

# Budget Proposals for Improving Primary Health Services in Bahawalnagar

FY 2014/15

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#### List of abbreviations

ADP Annual Development Programme

AE Actual expenditure

ANC Antenatal Care

ARI Acute respiratory infection

BE Budget estimates
BHU Basic Health Unit
CEI Client Exit Interview

DHDC District Health Development Centre
DHIS District Health Information System

DO (H) District Officer (Health)

EPHS Essential Package of Health Services
EPI Expanded Programme on Immunisation

FGD Focus group discussion
LHW Lady Health Worker

OPD Out-patient department

POL Petroleum, oils and lubricants

PRSP Punjab Rural Support Programme

RHC Rural Health Centre

SNG Sub-National Governance

THQ Tehsil Headquarters

YoY Year-on-year

## **Executive summary**

The Sub-National Governance (SNG) programme aims to help government to deliver services that meet the needs of poor people in Punjab and Khyber Pakhtunkhwa (KP). This can only be ensured if the decision-making by district governments is based on evidence regarding the needs of the districts' citizens.

A comprehensive needs assessment has therefore been carried out by the SNG programme, to identify issues in primary health care service delivery. This needs assessment was carried out using a composite approach, based on a review of the available literature, and consultations with citizens, front-line service providers, and policy-makers by way of a primary survey and focus group discussions (FGDs) which were conducted in Bahawalnagar district. This needs assessment was followed by a detailed analysis of budget and expenditure trends for the Bahawalnagar district government. Finally, budget proposals were developed in accordance with the Essential Package of Health Services (EPHS) in order to meet the needs of the Basic Health Units (BHUs), based on the burden of disease, and the availability of services. These proposals were costed using the cost of EPHS delivery and the weighted average of the provision of medicine and basic supplies and diagnostic facilities at BHU level. This report provides budget proposals for the non-salary component of the Bahwalnagar district budget for financial year (FY) 2014/15 for improved delivery of primary health services through BHUs.

In the light of the findings of the needs assessment, the following major issues in primary health service delivery were identified which have a direct linkage to budget allocation:

- non-availability of medicines, supplies and lab investigations;
- missing facilities (such as equipment for diagnosis / testing) at BHUs;
- areas where citizens have poor access to health services;
- lack of resource provision for vaccination services; and
- under-utilisation of BHUs shortage of skilled staff attendants.

To address these issues the following budgetary recommendations have been proposed:

- 1. To align budgetary allocations with the burden of disease, and to ensure that essential supplies and basic diagnostic facilities are available at the primary health care level, it is proposed that Rs. 34.080 million be allocated in the FY 2014/15 budget. This proposal can be financed from savings that have historically accrued from the budgetary allocations for Rural Health Centres (RHCs) in the district against vacant posts.
- 2. The needs assessment revealed that basic diagnostic facilities were not available at BHUs (except for blood pressure and weight measurement equipment). To provide the missing equipment at BHU level, EPHS-based costing of equipment has been

used to calculate the funding requirements. It is proposed that in the FY 2014/15 budget Rs. 1.6 million be allocated for provision of missing equipment for each BHU, or a total of Rs. 163.23 million for all 102 BHUs in the district. A provincial scheme included in the Annual Development Programme (ADP) has an allocation of Rs. 350 million for the provision of missing facilities in the primary and secondary health sectors. The funds available under this scheme can therefore also be accessed to provide the needed equipment.

- Medical camps should be periodically established for communities and areas that have poor access to health facilities. A notional allocation of Rs. 1 million in the FY 2014/15 budget is proposed for this activity.
- 4. Vaccinators are provided with a motorcycle by the government but funds for petroleum, oils and lubricants (POL) are not always provided. Thus, vaccinators find it very difficult to cover their areas of duty. It is proposed that a separate allocation be made in the district budget for provision of POL to the vaccinators, instead of lumping this with the POL for other officials, as is the existing practice.
- 5. One of the main reasons for under-utilisation of BHUs is a shortage of qualified staff in these facilities. District Health Development Centres (DHDCs) have been established by the government in each district, with a mandate to conduct training for health sector employees. These DHDCs need to be made fully functional, by developing a training schedule and robust monitoring mechanism to assess their performance. It is proposed that a non-salary allocation for the DHDCs be doubled during the next FY, to ensure adequate funding.

#### 1 Introduction

The SNG programme aims to help to ensure government delivers services that better meet the needs of poor people in Punjab and Khyber Pakhtunkhwa (KP). The programme supports the achievement of these objectives by enabling delivery of three programme-level target outputs:

- 1. Decisions by sub-national governments are based on robust evidence;
- 2. Sub-national government services are more responsive to peoples' needs; and
- 3. Sub-national governments' capacities to deliver basic services are strengthened.

In order to support and assist the district governments in making decisions based on evidence of needs, the SNG programme has developed evidence-based budget proposals. This report provides budget proposals for the non-salary component of the Bahwalnagar district budget for FY 2014/15 that are designed to ensure improved delivery of primary health services through BHUs. A comprehensive needs assessment was carried out by the SNG programme to identify issues in service delivery, based on a review of the available literature and consultations with citizens, front-line service providers and policy-makers. This needs assessment was followed by a detailed analysis of the budget and expenditure trends of the district government for Bahwalnagar district. Finally, budget proposals were developed to meet the needs of the BHUs based on the burden of disease, and the availability of services in accordance with the EPHS. These proposals were costed by reference to the cost of EPHS delivery and the weighted average of the provision of medicine and basic supplies and diagnostic facilities at the BHU level. Effort has also been made to identify resources that exist within the health sector budget of Bahawalnagar district government that could be diverted in order to implement the proposals. It is expected that the budget proposals, if fully implemented, would lead the district towards adequate funding of primary health service at BHU level, and can be a major step towards improving services in the district.

This report has been divided into the following sections: the first section looks at the key findings of the needs assessment study; the second section discusses the budget trends for Bahawalnagar district government, with special reference to the health and primary health care budget; and the third section presents proposed allocations, based on the analysis in the previous sections, to the district government for inclusion in its FY 2014/15 budget, in order to align the budget to the citizens' needs and to improve service delivery at the BHU level. Section 5 concludes and offers some ways forward.

## 2 Needs assessment – key findings

The budget proposals presented in this report have been formed on the basis of the health needs assessment carried out by the SNG programme in relation to Bahawalnagar district. The focus of this needs assessment was to identify gaps and to align services to citizens' needs. The key objectives of the needs assessment were to:

- identify issues in access, coverage and quality of primary health services in the light of the needs of people in the district, especially women, girls and minority groups;
- highlight gaps in planning, budgeting and management processes, with a special focus on women, girls, and coverage of minority groups; and
- inform relevant stakeholders, including policy-makers, health managers and front-line service providers, about service delivery gaps and identified needs, along with recommendations to improve the provision of primary health care in line with the Provincial Health Sector Strategic Plan 2012–20.

A composite approach was undertaken to carry out the needs assessment, including conducting a literature review, carrying out Key Informant Interviews, FGDs, and field visits for Client Exit Interviews (CIEs) and mystery client interviews. Additionally, stakeholder consultations were conducted to verify identified needs and to provide a platform for stakeholders to suggest measures to address these unmet needs.

Most of the stakeholders involved in the policy-making process in Punjab reported limited use of data when planning health services. An absence of collated information at different levels and a low quality reporting system has resulted in constrained decision-making and planning at provincial level. It was reported that the low level of integration between the health department and vertical programmes has caused duplication of resources and services. Most of the vertical programmes, which have their own management, reporting and monitoring mechanism, work in isolation, with a minimal level of coordination with other programmes. The needs assessment also revealed that an insufficient share of finances (approximately 1% of the size of provincial economy) is allocated to health in the province (including the funds allocated at provincial and district level). Most of this is spent on tertiary care facilities, at the expense of secondary and primary health care, and thus basic community needs are not properly fulfilled.

Districts receive a one-line budget from the provincial government, in regular monthly instalments, and a major part of this amount is automatically transferred into staff salary accounts, leaving a small amount of resources to be distributed across the 13 district departments. The share of the non-salary component allocated to the district health departments is usually not enough to meet their required demand, although, as far as Bahawalnagar is concerned, this is not specifically a major problem. A slow release of funds has also been reported to cause delayed procurement of equipment and drugs and to hamper smooth and timely delivery of health services. This resource constraint also limits planning and execution of training activities by the DHDC.

Lack of planning for the timely procurement of medicines in response to patients' needs was reported as one of the major issues for provision of services at the primary health care level.

Although a specific timeframe has been stipulated for each step of the procurement process, this schedule is seldom followed. The reported reasons for the slow paced procurement process are weak supervisory and monitoring mechanisms and issues regarding planning. Furthermore, data used to forecast medicine requirements is neither maintained nor reliable.

Coverage of the needs of the increasing population is reported as a major reason for gaps in the provision of health services. The target population for each Lady Health Worker (LHW) has been increased from 1000 to 1400 (or 150–200 households) since the inception of the LHW programme. However, due to a ban on recruitments which has been in place for a long time, LHWs who have left the programme have not been replaced, thus increasingly burdening existing LHWs as regards covering the added workload. Inadequate monitoring and weak performance evaluation of the health care systems has also made achievement of service delivery outputs ever more challenging.

CEIs revealed that the mean distance from citizens' residences to a BHU is 2.6 kms. The CEIs were conducted with respondents who could access the BHU. These respondents reported that of those who live within one km of a BHU, 64% travel by foot and 36% by motorbike. However, of those living within two kms, 17% travel to BHUs by foot and 83% by motorbike. Beyond two kms almost all citizens use motorbikes to travel to the BHUs. 74% of respondents reported that they had travelled on a bad road to get to the facility. The same respondents (73%) were found to be repeatedly utilising the services of the BHU. 60% said that the main reason for their visit was the close vicinity of the health facility, allowing easy access. 40% reported that both access and affordability were the reasons why they attended the BHU.

During the qualitative assessment, the majority of the respondents stated that in the case of remotely located BHUs, accessibility is a major problem. The condition of most of the roads to remotely located BHUs is poor and transport is not available all the time. However, in the case of BHUs that are at a close proximity to residences, people are willing to seek health services from such BHUs as they can access the facility on foot or by motorcycle.

Coverage of the primary health care facilities is based on disease data, availability of appropriate medicines and availability of human resources at the BHUs. No disease except malaria was found to be fully covered in Bahawalnagar district. Medicines for adults suffering from acute respiratory infection (ARI) and asthma were found in more BHUs than were formulations for children. For all other diseases, both adults and children were found to be equally badly covered. Under-utilisation of services and stocks (medicine, equipment and allied supplies) was also identified for antenatal care (ANC), delivery care, pre-natal care and family planning, due to access and coverage issues-adversely affecting pregnant women and new-born in the district.

Shortage of staff at BHUs was reported and around 50% of clients were examined by dispensers, 30% by LHVs, 10% by lab technicians, 6% by School Health and Nutrition Supervisors and only 3% by doctors. Around 75% of the respondents reported that they did not wait for more than 15 minutes before being examined by a health care provider.

Another key part of the analysis provided in this document is a study of the budget for Bahawalnagar district in the last four years. This study was undertaken to identify budgetary

trends in Bahawalnagar for the years FY 2010/11 to FY 2013/14. The objective was to see how budgetary allocations have been made and what the trends as regards actual expenditure have been during this period. The study focused on primary health care delivery through BHUs and thus examined the budgetary allocations and expenditure patterns of BHUs in detail. The analysis was based on budget documents, out-patient data, and disease patterns of the district. All relevant documents were obtained from the district government. An in-depth analysis of the current health sector budget (salary and non-salary component) was also carried out.

## 3 Analysis of budget trends

A budget analysis exercise, primarily focusing on health sector budget allocations and actual expenditures incurred in Bahawalnagar during the last four years (i.e. FY 2010/11, 2011/12, 2012/13, and 2013/14 was also carried out by SNG. The analysis was based on budget documents, out-patient data, and disease patterns of the district. All the relevant documents were obtained from the district government. An in-depth analysis of the health sector's current budget (salary and non-salary component) was also carried out. The focus of this analysis was primary health care delivered through BHUs.

# 3.1 Analysis of total district non-development budget and expenditure

The district non-development budget estimate was Rs. 5.385 billion in FY 2010/2011. This increased to Rs. 7.451 billion in FY 2013/14. The non-development actual expenditure was Rs. 5.314 billion in FY 2010/11. This increased to Rs. 7.270 billion in FY 2013/14. Utilisation of the budget remained above 93% during all four years.

# 3.2 Analysis of district salary and non-salary budget and expenditure

In the district budget, the salary share was 92%, 91%, 91% and 89% during FY 2010/11, 2011/12, 2012/14 and 2013/14 respectively. The salary budget utilisation was over 88% during the period. The non-salary budget utilisation was much more volatile: it ranged from 84% to 151% during the four year period.

## 3.3 District health department and budgetary allocations

The health sector at the district level mainly relates to primary and secondary health service delivery, i.e. BHUs, RHCs, and Tehsil Headquarters (THQ) and District Headquarters hospitals. Table 1 below shows the budget estimates (BE) and actual expenditure (AE) for the primary and secondary health care facilities over a period of four financial years. The share of primary health care in total health expenditure was a minimum of 33% in FY 2010/11 and a maximum of 44% in FY 2011/12. Similarly, the share of secondary health care in total health expenditure ranges from 30% to 34%. The rest of the budget is used for administration, other health facilities and a general nursing school, etc.

Table 1: BE and AE for primary and secondary health care facilities over a period of four financial years, and utilisation rate

Years	FY 2010/11		FY 20	11/12	FY 201	12/13	FY 20	13/14
	BE	Actual	BE	Actual	BE	Actual	BE	Actual*
Primary health	383,877	305,587	456,096	396,538	363,710	447,259	452,267	452,015
Utilisation rate		80%		87%		123%		100%
Secondary health	273,243	272,004	340,670	307,283	379,660	360,975	382,527	394,468
Utilisation		100%		90%		95%		103%
Total health budget	904,499	913,772	1,112,449	902,034	1,252,280	1,166,849	1,280,657	1,300,979
Primary - % of budget	42%	33%	41%	44%	29%	38%	35%	35%
Secondary - % of budget	30%	30%	31%	34%	30%	31%	30%	30%

<sup>\*</sup> Actual is on pro rata basis for 12 months.

Rs. In 000'

## 3.4 Health spending out of total district budget and expenditure

The health budget and health expenditure as a share of the overall district budget and AE is shown in the following figure. As shown, the share of health in total expenditure at district level remained at 16–18% during the four year period.

<sup>\*</sup> Actual is on pro-rata basis for 12 months.

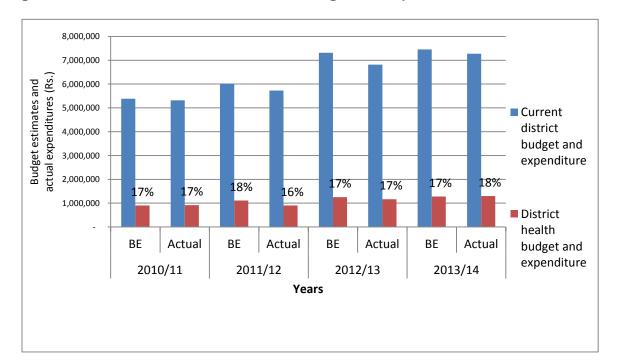


Figure 1: Share of health sector in district budget and expenditure

#### 3.5 Share of health sector in the district budget

The current health budget was Rs. 0.904 billion, Rs. 1.112 billion, Rs. 1.252 billion and Rs. 1.280 billion during FY 2010/11, FY 2011/12, FY 2012/13, and FY 2013/14, respectively. The year-on-year (YoY) increase in the budget was 23%, 2%, and 13% during these years. The YoY increase in AE was -1%, 29%, and 11%, in FY 2011/12, FY 2012/13 and FY 2013/14 (see Figure 2). The utilisation of the budget was 101% and 102% in FY 2010/11 and FY 2013/14, respectively, and AE was lower than the allocated budget in FY 2011/12 and FY 2012/13, being 81% and 93%, respectively. Generally, the utilisation of the health budget has been good (with the exception of FY 2011/12 where the variation between budget allocation and expenditure was 19%).

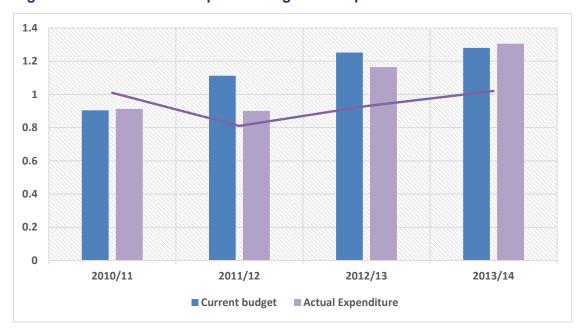


Figure 2: Health non-development budget and expenditure

Rs. in billions

# 3.6 Analysis of health salary and non-salary budget and expenditure

Of the health budget, the salary share was 76%, 73%, 70%, and 66%, and the non-salary share was 24% 27%, 30%, and 34% during FY 2010/11, FY 2011/12, FY 2012/13 and FY 2013/14, respectively. Similarly the salary share of AEs was 58%, 79%, 70%, and 65% and the non-salary share was 42%, 21%, 30%, and 35% during FY 2010/11, FY 2011/12, FY 2012/13 and FY 2013/14 respectively. This trend is depicted in Figure 3 below. The budget utilisation in respect of salary was 77%, 88%, 93%, and 100%, respectively, in the four years. The non-salary budget utilisation was 177%, 62%, 94%, and 105%, respectively, during the four years (see Figure 4).

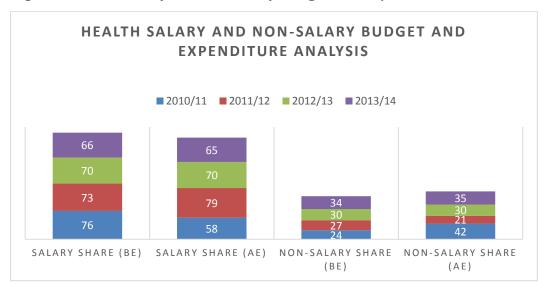
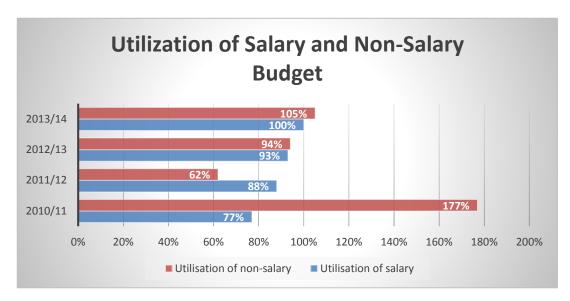


Figure 3: Health salary and non-salary budget and expenditure





The above analysis clearly shows that, generally, the district has been allocating an adequate non-salary budget for the health sector, keeping in view the generally accepted standard that a non-salary budget should be equal to 30% of the salary budget. However, as shown in Figure 4 the utilisation of the non-salary budget has been quite erratic over the years.

# 3.7 Budget allocation for non-salary components (especially medicines)

The non-salary budget primarily comprises operating expenses and repair and maintenance costs. The operating budget includes the budget for drugs and medicines. Table 2 below

shows the budget allocation and AE for operating expenses and repairs and maintenance, out of the total health budget. Under the operating expenses the most significant head of account is drugs and medicines. Table 2 also shows the utilisation of the medicine budget. In FY 2010/11 excessive procurement of medicines was undertaken, with the result that the budget allocation for FY 2011/12 was only 35% utilised.

Table 2: Medicine budget and AE

	FY 2010/11		FY 2011/12		FY 20	12/13	FY 2013/14	
Significant head	BE	Actual	BE	Actual	BE	Actual	BE	Actual
Operating expenses	191,696	349,687	274,681	155,311	330,662	322,658	408,745	429,379
Repair and maintenance	13,420	12,293	17,275	13,692	13,607	7,528	9,675	7,272
Drugs and medicines	121,250	229,032	176,850	61,829	218,100	221,170	215,035	258,042
Utilisation rate of medicine budget		189%		35%		101%		120%

Rs. in 000'

The needs assessment found that the medicine available at BHUs in the district had no relation to the burden of disease in the district, or to the requirements of the BHU. It appears, therefore, that there are no criteria for determining the quantity of medicines to be procured or for determining the linkages between medicine procurement and the disease patterns prevailing in the district. The procurement of medicines is one of the most important tasks of the district health department. It is therefore extremely important that this task is undertaken in the light of evidence of needs at different levels. Use of the District Health Information System (DHIS) appears to be the most feasible option in this regard, as the burden of disease is captured in the DHIS. Using data from the DHIS will enable the requisite medicine to be purchased.

# 3.8 District health non-development budget and AE in different sectors

The district health non-development budget is divided into different sectors, i.e. Primary, Secondary, Administration, Other Health Facilities, and General Nursing School. This analysis mainly focuses on the primary health care services.

<sup>\*</sup> Actual is on pro rata basis for 12 months.

#### **Primary health care services**

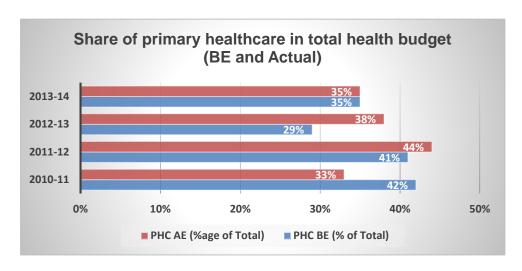
Table 3 summarises the level of primary health care funding in the district. Allocation for primary health care services was 42%, 41%, 29%, and 35% of the total health budget in the district in FY 2010/11, FY 2011/12, FY 2012/13 and 2013-14, respectively. The AE on primary health care was 33%, 44%, 38%, and 35% during these years (see Figure 5). Utilisation of this budget was 80%, 87%, 123%, and 100% during these years (see Figure 6). Again there seems to be little predictability as regards the utilisation of the funds allocated for primary health care.

Table 3: Primary health care current budget and AE

Years	FY 2010/11		FY 20	FY 2011/12		12/13	FY 2013/14	
	BE	Actual	BE	Actual	BE	Actual	BE	Actual *
Primary health care	383,877	305,587	456,096	396,538	363,710	447,259	452,267	452,015
Primary health care budget as percentage of total health current budget	42%	33%	41%	44%	29%	38%	35%	35%
Utilisation ratio		80%		87%		123%		100%

Notes: Rs. 000'

Figure 5: Primary health care budget and Actual (AE) as share of total health budget and AE



<sup>\*</sup>AE is on pro rata basis for 12 months.

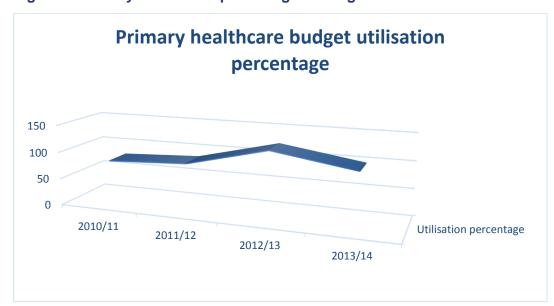


Figure 6: Primary health care percentage of budget utilisation

#### BHUs with budget and AE

There are 102 BHUs in Bahawalnagar district. These BHUs are under the administrative and financial control of the District Officer (Health) (DO (H)). Therefore, budgeting for these BHUs is carried out at the district level by the office of the DO (H).

Table 4 summarises the budgetary allocations and AE for BHUs during the period in question.

Table 4: BE and AE for BHUs

	FY 2010/11		FY 2011/12		FY 20	12/13	FY 2013/14	
	BE	Actual	BE	Actual	BE	Actual	BE	Actual*
BHUs (DO (H))	254,020	196,546	312,923	254,127	177,147	284,938	254,823	283,904
Utilisation (%)		77%		81%		161%		111%

Notes: Rs. 000'

\*Actual is on pro rata basis for 12 months.

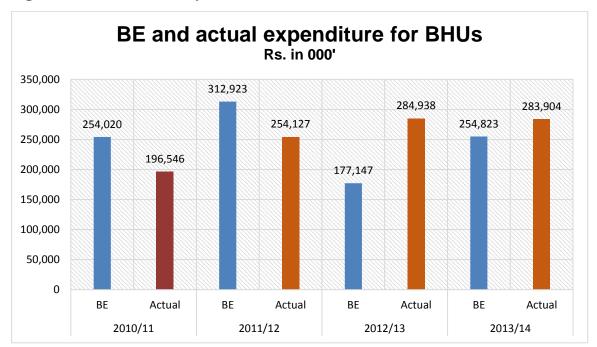


Figure 7: BE and actual expenditure for BHUs

The variation between budgeted amounts and AE for BHUs clearly reflects a lack of financial planning and an absence of evidence-based budgeting for the provision of primary health care services during the last few years (see Figure 7). The BHUs are responsible for providing the most important preventive and curative functions at the grassroots level. Therefore, it is important that budgeting and planning is improved at the district level, through the use of evidence and data.

## 3.9 Major BHU budget and AE components

As shown in Figure 8, below, the BHU budget and AE mainly consists of employee-related expenses, operating expenses, and repairs and maintenance. As the chart shows, however, most of the spending for BHUs is actually on the salaries of staff: allocations for repairs and maintenance are at such a low level that they are hardly visible (Figure 8).

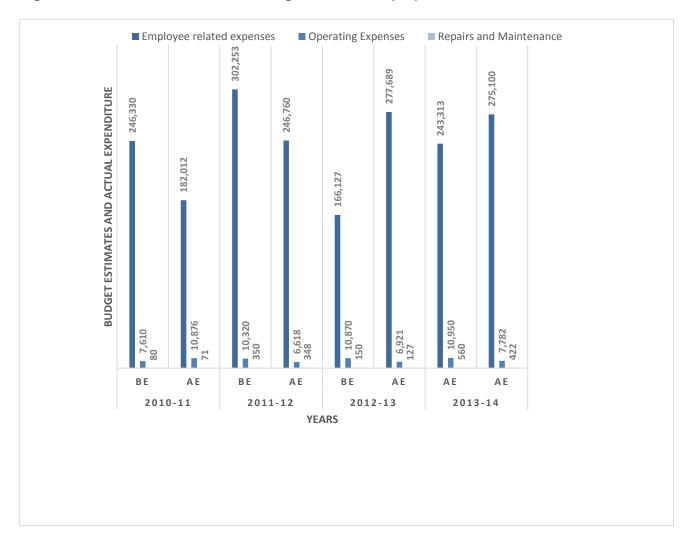


Figure 8: Break-down of BHU budget and Actual (AE)

Rs. In 000

The data also reveals that even the small amounts that are being budgeted for operating expenses and for repairs and maintenance are not being fully utilised. This is a concern as the non-salary allocations for BHU appear to be inadequate: if these already small allocations are not fully utilised then the service delivery is bound to suffer.

#### 3.9.1 Procurement of medicines for BHUs

The budgetary allocations and AE for procurement of medicines at BHUs are summarised in Table 5 below. The data reveals that budgeted amounts under this head have not been utilised fully during the last four financial years, with the exception of FY 2012/13 and FY 2013/14 when the AE was above the budgeted amount (by 61% and 11%, respectively).

**Table 5: Medicine BE and Actual** 

	FY 2010/11		FY 2011/12		FY 20	12/13	FY 2013/14	
	BE	Actual	BE	Actual	BE	Actual	BE	Actual
BHUs (DO (H) BWN)	254,02 0	196,54 6	312,92	254,12 7	177,14 7	284,93 8	254,82 3	283,90
Utilisation (%)		77%		81%		161%		111%

Rs. In 000'

#### 3.9.2 Cost per patient for BHUs

The per patient cost has been calculated using the numbers obtained from the district for outpatients treated at the BHUs, and using the budgetary allocations for BHUs and AE incurred during the last four years (see Table 6).<sup>1</sup>

Table 6: Patient cost according to original budget and AE

	FY 2010/11		FY 2	011/12	FY 2	012/13	FY 2013/14	
	BE Actual		BE	Actual	BE Actu		BE	Actual
Patient cost as per total budget for BHU	232	179	336	251	209	255	296	330
Patient cost as per non-salary budget for BHU	7	13	11	8	13	9	13	10

<sup>\*</sup>AE is on pro rata basis for 12 months.

Table 6 shows that the per patient non-salary expenditure at BHU level ranges from Rs. 7 – 13. This allocation is extremely low, bearing in mind the actual needs as regards the provision of medicines, and diagnostic facilities etc. through BHUs. This clearly calls for more evidence-based budgeting, based on the number of patients using BHUs and the average cost for the provision of health services. The EPHS average cost for provision of BHU-related services has been calculated by the Government of the Punjab, Department of Health, at Rs. 62 per patient. The existing per patient spending in Bahawalnagar is around one tenth of this standard.

Sub-National Governance Programme

<sup>\*</sup>Actual is on pro rata basis for 12 months.

<sup>&</sup>lt;sup>1</sup> As reported by the DO (H) of Bahwalnagar, between 800,000 and 1 million out-patients were treated at BHUs during FYs 2010–14.

Before discussing the budgetary proposals, it will be useful to summarise the issues that were identified in the needs assessment which was carried out to assess the primary health care needs of the residents of Bahawalnagar district.

# 3.10 Major issues in primary health care (BHUs) in Bahawalnagar district

In light of the findings of the needs assessment, the following major issues in primary health service delivery were identified, which have a direct link to budget allocation:

- non-availability of medicines, supplies and lab investigations;
- missing facilities (such as equipment for diagnosis / testing) at BHUs;
- · areas with poor access to health services;
- · lack of resource provision for vaccination; and
- under-utilisation of BHUs shortage of skilled staff.

# 4 Recommended non-salary budget allocations to improve primary health services in Bahawalnagar

#### 1. Medicines, supplies and lab Investigations

A key finding of the needs assessment relates to the non-availability of required medicines (except for malaria) and diagnostic facilities at BHUs, as prescribed by the EPHS approved by the provincial government.

An analysis was carried out to look at the patient load and disease pattern at the BHU level in the district. This analysis clearly indicates the presence of a large number of ARI patients in the district. The graph below (Figure 9) shows the number of patients receiving out-patient department (OPD) facilities and the prevailing disease pattern in the district.<sup>2</sup> It is clearly evident from the graph that a large number of ARI patients visit the BHUs in the district.

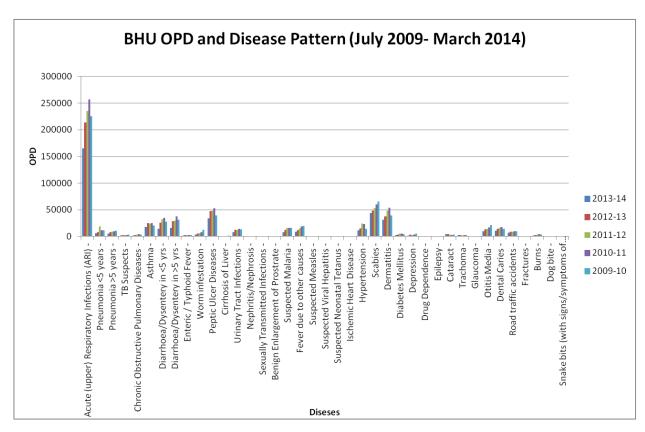


Figure 9: Disease pattern and OPD at BHUs (no. of patients)

Upon further investigation, it was found that medicine for children with ARI and asthma were not available at the BHU. This indicates data on the burden of disease in the district is not used when procuring and distributing medicines at various BHUs. As a result, the budgetary

<sup>&</sup>lt;sup>2</sup> Data obtained from DHIS.

allocations made for the procurement of medicine are not backed up by any hard data and are not well-targeted.

In order to address these issues, it is imperative that when procuring and distributing medicines at primary level health facilities the burden of disease, and thus the requirement for medicines for those diseases, is kept in mind.

To align budgetary allocations with the burden of disease, and to ensure that essential supplies and basic diagnostic facilities are available at the primary health care level, the following calculations were carried out using the weighted average cost formulae for the cost of drugs/medicines, supplies and lab investigations.

The weighted average cost for the provision of these services at the BHU has been calculated at Rs 62 per unit.<sup>3</sup> Using this weighted average per BHU, it is possible to calculate the funding requirements for providing these services at the primary health care facilities in the district. For calculating the cost of medicines, 25% was added to the medicine requirement, as buffer stock.<sup>4</sup> Table 7 provides the budgetary allocation for the provision of medicine, supplies, and basic diagnostic facilities at BHU level in the district, using the number of patients visiting BHUs and multiplying this by the average cost per patient and further enhancing the product by a factor of 1.25 to ensure the availability of a buffer stock of medicine and to offset price fluctuations.

<sup>&</sup>lt;sup>3</sup> The weighted average cost used for calculations here has been worked out in **Department of Health, Government of Punjab report titled: Costing of Essential Package of Health Services (Primary Healthcare Facilities in Punjab), 2012.** The calculation of weighted average cost is a three step process:

<sup>•</sup> Calculation of a multiple of per unit service cost for a service x number of expected cases of that service

Calculate the sum of the multiples calculated in previous step

Divide the sum computed above by the total number of cases to obtain the weighted average cost of services.

<sup>&</sup>lt;sup>4</sup> International literature on the subject recommends that buffer stock of medicines be maintained in the range of 15%–25%.

Table 7: Proposed allocation per BHU for medicines, supplies and lab investigations

Total patient load and patient load per BHU	Weighted average per patient cost (Rs.)	Multiple for buffer stock	Medicines, supplies and lab investigations costs per BHU (in Rs.)						
549,664	62	-	34,079,168						
5,389	62	-	334,118						
	Inc	Including buffer stock (1.25)							
549,664	62	1.25	42,598,960						
5,389	62	1.25	417,648						

Table 7 above indicates that Rs. 34.08 million is needed to provide essential supplies and basic diagnostic facilities at all BHUs in the district. The cost per BHU works out at around Rs. 334,000. Additionally, Rs. 42.60 million is needed for the provision of requisite medicines at the BHU level, to address the burden of disease and patient load at those facilities. This will also include provision of 25% as a buffer stock of medicine. It is recommended that the allocated budget be distributed across BHUs on the basis of patient load, instead of using a constant budget allocation.

#### Source of funding

The budget analysis carried out by SNG Punjab in respect of Bahawalnagar district has indicated certain areas where the utilisation rate of the budget is very low. Therefore the recommendation regarding medicines, supplies and lab investigations can be met from areas where the budget utilisation has historically been very low. Analysis has indicated that overbudgeting in health facilities in the district has resulted in a low budget utilisation rate. Furthermore, analysis of RHC budgets indicates substantial over-budgeting in the salary component at the RHC level (see Table 8). This over-allocation can easily be diverted to fund BHU medicines, supplies, and lab investigations.

Table 8: Budget and expenditure trends at RHC, BHU and THQ levels

Years	FY 2010/11			FY 2011/12 F			<b>/ 2012/1</b> 3	FY 2	FY 2013/14	
Major components	BE	Actual	BE	Actual	BE		Actual	BE	Actual	
Employee-related expenses	115,414	92,477	127,069	128,740	167,60	01	146,430	176,385	149,869	
Operating expenses	13,168	15,388	14,324	12,775	17,00	)7	14,478	19,659	15,918	
Repairs and maintenance	1,275	634	1,780	896	1,95	5	813	1,400	884	
Medicines (Local Purchase) at RHCs	2,100	2,000	2,400	2,329	2,90	0	2,185	3,200	2,126	
Medicines at BHUs	5,000	4,476	6,000	1,778	6,00	0	2,536	3,000	1,763	
Operating expenses at THQ level	25,711	36,620	36,871	31,723	40,49	90	33,441	40,630	32,887	

<sup>\*</sup>Actual is on pro rata basis for 12 months.

Rs. In 000'

#### 2. Missing equipment

The needs assessment has revealed that basic diagnostic facilities are not available at BHUs (except for blood pressure and weight measurement equipment). To provide the missing equipment at BHU level, EPHS-based costing of equipment has been used to calculate the funding requirements.

Table 9 shows the equipment cost at each facility (BHU), with depreciation applied. The equipment maintenance cost has also been calculated in this table, using 10% depreciation of equipment per year.

Table 9: Total cost of equipment at BHUs and related repair and maintenance costs

Total cost of equipment per BHU	1,600,261
Equipment maintenance cost	19,836
Total cost for 102 BHUs	163,226,622
Equipment maintenance cost	2,023,281

Amount in Rs.

In the needs assessment undertaken by SNG an android based survey of equipment availability at 15 sample BHUs was carried out. Based on the survey, a list of missing equipment was developed for the 15 BHUs. Using the list of missing equipment for the sampled BHUs, the district government can extrapolate the cost of missing equipment for all 102 BHUs in the district. It would, however, be useful to conduct a comprehensive assessment of missing facilities, to accurately estimate the funding requirement for the provision of missing facilities / equipment in all BHUs in the district.

#### Source of funding

The provincial ADP 2014–15 includes a scheme entitled 'Purchase of Missing Equipment and Hospital Furniture etc. for Primary and Secondary Care Hospitals in Punjab'. An allocation of Rs. 350 million has been made for this scheme for this year. The district government should approach the provincial government for funding, to provide the missing equipment in BHUs in the district. However, it is also possible that the provision of the missing equipment can be taken up by the district government in a phased manner, using its own budget.

#### 3. Medical camps

The needs assessment examined access to health services in the district through a Geographic Information System-based analysis. This helped to identify areas with poor access to health services. It is imperative that district government makes special arrangements to reach out to the communities living in such areas periodically. If a more permanent arrangement cannot be immediately made, one option is to hold medical camps in such areas. The Punjab Rural Support Programme (PRSP) is managing health service delivery in a few districts of the province and in such districts medical camps are regularly arranged for under-served areas of the district. The PRSP's experience indicates that setting up these camps require minimal logistics costs as the medicines and equipment available at BHU can be used for such camps. Therefore an indicative allocation of Rs.1.0 million is proposed for Bahwalnagar district during FY 2015/16, to provide medical camps.

#### 4. Resource provision for vaccination

One of the issues identified by the SNG programme while undertaking its review of the business process of the Expanded Programme of Immunisation (EPI) was that necessary facilities, especially POL for motorcycles, is not provided to the vaccinators who are

responsible for the implementation of the EPI. A review of the district budget reveals that there is an allocation for provision of POL to vaccinators. However, enquiries in the field suggest that this allocation is not being disbursed. One of the reasons for this non-disbursement is probably the concern that the POL will be misused. In order to ensure that misuse does not happen, it is proposed that a separate allocation be made in the budget for provision of POL to vaccinators, and that the amount be disbursed to vaccinators through the use of fleet cards (if this is practical, considering the extent of the availability of this facility in the district).

#### 5. DHDC

One of the main reasons for under-utilisation of BHUs is a lack of qualified staff at these facilities. DHDCs have been established by the provincial government in each district with a mandate to conduct training for health sector employees. These DHDCs need to be made fully functional, by developing a training schedule, with a robust monitoring mechanism to assess their performance. Table 10 and Figure 10 indicate that in the last four financial years, the total expenditure on DHDC has ranged from Rs. 2.57 million (in FY 2010/11) to a maximum Rs. 4.086 million (in FY 2012/13). However, 87% of this expenditure is employee-related, 11% are operating expenses and just 2% is for maintenance and repairs (Figure 10). Under these circumstances, Bahawalnagar district can also benefit from making these DHDCs fully operational. It is proposed that the non-salary allocation for the DHDCs be doubled during the next financial year, to ensure adequate funding.

Table 10: DHDC BE and AE

	FY 2010/11		FY 2011/12		FY 20	12/13	FY 2013/14	
	BE Actual		BE	Actual	BE	Actual	BE	Actual*
Employee- related expenses	2,324	2,072	2,632	2,887	3,517	3,605	3,617	3,285
Operating expenses	498	410	660	224	504	429	588	381
Repairs and maintenance	115	86	135	79	80	52	90	17
Total	2,937	2,568	3,427	3,190	4,101	4,086	4,295	3,683

#### Rs in 000'

<sup>\*</sup> Actual is on pro rata basis for 12 months.

Figure 10: Average expenditure on DHDC (2010–14)

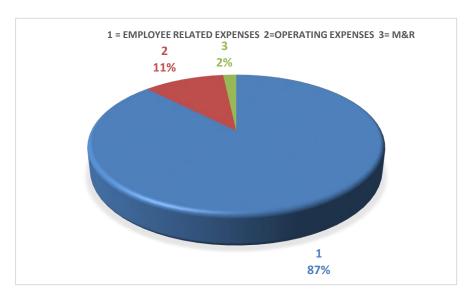
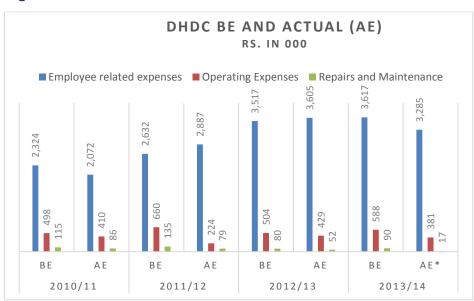


Figure 11: DHDC BE and AE



<sup>\*</sup>Actual (AE) is on pro rata basis for 12 months.

## 5 Conclusion and way forward

The budget proposals presented in this report have been calculated using the historic budget data for Bahawalnagar district. These proposals have been designed to fill some of the existing gaps in primary health care service delivery in the district. The source of funding has also been indicated, where additional allocations have been suggested. Wherever possible an attempt has been made to remain within the existing resource envelope available to the district. It is anticipated that if these proposals are implemented, some of the unmet requirements of the residents of the district with regard to primary health care services will be addressed. Additionally, it is envisaged that applying the proposals will introduce evidence-based budgeting to the district, and the district can build on this to further bolster its health care service delivery in the future.

# **Annex 1: Weighted average cost calculation**

Catchment										
population			10,0	00	15,00	00	20,00	00	25,0	00
Services	Prevalence/ incidence	Per unit cost	Target population	Cases						
ANC	64%	135	290	185	435	278	580	371	725	464
Delivery	10%	189	290	30	435	45	580	59	725	74
Postpartum	20%	183	276	55	414	83	552	110	690	138
New-born care	10%	105	276	28	414	43	552	57	690	71
Pneumonia	1.80%	52	1,260	23	1,890	34	2,520	45	3,150	57
Others	13.40%	22	8,740	1,171	13,110	1,757	17,480	2,342	21,850	2,928
Diarrhoea/ dysentery	13.10%	44	8,740	1,145	13,110	1,717	17,480	2,290	21,850	2,862
FP condoms	12.00%	94	1,487	178	2,231	268	2,974	357	3,718	446
FP oral	2.80%	91	1,487	42	2,231	62	2,974	83	3,718	104
FP injection	2.30%	64	1,487	34	2,231	51	2,974	68	3,718	86
FP IUD	1.10%	40	1,487	16	2,231	25	2,974	33	3,718	41
Pneumonia	1.80%	58	8,740	157	13,110	236	17,480	315	21,850	393
Other RI	1.40%	4	8,740	122	13,110	184	17,480	245	21,850	306
GI	1.80%	12	8,740	157	13,110	236	17,480	315	21,850	393
TB diagnosis	0.10%	14	8,740	9	13,110	13	17,480	17	21,850	22
TB treatment	0.08%	3,313	8,740	7	13,110	10	17,480	14	21,850	17
Malaria: diagnosis	0.07%	5	8,740	6	13,110	9	17,480	12	21,850	15
Malaria: treatment	0.70%	231	8,740	61	13,110	92	17,480	122	21,850	153

Typhoid	0.10%	35	8,740	9	13,110	13	17,480	17	21,850	22
STIs	0.05%	96	8,740	4	13,110	7	17,480	9	21,850	11
Eye related	0.90%	283	8,740	79	13,110	118	17,480	157	21,850	197
UTI	0.70%	69	8,740	61	13,110	92	17,480	122	21,850	153
Worm infestation	0.70%	2	8,740	61	13,110	92	17,480	122	21,850	153
Fever	1.80%	15	8,740	157	13,110	236	17,480	315	21,850	393
Hypertension	0.50%	150	6,200	31	9,300	47	12,400	62	15,500	78
Scabies	2.90%	15	8,740	253	13,110	380	17,480	507	21,850	634
Other skin infections	1.40%	50	8,740	122	13,110	184	17,480	245	21,850	306
Diabetes	0.70%	550	6,200	43	9,300	65	12,400	87	15,500	109
Other eye diseases	0	-	6,200	-	9,300	-	12,400	-	15,500	-
Dental	0.00%	100	8,740	-	13,110	-	17,480	-	21,850	-
Emergency first aid	0.60%	100	8,740	52	13,110	79	17,480	105	21,850	131
Micro nutrients		194.88	1,260	-	1,890	-	2,520	-	3,150	-
Vitamin A		14.1984	1,260	-	1,890	-	2,520	-	3,150	-
Total cases				4,302		6,454		8,605		10,756

Source: Government of the Punjab, Report on Costing of EPHS

(Primary Healthcare in Punjab), 2012.

## Annex 2: Equipment cost calculation as per EPHS

16	Useful	Cost	Quantity	Total cost (Rs.)
Items	life	(Rs.)	вни	BHU
Adult stethoscope	3	550	1	550
Adult weighing scale	3	1,000	1	1,000
Ambu bag (child, adult, infant)	5	3,500	8	28,000
Forceps	5	150	20	3,000
Autoclaves	8	15,000	1	15,000
Baby weighing scale	5	3,500	1	3,500
Bed-pans	5	500	1	500
Bench fibre glass	5	2,500	2	5,000
Binocular microscope	8	80,000	1	80,000
Blood grouping viewing box	5	3,000	1	3,000
BP apparatus (mercury)	3	1,500	3	4,500
Breast pumps	5	2,000	1	2,000
Centrifuge machine	8	100,000	1	100,000
Chair for health worker	5	1,000	1	1,000
Chairs for caretakers	5	500	2	1,000
Cold box refrigerator for EPI	5	17,000	1	17,000
Computer	5	75,000	1	75,000
Couscous specula	5	400	2	800
DLC counter	8	2,000	1	2,000
Dressing drum	5	500	1	500
Dressing scissors	5	100	1	100
Dressing trays	5	400	1	400
ENT diagnostic set	7	2,500	1	2,500
Episiotomy scissors	5	300	2	600
Examination couch	10	100,000	2	200,000
Fetal stethoscope	5	500	2	1,000
Gas burner	5	11	1	11
Gas stove/ cylinder	5	500	1	500
Glucometer	5	4,000	1	4,000
Haemocytometer	10	4,000	1	4,000
Haematology analyser	10	450,000	1	450,000
Ice box	7	7,000	1	7,000
Ice packs	7	100	10	1,000
ILR/deep freezer	10	45,000	1	45,000

IUD insertion kit	7	1,500	1	1,500
IV stand	5	450	2	900
Kidney tray- large size	5	200	2	400
Labour /delivery table	10	10,000	1	10,000
Nebuliser	5	5,000	2	10,000
Needle holder	5	100	4	400
Normal delivery set	7	10,000	2	20,000
Office chairs	8	3,000	4	12,000
Office rack wooden	8	1,500	4	6,000
Office table with three drawers	8	2,000	4	8,000
Oxygen cylinder (all types)	5	20,000	1	20,000
Patella hammer	5	400	2	800
Patient stool	5	1,000	3	3,000
Pedal suction machine – manual	7	20,000	1	20,000
Pinard fetoscope	5	100	2	200
Pressure cooker	7	4,000	1	4,000
Pressure cooker autoclaves	7	20,000	1	20,000
Refrigerator	10	40,000	1	40,000
Revolving stool	5	600	2	1,200
Room thermometer	5	1,000	1	1,000
Sahli haemoglobinometer	5	1,000	1	1,000
Scalpel	5	100	2	200
Scissors (simple, straight)	5	100	4	400
Screen four fold	5	3,000	2	6,000
Shadow-less lamps	8	38,000	1	38,000
Sim's vaginal speculum	5	300	2	600
Sims speculum double blade	5	300	2	600
Sims speculum single blade	5	300	2	600
Standard surgical set	7	8,000	2	16,000
Steel almirah	9	6,000	6	36,000
Steriliser	9	100,000	1	100,000
Stethoscope	5	550	2	1,100
Stretcher	9	10,000	1	10,000
Table	7	5,000	2	10,000
Table lamp	5	500	1	500
Timing device/watch with second hand	3	1,000	2	2,000

Tourniquet	3	1,000	2	2,000
Tuning fork	5	100	2	200
Vaccine carrier	5	1,600	2	3,200
Vacuum extractor pump	8	65,000	2	130,000
Water bath	5	2,000	1	2,000
Weighing Scale, spring	5	1,000	1	1,000

Source: Government of the Punjab, Report on Costing of EPHS (Primary Healthcare in Punjab), 2012.

# Annex 3: Missing equipment at 15 sample BHUs in Bahawalnagar district

Equipment to be present at BHUs as approved by Health Department	Available at sample BHUs	
Missing equipment/diagnostic facility	Yes	No
Adult ambu bag and mask	2	13
Adult stethoscope	9	6
Adult weighing scale	10	4
Adult weighing scale	10	4
Ambu bag for infant	3	12
Ambubag for child and adult	5	8
Artery forceps	11	4
Artery forceps curved	10	5
Artery forceps straight	12	3
Baby weighing scale	10	4
Baby weighing scale	4	10
Bed-pans	4	11
Bench fibre glass	11	4
Blood pressure apparatus	8	7
Boiler/autoclave	7	7
Breast pumps	3	12
Chair for health worker	13	2
Cheatle forceps	8	6
Cold box refrigerator for EPI	13	2
Computer with accessories, including internet access	1	13
Couscous specula (small, medium, large for each category)	4	11
Dressing drum	12	3
Dressing scissors	14	1

Dressing trays	14	1	
ENT diagnostic set	2	12	
Episiotomy scissors	5	10	
Examination couch	15	0	
Fetal stethoscope	10	5	
Gas burner	0	15	
Gas stove/ cylinder	0	15	
Glucometer	0	14	
Haemocyto meter	0	15	
Haemoglobino meter	0	15	
Ice box	13	2	
Ice packs	13	2	
ILR/deep freezer	12	3	
Equipment to be present at BHUs as approved by Health Department	Available at Sample BHUs		
IUD insertion kit	8	7	
IV stand	9	6	
Kidney tray- large size	13	2	
Labour /delivery table with washable plastic cover	14	1	
Nebuliser	0	14	
Needle holder forceps	11	4	
Non-toothed tissue forceps – eight inches	2	13	
Normal delivery set	14	1	
Office chairs	14	1	
Office rack wooden	3	12	
Office table with three drawers	3	12	
Outlet forceps	5	10	
Oxygen gas cylinders	10	4	

Oxygen source (portable cylinder or central wall supply), with mask or nasal cannula; tubing; flow meter	4	11
Oxygen tubing and masks	5	10
Patella hammer	2	13
Patient's stool	12	3
Pinard fetoscope	4	11
Pressure cooker autoclaves	3	12
Refrigerator	5	10
Revolving stool	14	1
Room thermometer	0	15
Scalpel handle and blades	4	11
Scissors (Simple)	14	1
Scissors	9	6
Screen four fold	6	9
Shadow-less lamps	5	9
Sim's vaginal speculum – single and double-ended (each of small, medium and large size)	8	7
Sims speculum double blade	2	13
Sims speculum single blade	3	12
Sponge holding forceps	4	11
Standard surgical set (for minor procedures like episiotomy stitching)	3	12
Steel almirah	12	3
Steriliser	6	9
Stethoscope	15	0
Straight scissors	11	4
Stretcher	2	13
Suction and evacuation set (SNE)	0	14
Equipment to be present at BHUs as approved by the Health Department	Available at S BHUs	
Table for vaccine supplies	13	2

Table lamp	1	14
Timing device/watch with second hand	7	8
Tissue forceps – plain	2	13
Tissue forceps – toothed	2	13
Toothed tissue forceps – eight inches	2	13
Vaccine carrier and ice pack	14	1
Weighing scale, spring	2	13

(Source: Needs assessment survey)