indicator of public trust and satisfaction in relation to the health services being provided at the facilities. A time series analysis of OPD data shown in Figure 9 indicates that the total number of OPD visits has increased by around 30% since 2011. A number of factors could be responsible for this increase including improvement in coverage and quality of health services at these facilities.

Figure 9: Total OPD visits (2011-13)



Source: Department of Health, PHIS, 2013

4.5.2 Client satisfaction and perception about quality of services

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

In order to assess the perception of clients about quality of the public health services, especially MNCH care provided at the health facilities, CEIs were conducted at in RHCs of Sahiwal. The findings from these interviews indicate that most of the patients (90%) visiting RHCs were satisfied with the attitude of staff and care providers.[55] However, the data indicates that while 92% of the patients visiting RHCs were satisfied with their clinical examination, less than half of them (42%) were satisfied with laboratory services and availability of medicine (Table 9)

Table 9: Satisfaction with services

Services at RHC	Satisfaction level
Clinical examination	92%
Laboratory services	42%
Medicine availability	42%

Source: Government of Punjab, Health Facility Assessment (HFA), Sahiwal, 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).[56]

As a part of this study, with the technical support of the World Bank, the issue of access to health facilities was looked at using GIS maps and by deploying various layers of data, such as BHU locations, presence of roads, 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

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

55 Government of the Punjab, *Health Facility Assessment (HFA) - Punjab, Sahiwal*, 2011

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

The road network is derived from a crowd-sourced road layer[57] that categorizes roads into nine types, namely primary highway, major arterial, minor arterial, secondary road, local road, controlled access, limited access, non-traffic and terminal. For the 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 10). 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

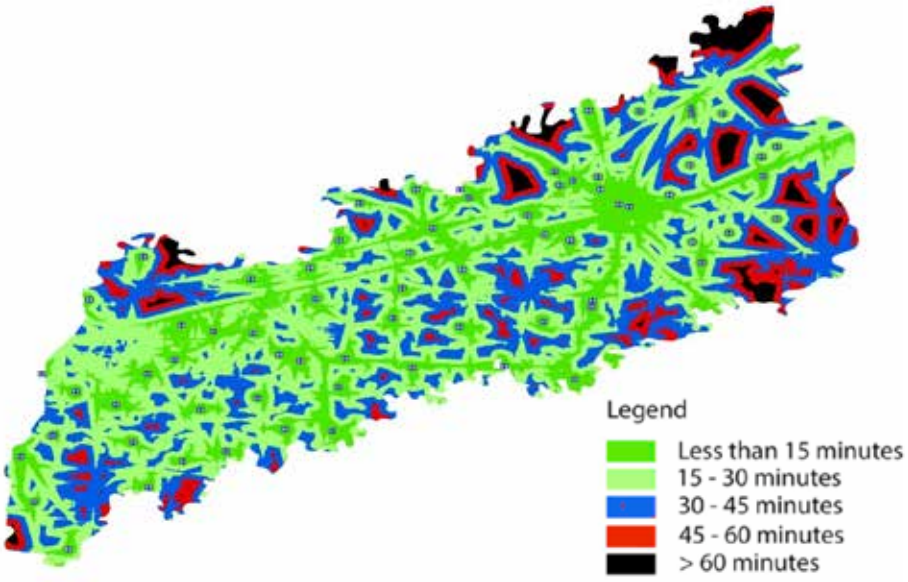


Figure 10 depict areas that are within 15, 30, 45 and 60 minutes of travel time to the nearest BHU. Regions in black are such that people living in these areas need more than 60 minutes to reach a health facility and therefore represent potentially underserved areas. Any settlements lying in these regions do not have realistic access to a public health facility.

4.6.2 Distance to the nearest BHU as the crow flies

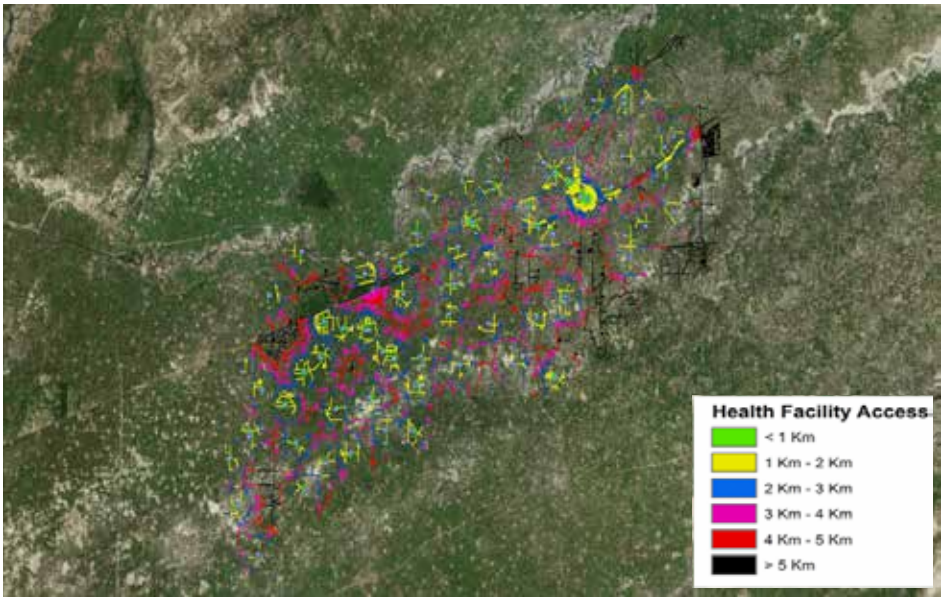
In this component, access is defined according to how far a citizen is from the nearest health facility by straight-line distance.

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

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 Figure 11, 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 11: Straight Line distance to nearest BHU as crow flies



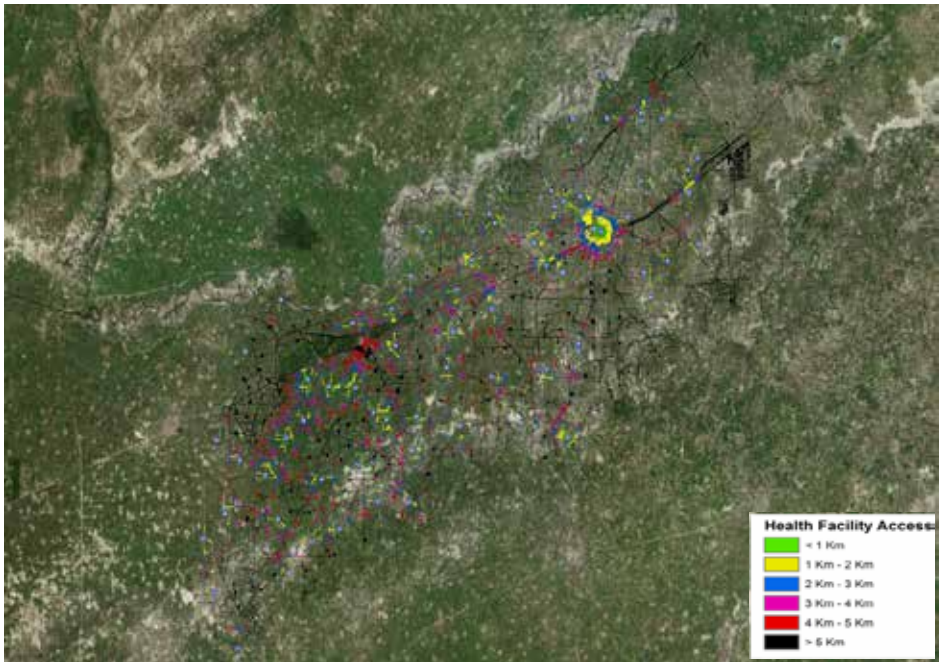
4.6.3 Travel distance to the nearest BHU

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 otherwise on foot.

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 12 depicts 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 considered as underserved regions.

Figure 12: Travel distance by road to the nearest BHU with doctor



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

Figure 13: Underserved Villages (I)

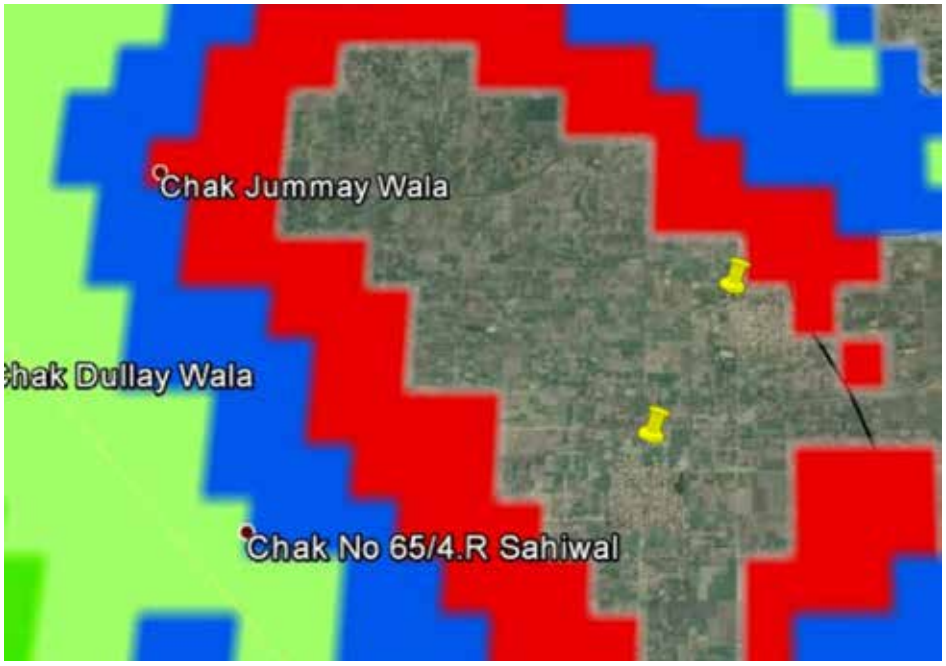


Figure 14: Underserved Villages (II)

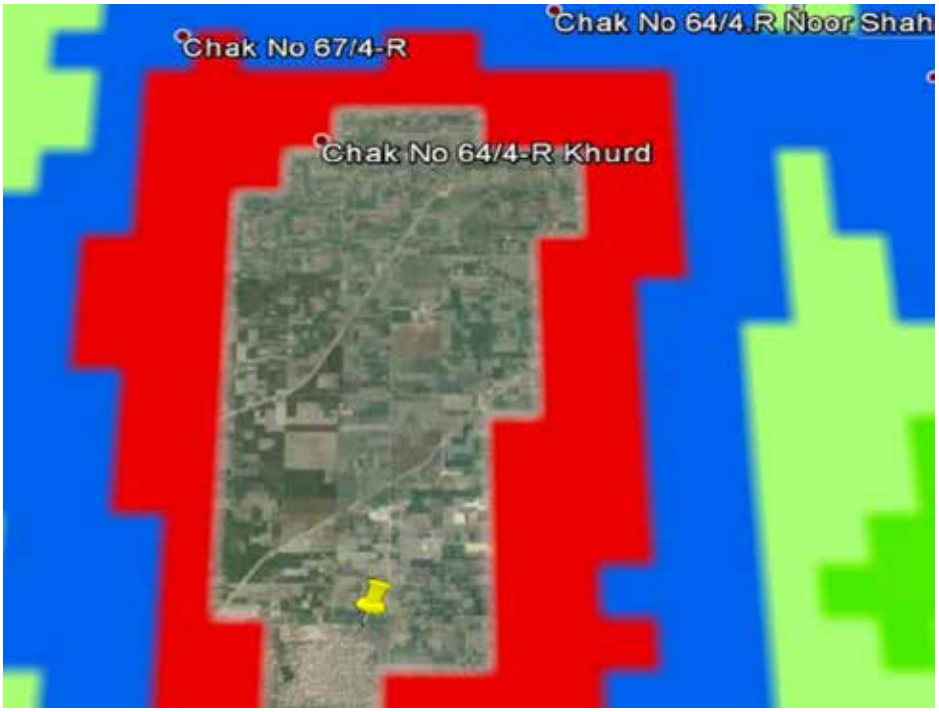
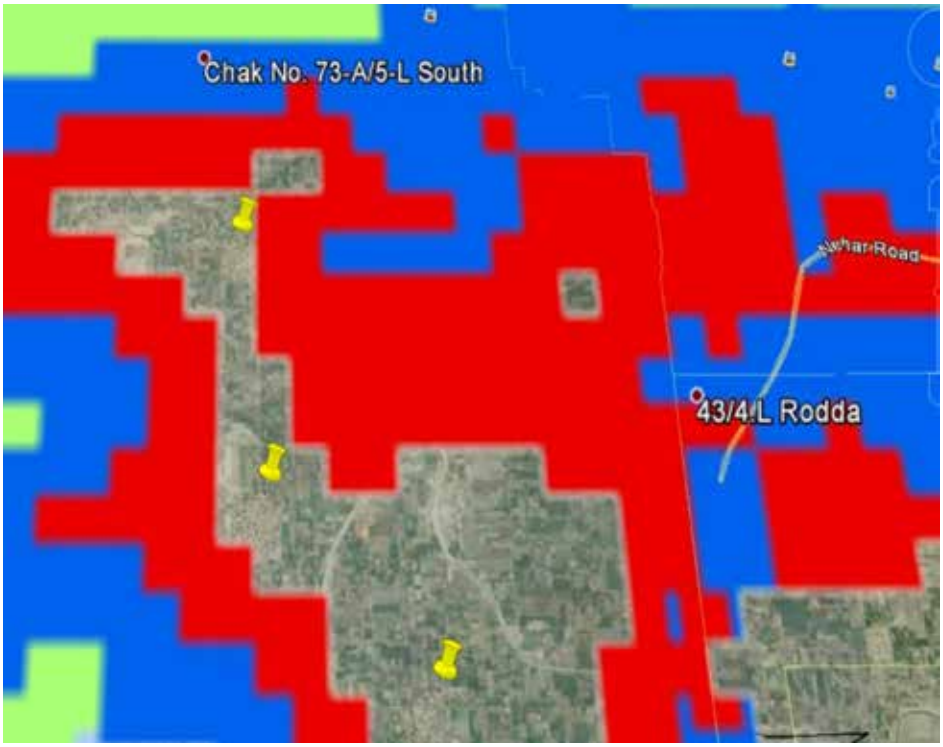


Figure 15: Underserved villages (III)



A few examples have been given in the above figure, how GIS maps can be used to identify villages that are underserved by the health facilities. A similar exercise needs to be carried out for all BHUs and Identify populations that have no or limited access to health facility

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 childbearing age should receive 5 or 2 doses of TT during pregnancy. As 70% of the women were immunised against TT, so a gap of 30% still exists. The district is also not able to meet the minimum standard set by the province in this regard i.e. a minimum of 80% mothers of childbearing age must receive 5 or 2 doses of TT doses 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 Sahiwal, as only 82% 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, 72% of the deliveries were conducted by SBAs in district Sahiwal during the year 2013, so a gap of 28% exists in the provision of natal care against the standard prescribed by MSDS.

5.1.4 Post natal care

According to the standard, for postnatal care, two postpartum visits are necessary and the first visit should be within 24 hours of delivery by a skilled personnel. While the minimum level of acceptance is that at least two third of all women should receive postpartum care on prescribed criteria. In district Sahiwal the situation of postnatal care is very distressing. Only 39% 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 19% women were treated in a public sector facility.

5.1.5 Family planning

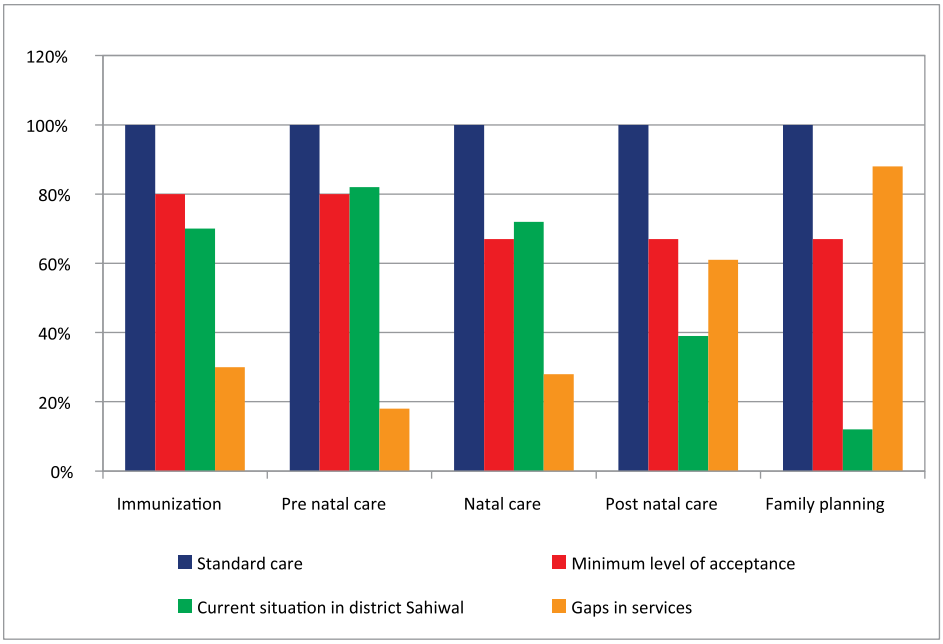
The provision of family planning services in the district also leaves a gap of 88% as only 12% of the couples were availing this facility, while according to the standard all couples will be provided necessary information and services regarding family planning. While the minimum acceptable level is that nearly two third of all the eligible couples will be provided awareness on family planning. The gaps in service delivery in the district are presented below in tabular form:

Table 10: Gaps in PHC service delivery (Sahiwal)

Services	Standard Care	Minimum level of acceptance[5]	Current Situation	Service Gap	Current Status in Punjab
Immunisation	100%	80%	70%	30%	81%
Pre natal care	100%	<80%.	82%	18%	73%
Natal Care	100%	More than 2/3rd deliveries by SBAs	72%	28%	74%
Post natal care	2 postpartum visits; first visit within 24 hours of delivery.	67% or 2/3rd of all women should receive postpartum care	39%	61%	28%
Family planning	100%	67% or 2/3rd of all eligible couples	12%	88%	12%

Source: MSDS, 2008, Punjab DHIS Annual Report 2013

Figure 16: Gaps in PHC service delivery (Sahiwal)



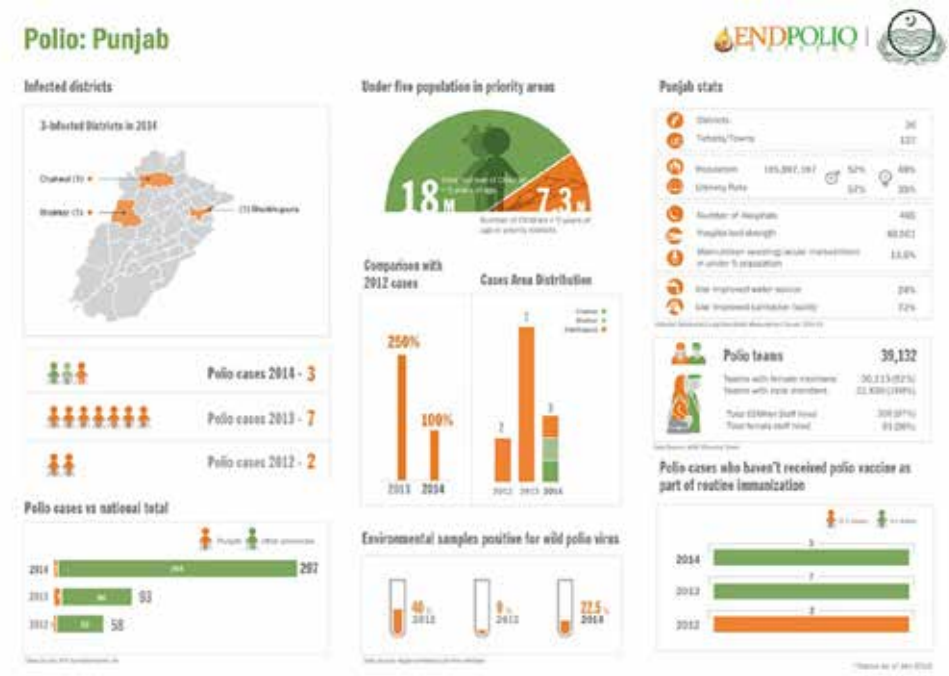
5.1.6 Vertical programmes [58]

A needs assessment study conducted by the SNG for districts Hafizabad and Bahawalnagar indicates low level of coordination between regular district 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 Sahiwal.

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 Sheikhupura, Chakkwal and Bhakkar districts as compared to the year 2013, where 7 cases were reported in the province.

Figure 17: Polio situation in Punjab



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

5.1.8 Infrastructure and equipment at BHUs

As indicated by the HFA 2011 survey conducted in district Sahiwal, the current infrastructure at the surveyed BHU was not adequate, in terms of compliance with the specified minimum standards for infrastructure required for MNCH services. The

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

main infrastructure issues at the surveyed BHUs were lack of hand washing facility at the OPD and LHV's room, scrubbing area in a delivery room and a separate patient's washroom, all of which are missing in majority of the surveyed BHUs. These are all part of the essential infrastructure at health facilities according to the EPHS.

The functional quantity of the essential equipment items (general items, equipment for OPD and LHV room) for BHUs in relation to the standard list specified in the PC-1 of the NMNCH Programme, was also found to be inadequate at majority of the BHUs surveyed by the HFA 2011. The general BHU equipment were missing in all the surveyed BHUs, also the OPD equipment was available in only 2 BHUs and the equipment items for the LHV's room were also missing in a number of BHUs; while, essential items mentioned in the standard list were not available at any of the surveyed BHUs.

5.2 Quality

5.2.1 Client satisfaction

Although, the CEIs conducted by the HFA 2011 and for the needs assessment study conducted by the SNG for districts Bahawalnagar and Hafizabad indicated that the clients visiting the surveyed health facilities were generally satisfied with the services being provided. Their respective responses should be taken with caution while drawing conclusions about the quality of services at government health facilities 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. However, even these patients are not satisfied with laboratory services and provision of medicine.

5.2.2 Workload of health facilities

According to the OPD data obtained from the PHIS for 2013 majority of the BHUs in district Sahiwal experienced a "MEDIUM" outpatient load per working day compared to the average across all BHUs in the district. While, only 3 BHUs out of 75 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 coverage and quality of the health care provided at the BHUs. Additionally, the outpatient load per day has increased since 2011, which can be due to many reasons including an improvement in the quality of services provided at public sector healthcare facilities.

5.2.3 Governance and management issues

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

5.2.3.1 Limited evidence based planning [59]

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 financial resources.

5.2.3.2 Lack of management skills

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

5.2.3.3 Performance management system [60]

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 was no incentive system in place to motivate managers and employees to perform better.

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

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

60 ibid

coordination and also monitoring of outreach staff by district health officials.

Lack of an adequate monitoring system had failed to achieve the optimal service delivery outputs. Additionally, lack of funds and human resource hampers effective monitoring of service delivery. Moreover, delay in provision of resources, constrained regular monitoring visits and evaluation of workers. Although monitoring manuals have been designed for service providers, but due to restricted resources they were not being followed. As no proper mechanism of monitoring existed, so adherence to operational guidelines could not be ensured. Moreover, no grievance redress mechanism had been established at BHU level till now, as Punjab HealthCare Commission (PHCC) was not taking up this task because of limited resources.

5.2.3.4 Political interference

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

5.2.3.5 Medicine availability at health care facilities

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

5.2.3.6 Lack of effective human resource management

Performance and benefits that a health system can deliver depend largely upon the knowledge, skills and motivation of individuals running the system. Lack of effective HR management has undermined the service delivery in the district. People at district level are not trained in administrative and HR policies. The HR positions sanctioned by the Health Department are not filled as doctors and other staff are 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 primary health care (PHC) and secondary health care (SHC) has undermined the quality of health service in the district. In addition to this, lack of transportation facilities such as effective ambulance service has compounded this weak referral link between PHC and SHC tiers.

5.2.3.7 Procurement

PPRA Rules 2009 detail the procurement process that needs to be followed by the Health Department to procure supplies and medicine. 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 from the PHIS revealed that the procurement process of medicine was not in accordance with the requirement of the community. As discussed above, disease pattern of the district was not considered while processing demand and distributing the medicine at BHU level.

Quality of medicine was compromised due to flaws in the planning process as the focus had always been on acquiring medicine at cheaper rates. Additionally, improper handling of medicine by not 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 the 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 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 Sahiwal may start the pilot and gauge the results to see the efficacy of the proposed model.

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

It is further proposed that in Sahiwal 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. As all the sanctioned positions in the district are filled therefore there is a need to improve the capacity of existing staff for improvement in the quality of service delivery. The district can utilize the DHDC to train its staff 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 Sahiwal 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.[61] 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, the 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 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 part of the data collected by the MEAs.

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

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.[62] The patients' visits and the referrals from LHWs also doubled at these BHUs, after communities were well informed about the availability of a doctor on a particular day. In order to ensure that medicine is available at the BHUs, it is proposed that the allocation of 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. A district audit can also be undertaken to assess problems that are being faced and reasons for these problems can also be identified. The study found that the sanctioned staff positions at BHUs are filled in Sahiwal, therefore, it is recommended that non-salary budget of DHDC must be adequate to meet the training needs of this staff.

vi) Equipment and infrastructure at the BHUs

The study very clearly indicated shortage of essential equipment and diagnostic facilities at the BHU level to provide BHU related and to meet the requirements of 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

62 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.

experience a low patient load when compared with the district OPD average. Out of the 75 BHUs only 3 BHUs had very high outpatient workload. There is a need to investigate this further and assess the reason for the same, in case the workload is low due to issues of accessibility or lack of services at the BHU. The district must assess the cost of providing the missing facilities at the BHU. In case the cost is too high, the district may decide to consolidate BHUs. This would also spare staff and other resources that could be utilized elsewhere in the district.

viii) Evidence based planning

It has been found in this study that evidence based planning is not being practiced in the district. This is for various reasons - lack of capacity and lack of credibility of the available data being few such reasons. In order to improve the quality of health sector data PITB is also involved in a number of initiatives. Punjab Health Watch and Medicine Inventory Management System are two such initiatives that are in various stages of development. Some capacity development has also been carried out by PITB in this regard, but feedback from the field suggests that a lot needs to be done to enable the health sector managers at the district level to use the initiatives to improve service delivery in their districts. One major drawback of these systems is that they have been designed as a monitoring tool and thus lack the information and detailed data needed for effective planning. Additionally, the health sector planners do not have any incentive to use the data for planning. The Punjab Health Roadmap team has now prepared disaggregated targets for each of the districts in the province against selected indicators. Once the results are tracked over time and rewards and punishment linked with the performance of health sector mangers, 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 DCO Office Sahiwal on 2nd March, 2015. The objective was to share the findings and budget proposals with the DRG members consisting DCO, sector EDOs, civil society members and local NGOs. The workshop participants were generally happy with the findings and recommendations, and the DCO and sector EDOs expressed their willingness to include these budget proposals in the upcoming budget for FY 2015-16. It was also agreed in the workshop that support and capacity building would be undertaken of the district government officials in evidence based budgeting i.e. needs assessment and budget analysis.

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).