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A Study in Three Pilot Upazilas of Bangladesh

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Conduct a Costing of the Proposed SSK Benefit Package: A Study in Three Pilot Upazilas of Bangladesh

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However, we alone are responsible for any error and omission still remaining in the report.

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List of Acronyms

AFC	Average fixed cost
ANC	Antenatal Care
ARI	Acute Respiratory Infection
AVC	Average variable cost
CC	Community Clinic
CD	Communicable Disease
CHCP	Community Health Care Provider
DCI	Data Collection Instrument
EmOC	Emergency Obstetric Care
FI	Field Investigator
FS	Field Supervisor
FWA	Family Welfare Assistant
FWC	Family Welfare Centre
GOB	Government of Bangladesh
HA	Health Assistant
HEU	Health Economics Unit
IHE	Institute of Health Economics
IPD	Inpatient Department
MA	Medical Assistant
MO	Medical Officer
MOHFW	Ministry of Health and Family Welfare
NCD	Non-Communicable Disease
OPD	Outpatient Department
PNC	Post Natal Care
RD	Rural Dispensary
RMO	Residential Medical Officer
SACMO	Sub Assistant Community Medical Officer
SBP	Shasthyo Shurokhsha Karmasuchi Benefit Package
SSK	Shasthyo Shurokhsha Karmasuchi
TC	Total cost
TFC	Total fixed cost
TVC	Total variable cost
UHC	Upazila Health Complex
UH&FPO	Upazila Health and Family Planning Officer

Executive Summary

Background

The Ministry of Health and Family Welfare (MOHFW) has for long been planning to implement health insurance scheme in Bangladesh. As the first step towards nationwide implementation of a health insurance scheme titled “SHASTHYO SHUROKHSHA KARMAUCHI (SSK)”, the MOHFW is going to launch through the Health Economics Unit (HEU) a pilot of the SSK in three selected upazilas. It is against this backdrop that the Health Economics Unit (HEU) of the MOHFW has launched a number of studies to assess the supply side and the demand side situations as at present and to estimate the cost of service provision. The present study is one of these investigations. The main purpose of the costing study was to estimate the cost of health services under the SSK benefit package so as to calculate the required premium for the insurance scheme to be implemented. This report presents the findings of the costing study.

Objectives

The specific objectives of the study were to:

- conduct a cost analysis to determine all direct, fixed and variable cost components to meet the requirements of the SBP
- analyze result in terms of unit cost and average cost of the services
- analyze unit cost by services type, by provider per individual, by provider category, by type of clinics and by location
- develop a simulation model to determine unit cost: e.g. effects of increase in patient volume
- based on total costing results of SBP, calculate the premium per individual or family yearly, quarterly and monthly to cover SBP service delivery

Methodology

Survey Design and sample: It was a cross-sectional study to collect data from a number of facilities using a one-shot survey. This study was conducted in three upazilas of the project: Tungipara in Gopalganj district, Debhata upazila in Satkhira district, and Rangunia in Chittagong district as these upazilas were selected for the pilot intervention. Data were collected from the UHCs and UHFWS of each upazila, as well as from the selected private facilities.

Method of estimation of costs and of analysis of data: All inputs were divided into two broad groups: fixed and variable. The fixed inputs are human resources, equipments, furniture and

fixtures, infrastructure, and utility services and maintenance costs. The variable inputs are: drugs, logistics and supplies, diagnostic test services for surgery, and bed and food costs for in-patients. The total and average costs were calculated using the data on the quantity of inputs and expenditure for human resources and the number of patients which were collected from the facilities, and the market prices of the other inputs.

Findings

- At the UHC of Debhatta upazila, the total cost of health care was BDT 18069943, of which fixed cost was 56.30 percent and variable cost is 43.70 percent. Of the total cost, the cost for human resources was highest. The average total cost (per patient visit) was BDT 295.84, the average fixed cost and average variable cost being BDT 166.55 and BDT 129, respectively. The average costs for equipments, drugs, and logistics/ supplies were quite low --- BDT14.54, BDT33.08, and BDT 3.41 respectively. This finding may be indicative of the fact that while human resources sufficiently exist (although all not regularly), the other necessary inputs are not there in adequate quantities, and thus the input-mix was greatly inappropriate and unbalanced. The inappropriate input-mix can be a serious constraint to properly provide care to the patients visiting the facility.. The two broad types of patients, outpatients and inpatients, have been divided into five types: outpatients (normal) who did not require any lab test, outpatients who received lab tests, inpatients (normal) who did not require any lab test or surgery, inpatients who received lab tests, and inpatients who received surgery. There were 3768 inpatients in total: 2968 received normal inpatient care and lab tests, and 800 had surgery. The average total cost for inpatient care was BDT 1553. The average total cost is quite high for the inpatients for which diagnostic tests were performed, as well as for the inpatients of surgery. If 25% of the total population is enrolled in the SSK, the required amount of premium will be BDT 888 for a person to receive all services as delivered at UHC at present. If the number of enrollees increases so as to cover under the scheme 50 percent of the current population, the amount of premium will decline to BDT 444. If SSK covers only inpatient care, then the required premium will be BDT 224 (if 25 percent population enrolled). The amount of drugs provided to the patients of UHCs is highly inadequate at present. If we assume that under the SSK all necessary drugs will be provided to all patients, then the amount of required premium for all services will increase by 62% and that for inpatient care will increase by 13%.

In Tungipara upazila, the total cost is BDT 24243794, of which fixed cost was 61 percent and variable cost was 39 percent. Of the total cost, the cost for human resources is highest. The average total cost (per patient visit) is BDT 258; and BDT 156.44 and BDT 101 are the average fixed cost and average variable cost, respectively. The average costs for equipments, drugs, and logistics/ supplies are quite low --- BDT 2.87, BDT 22.08, and BDT 5.62 respectively. This implies that the input mix was highly inappropriate and unbalanced at the Tungipara UHC as it was at the Debhatta UHC. There were 8799 inpatients in total: 8505 received normal inpatient care and lab tests, and 294 had surgery. The average total cost for inpatient care was BDT 976. The table shows that the average total cost is quite high for the inpatients for which diagnostic tests were performed, as well as for the inpatients of surgery. If 25% of the total population is enrolled in the SSK, the required amount of premium will be BDT 1128 for a person to receive all services as delivered at UHC at present. If the number of enrollees increases so as to cover under the scheme 50 percent of the current population, the amount of premium will decline to BDT 564. If SSK covers only inpatient care, then the required premium will be BDT 416 (if 25 percent population enrolled). The amount of drugs provided to the patients of UHCs is highly inadequate at present. If we assume that under the SSK all necessary drugs will be provided to all patients, then the amount of required premium for all services will increase by 114% and that for inpatient care will increase by 180%.

In Rangunia, the total cost was BDT 23678614, of which fixed cost is 71 percent and variable cost is 29 percent. Of the total cost, the cost for human resources was highest. The average total cost (per patient visit) was BDT588.57; BDT415.19 and BDT 173.38 being the average fixed cost and average variable cost, respectively. The average costs for equipments, drugs, and logistics/ supplies were quite low. The input-mix is not appropriate and balanced at the UHC of Rangunia too. There were 3451 inpatients in total: 3314 received normal inpatient care and lab tests, and 137 had surgery. The average total cost of inpatient care of all types was BDT 1609. If 25% of the total population is enrolled in the SSK, the required amount of premium will be BDT 494 for a person to receive all services as delivered at UHC at present. If the number of enrollees increases so as to cover under the scheme 50 percent of the current population, the amount of premium will decline to BDT 247. If SSK covers only inpatient care, then the required premium

will be BDT 99 (if 25 percent population enrolled). The amount of drugs provided to the patients of UHCs is highly inadequate at present. If we assume that under the SSK all necessary drugs will be provided to all patients, then the amount of required premium for all services will increase by 29% and that for inpatient care will increase by 7%.

Conclusions and recommendations

The major conclusions emerging from the study are as follows:

- Unmet health care need exists in all the three upazilas, especially among the population in the villages which are located away from the UHC. The patients currently visiting the UHCs are mostly those who reside in the villages located near the UHCs.
- If compared with the total population of the upazila, the number of patients is unusually high at the Tungipara UHC, while it is very low at Rangunia UHC.
- The average costs widely vary among the upazilas due to considerable variation in the number of patients and the volume of existing inputs.
- The three-year trends of the number of patients in the upazilas show almost the same pattern: the number decreased in 2010 and then increased in 2011. However, the magnitude of variation is not high, indicating that the number of patients is more or less stable over the years.
- The amount of required premium is highest in Tungipara and lowest in Rangunia upazila. If we consider the inpatient care (of all types), then the required premium will drastically decline.
- The amount of drugs provided to the patients of UHCs is highly inadequate at present. If we assume that under the SSK all necessary drugs will be provided to all patients, then the amount of required premium for all services will increase by 62% in Debhata, 114% in Tungipara and 29% in Rangunia; and the same for inpatient care will increase by 13% in Debhata, 180% in Tungipara and 7% in Rangunia.

On the whole, the study has revealed that insofar as the supply side of health services is concerned, SSK can be implemented without bringing about any major change in the UHC. The only changes required are: proper utilization of the employed providers, to improve the

input mix through increased employment of support staff, and increased supply of drugs. These changes will improve quality of care and at the same time reduce average fixed cost of services. Payment of incentives to the providers will increase utilization of provider's time and increased authority of the providers to procure drugs and logistics, as and when needed, will increase availability of drugs in the facilities.. Implementation of the SSK will address these issues by way of improving finance of the facilities, paying incentives to providers, and involving a third party (which will make the providers more accountable). Except in Tungipara, the amount of required premium is reasonable. If 25 percent of the population is enrolled in the SSK, an enrolled household will have to pay 5 to 7 percent of annual income to receive all types of primary health care for all of its members (if it is assumed that per capita income is \$800 and there are 5 members in an average household). In Tungipara, the amount will be higher because the proportion of patients to population is very high at present. The premium will decline everywhere if the number of enrollees increases.

Based on the above findings, the following recommendations can be put forward:

- Expansion of coverage of the public health facilities is needed and possible.
- The input mix should be more appropriate and more emphasis is needed on the supply of the variable inputs, such as drugs and logistics. This will increase the patients and reduce the cost.
- In Rangunia, special measures should be adopted without delay so as to rapidly increase the number of patient visits to the public facilities.
- The providers are very keen to implement the SSK. Some of them expect that some incentive for them will remain there in the scheme. It will be appropriate if the provision of giving some financial incentive out of the premium received is in-built in the scheme.
- The enrollees in the scheme should constitute at least 10-15% of the population in the initial years. Otherwise, the amount of required premium will far exceed the apparent willingness- and ability to pay for the scheme by the larger section of population. Furthermore, two other measures are needed to keep the premium within the appropriate amount and reduce it over time: first, to rapidly increase the number of

enrollees over time through motivation and incentives; and second, through reduction of patient visits at the UHC by way of increased prevention of diseases (with the preventive measures) and implementing referral mechanism for the facilities so that the CCs and FWCs deal with the common cases and they refer only the relatively complicated cases to the UHC.

Conduct a Costing of the Proposed SSK Benefit Package: A Study in Three Pilot Upazilas of Bangladesh

1. Introduction

Accomplishment of impressive expansion and growth in the recent decades nonetheless, the Health and Population Sector of Bangladesh has now reached a critical stage when it has to overcome a number of dilating challenges. The growth of performances, if judged, in terms of the crucial indicators, is widely recognized as remarkable; it is higher than in many developing countries including some richer neighboring countries. The rate of its growth is higher than most private sectors of the country, which in contradistinction with the basic proportion of traditional neoclassical economics; strongly suggest an alternative development paradigm. That public sector in general and health in particular can precede, induce and lead, rather than follow and become the effect of private sector growth in a developing setting. Notwithstanding this, however, the sector is currently facing a number of problems. As already noted, there is no denying that the sector has been continuously growing for long. The impetus created in the sector in 1970s, has, through sustained momentum in the next decades enabled it to attain a level of growth which is commendable to many and can also be envied by many countries. The coverage of the sector has drastically increased in most areas and among almost all socioeconomic groups of population. Despite this, even one liberal observer can argue that there has not been enough increase in coverage and also, increase in coverage alone is not enough for the sector. Coverage has not adequately increased since still many areas of the country and most of the disadvantaged population remains under- or un-served by the sector. Second, increase in coverage alone is not sufficient for the sector to achieve its objectives; alongside increased coverage, amount of services provided per person, effectiveness of coverage, quality of services, efficiency of resource use, and financing should all improve for the sector to grow properly and sufficiently. With the thrust on merely the quantitative expansion, the sector has developed at a high growth rate so long. But now a closer examination reveals that the rate of growth has now been declining, and the time path of its outcome is demonstrating a tendency to converge to limit at a much lower level than needed and desired. In order to combat the stagnating tendency and accelerate the growth rate, the sector requires an upward shift of its performance function, which can be achieved through a big-push of the on-going as well as some new interventions. It may be

noted that the type of challenges facing the sector is almost universally true for any program or sector or even economy. In the initial phase of growth of any enterprise, public or private, the main emphasis is attached on the quantitative expansion, disregarding other issues. But as the program develops and the resource for it becomes scarcer, the other issues come to the fore, and drastic change in measures is to be brought about to improve quality, increase equity and efficiency, and strengthen financing.

The government of Bangladesh is fully aware of the trend of the health sector growth and has been devising and undertaking new and new interventions to not only sustain its momentum but also continuously improve its performances. The decision to implement community health insurance scheme is one such innovation. Recognizing the importance of health insurance scheme (HIS) to address the emerging challenges of the sector, the MOHFW has for long been intending and planning to implement it, as is manifest in the objectives mentioned in the earlier plan documents and in its efforts for bringing the stakeholders to a consensus about the nature of HIS to be implemented and the modus operandi of implementation. Finally, the government has made the decision to do so. As the first step towards nation wide implementation of the HIS, the MOHFW, through the HEU, is going to launch a pilot of the same in three selected upazilas. For carrying out the pilot, it has to properly assess the crucial issues related to implementation of HIS, specially, the supply side capacity and cost to be incurred for implementing the HIS, the required amount of premium, and the willingness of the households to enroll in the scheme and pay the premium and the magnitude of the needed safety net.

It is against this backdrop that the Health Economics Unit (HEU) of the Ministry of Health and Family Welfare (MoHFW) decided to pilot a health insurance program (SSK) for the rural people in three upazilas of the country. The main aim of SSK is to improve the access of the poor to health care, especially inpatient care, by introducing prepaid and risk pooling mechanism. In order to design and implement the pilot successfully, the GFA consulting company on behalf of MOHFW has offered tender to conduct different studies including costing of the proposed SSK Benefit Package. The main purpose of the costing study is to estimate the cost of all health

services, including those under the SSK benefit package, in order to calculate premium for the insurance scheme to be implemented under the SSK project.

This report presents the findings of the costing study. It is organized as follows. Section 2 develops a simple analytical framework based on a priori reasoning and the available evidence with the aim of deducing the underlying issue and explicitly showing the magnitude of importance and multiple dimensions of the issue. Section 3 discusses the objectives, and Section 4 describes the methodology. The findings of the survey in three upazilas have been shown in three sections, from Section 5 to Section 7. Section 8 will make a comparative analysis of the findings in the upazilas. Section 9 will conclude and put forward some recommendations.

2. Main features of SHASTHYO SHUROKSHA KARMASUCHI (SSK)

A brief description of the healthcare financing scheme to be piloted may be useful to assess the relevance and implications of the findings of the study. The description is entirely based on the project document.

The Health Economics Unit (HEU) of the Ministry of Health and Family Welfare (MoHFW) has developed a social health protection scheme termed as SHASTHYO SHUROKSHA KARMASUCHI (SSK) with the assistance from KfW (German Development Bank) and GFA Consulting Group. The SSK model has been developed over a period of two years with input from experts at many workshops, meetings and seminars.

The SSK scheme was developed because tax-based funding for the health sector is obviously insufficient in Bangladesh and that a new approach, which allows to pool taxpayer's money with health insurance contributions, might improve the situation. However the scheme will focus initially at Upazila level, it will be scaled up in all districts upon the lessons learned to aim for Universal Coverage (UC) within the Vision 2021.

Taking into consideration the National Health Policy 2011, the Sixth Five-Year Plan (SFYP), the Strategic Plan for Health, Population and Nutrition Sector Development Program (HPNSDP)

2011-2016 and the Health Care Financing Strategy (on process), the SSK project aims to improve access of the poor to hospital inpatient care by reducing financial barriers, to decentralize hospital activities for functional improvement in the health sector in phases as a part of Local Level Planning (LLP) and development and introduce modern Information and Communication Technologies for increased efficiency and transparency in the health sector (e. g. claims processing, accounting, controlling and electronic patient records) . The basic assumptions are:

- Hospitals will be authorized to manage and spend revenues/ user fees at local levels
- Effective financial control and audit mechanisms will be established
- An appropriate system with defined standards of quality of care will be established
- The legal framework for the establishment of a National Health Security Office (NHSO) will be created and approved by the Government of Bangladesh (GoB)
- All sanctioned posts will be filled-up

The SSK project represents a new model for Health Care Financing, which will introduce National Health Security Office (NHSO) as a third party payer. The model is open for contributions from different sources: employer-employee contributions, social protection schemes, and voluntary contributions (e. g. through remittances). NHSO can be further developed to serve as a national social health insurance. It is expected that

--increased access by the poor in hospital in-patient services

---reduced out-of-pocket payment (oop) of the poor

---gained important experience with the establishment of a single payer agency to manage the insurance fund

---defined quality standards

---improved efficiency and transparency in hospital management with the use of modern information technology

Hospitals in the pilot area will be contracted by PMU. These hospitals must

- sign a contract with PMU, which lays down the services to be provided and the payments due.
- ensure availability of medicines and medical consumables for the target group either from

the MoHFW and DGHS supply chain or by local purchase

- ensure women and child friendly environment
- introduce separate auditable bank accounts for receiving PMU payments.
- introduce computerized accounting systems allowing to trace PMU revenues from any other revenues
- introduce electronic claiming and invoicing
- follow medical treatment guidelines stipulated by PMU
- maintain full patient records both in hard copy and as electronic patient record for auditing purposes
- produce electronic activity reports, which shall be linked with PMU systems as needed

Benefit package

PMU will define a list of reimbursable benefits, which will evolve over time and shall be regularly updated. The benefit package could include:

- In-patient care which is manageable at Upazila and District level
- Free Physician's consultation
- Free drugs and diagnostic facilities
- Structured referral to the secondary and tertiary level hospitals
- Transportation cost for referral cases
- A mobile 'camp clinic' with a mixed specialized team will be conducted in each union at least once a month for screening, treating and referring for inpatient care at the appropriate level

Hospitalized SSK members will be treated according to defined medical treatment guidelines. The treatment guidelines will serve to calculate and standardize the reimbursement to the hospital.

Supply of Drugs and other logistics

As it was documented in National Health Accounts (NHA) study, the OOP cost of the consumer is around 64% and the major outlet is for drugs (around 67%), it was designed to ensure all drugs for the poor if admitted in hospital. A mechanism will be developed to ensure drugs during the project phase either from GoB or back up support from the project. So, in general drugs are available during the project phase

- From the routine GoB supplies
- Local procurement through hospital earnings
- From Community Support Group initiatives
- From DP's back up support which is not available in GoB routine supply.

Quality Assurance

It is intended to establish an appropriate system for quality assurance during the pilot period of the project. Incentives for going through the process will have to be defined. If incentive payments are part of the SSK scheme these should only start after ensuring the standard of quality services in the facility. The participating facilities should be guided through quality protocols.

Long term Perspective

It is expected that the SSK scheme will be successful in increasing access to inpatient care for the poor, raising hospitalization rates, which are low in Bangladesh in comparison to other countries. It is likely that better health care for the poor will increase health expenditures, which only can be balanced with additional resources from tax revenues or with cross-subsidies from compulsory social health insurance for the formal sector.

The combination of the SSK scheme with voluntary health insurance is not evident for economical considerations, because it must be expected that only the "bad risks" will be interested to register for SSK membership (adverse risk selection). So, it is proposed to include

compulsory health insurance in some stage of the pilot to overcome the problem of adverse risk selection. Moreover, the process will help to generate additional revenue in the health system by including APL in the scheme. The combination with compulsory health insurance appears much more promising.

Since there is a universal need that health care for the poor is a priority of Bangladesh, the SSK scheme has a high responsibility of using all possible measures for cost containment.

On the bright side it is expected that the additional resources for the hospitals in combination with the requirement to respect defined standards will lead to higher quality of care.

In long term perspective, the SSK scheme will operate through an autonomous and independent public corporation, NHSO under the oversight of the Government, which will be financed from the contributions of the insurance fund. This will ensure efficiency in the system which is needed to split the functions of purchaser-provider mechanism. A planned study will determine in more detail the proposed setup of the NHSO.

The extension of the SSK scheme to lower levels of health care is desirable to provide a comprehensive benefit package and strengthen referral systems. As long as outpatient services are free, it does not make sense to introduce claims reimbursement systems at lower levels. If user fees for outpatient care are introduced during the course of the project, the SSK scheme can be expanded to cover those fees in lower level health facilities although the logistic challenges of installing reimbursement mechanisms in hundreds of facilities, some of which may not have electricity, are considerable. Also introduction of the electronic patient record in those facilities could be considered at a later stage of the scheme.

3. Specific objectives of the study

The TOR mentioned the specific objectives of the study. The broad objective of this study is to determine the cost of the health services in general and that of the proposed benefit package (SBP). The Specific Objectives are to:

- conduct a cost analysis to determine all direct, fixed and variable cost components to meet the requirements of the SBP
- analyze result in terms of unit cost and average cost of the services
- analyze unit cost by services type, by provider per individual, by provider category, by type of clinics and by location
- develop a simulation model to determine unit cost: e.g. effects of increase in patient volume
- based on total costing results of SBP, calculate the premium per individual or family yearly, quarterly and monthly to cover SBP service delivery

The major tasks performed in the cost study are: review of relevant documents and studies, assessment of the infrastructure of the primary level public facilities, assessment of the situation in the non-government facilities (in private and NGO sectors), to assess the services provided by the facilities and calculate the number of clients by disease, to estimate the amount of inputs (including human resources) employed and in working conditions, and to compute the costs of inputs by services and type (average and additional) for each type of facility, to estimate the amount of required premium for health insurance, and to ascertain the possible trend of average cost and required premium.

4. Methodology

4.1. Method of data collection

During the fieldwork major tasks carried out were as follows:

- Mapping of facilities in the pilot areas
- Inventory and situational analysis in the selected facilities
- Collection of data on expenditure (using diary method, time-motion of providers, and observation of activities in the facilities)
- Collection and compilation of data on clients treated at facilities by diseases for at least three years

To carry out these tasks, the following methods were adopted.

Survey Design and sample

It was a cross-sectional study to collect data from a number of facilities using a one-shot survey. This study was conducted in three pilot upazilas of the project: Tungipara in Gopalganj district, Debhata upazila in Satkhira district, and Rangunia in Chittagong district as these upazilas were selected for the pilot intervention. Data were collected from the UHCs and UHFWCS of each upazila, as well as from the selected private facilities. In order to obtain the estimates of unit costs of services and of the required premium, it was not necessary to conduct survey in all of the union level facilities, since these facilities have striking similarity in the crucial respects and, in addition, they do not provide in-patient care (which is the focus in the cost estimate of the study). We selected 30% of the existing UHFWCs, but not less than 2 in any upazila, for the survey: 2 out of 5 in Tungipara as well as in Debhata upazila Upazilas, and 6 out of 15 in Rangunia Upazila. Attempts were also made to select three of the best performing NGO clinics and three of the best performing private facilities. But, in view of the non availability of NGO clinics and required number of private clinics, we had to collect information from only one private clinic in each upazila. The following table shows the survey design and the sample.

Survey design and sample

Upazilla	UHC	UHFWC			Private Clinics	Upazilla Total
		<i>High performing</i>	<i>Low performing</i>	<i>Total</i>		
Tungipara	1	1	1	2	1	4
Debhata upazila	1	1	1	2	1	4
Rangunia	1	3	3	6	2	8
Total	3	5	5	10	4	17

The union facilities were selected after conducting a preliminary rapid survey of all facilities in the upazila before the survey proper was launched. Using the preliminary survey results the union facilities were divided into two groups: high-performing and low-performing. Fifty percent of the survey UHFWCs was selected from among the high performing facilities (that is, one in Debhata upazila and Tungipara each and three in Rangunia) and fifty percent from among the

low performing ones in each upazila, so that the survey delineates the average situation about the union facilities in each upazila.

4.2 Method of field work

First, mapping of all facilities of the selected unions were done. Second, in each Upazila situation analysis were conducted in the UHCs, selected UHFwCs and in the selected NGO and private facilities. In the situation analysis data on infrastructure, inputs, condition of the inputs were collected. Purchase price and year of procurement of each capital input were collected. The services provided, the mode of service delivery, and referral practices were explored. Third, monthly data for 3 years on expenditure by line items was collected from the service statistics. Fourth, monthly data for 3 years on clients by diseases were collected from the service statistics. Fifth, data on providers' time were collected in three ways to accomplish multiple checks and get the real figures. Diary method was used to compute the amount of time spent by each provider/ staff for each activity during an office hour during a day. Then time-motion observation was conducted for all providers and staff to observe the amount of time actually spent per patient by disease. Sixth, data on the amount of supplies and drugs used in the each facility per month were collected and prices of the inputs from both procurement prices and market prices.

List of variables, source of data and method of data collection by activity

Activities	Variables	Source of data	Method of data collection	Sample size
Mapping of facilities	Location of facility, distance, providers, client flow	Facilities	Observation and interview of managers	UHCs and all UHFwCs, all NGO clinics, all private facilities in each upazilla
Situation Analysis	All inputs including manpower, condition of inputs, price of capital inputs, procurement year of capital inputs, services provided, number of patients served	Facilities managers, providers and staffs	Observation, interview and consultation of documents	UHCs, selected UHFwCs, selected NGO clinics, selected private facilities in each upazilla
Collection of expenditure data	Monthly expenditure on all inputs including salaries and allowances of staffs for 3 consecutive years	Office accounts	Compilation from records	UHCs, selected UHFwCs, selected NGO clinics, selected private facilities in each upazilla
Collection of data on patients treated	Monthly number of patients treated by disease for last 3 years	Service statistics	Compilation from records	UHCs, selected UHFwCs, selected NGO clinics, selected private facilities in each upazilla
Collection of	Time spent by provider on all	Providers	Diary method	UHCs, selected UHFwCs,

data on providers' time (diary method)	activities	and staffs		selected NGO clinics, selected private facilities in each upazilla
Collection of data on providers' time (Time-motion method)	Time spent by provider on all activities	Providers and staffs	Time-motion observation	UHCs, selected UHFwCs, selected NGO clinics, selected private facilities in each upazilla
Collection of data on drugs and supplies and their prices	Amount of supplies and drugs by types, prices	Office	Records and interviews	UHCs, selected UHFwCs, selected NGO clinics, selected private facilities in each upazilla
Interview of managers and providers	Perceived changes needed for health insurance	Managers and providers	Interview	UHCs, selected UHFwCs, selected NGO clinics, selected private facilities in each upazilla

Supply-side costs were collected by surveying a total of 16 facilities with a facility questionnaire. For the public sector facilities (13), data on cost were collected through use of diary for the providers and key staff, time motion study of providers and staff, and observation of facility activities. Investigators conducted time-motion observation of activities of providers and key staff. The time-motion observations were necessary to get unbiased records on the duration of various encounters by service as well as staff present. The providers and staff were also interviewed about the time they usually devote to each type of service, and information obtained thereby was verified through covert observation.

Salary information was collected through interviews with payroll officials and manager of the facilities, and from the account records. The costs of inputs (drugs, consumables/disposables, and frequently replaced equipment) were based on price lists associated with facility procurement. For private facilities, data on all costs of services were collected from the providers.

It may be noted here that the institute of Health Economics was awarded two studies, one for situation analysis and the other for estimation of costs of health services (the present one), to be conducted simultaneously. The studies were conducted by two separate teams. As was expected, teams worked in close coordination and through continuous interaction and followed the same conceptual framework, while each maintaining adequate amount of academic and operational

independence. Two studies used two sets of data collection instruments and had different groups of respondents for several issues. But for the sake of convenience and to complete work within the strict time frame, both teams of field work were trained to administer all data collection instruments and in the study areas each team collected data using both sets of DCIs in the lower level facilities (FWCs, CCs, Private Clinics) deliberately allocated to it. Furthermore, each study used the information of both data sets as and when considered necessary and appropriate.

4.3 Method of estimation of costs and of analysis of data

All inputs were divided into two broad groups: fixed and variable. The fixed inputs are human resources, equipments, furniture and fixtures, infrastructure, and utility services and maintenance costs. The variable inputs are: drugs, logistics and supplies, diagnostic test services for surgery, and bed and food costs for inpatients.

Since all human resources are not appropriate for the clients of all types, it was considered appropriate to divide the human resources into the following subgroups: general manpower (management) which includes manager, general physicians, fifty percent time of surgeon and gynecologist, other clinical persons and supporting staffs; the manpower for surgery includes 50% of time of the surgeon and gynecologist and anesthetist; the diagnostic persons and the FP persons. Similarly, the equipments were divided into four categories: general equipments, diagnostic equipments, surgical equipments, and special equipments (which are used for specific groups of patients such as that of eye care and dental care). The annualized total cost of general equipments has been calculated by dividing the total value of equipments (current market price X number of equipments) by the number of expected life years of the equipments (as mentioned by the providers). The detailed list of furniture and fixtures was collected from the facilities and annualized values of these were obtained using the current market price and the number of expected life years. In computing the cost of land and space, we divided the total amount of land of the facility into unused amount and the building space. The annualized cost of unused amount was calculated by dividing the market value of land in the area of 99 years, and the annualized

value of building and building space was assumed to be equal to the annual rental rate (that prevails in the area) per square foot multiplied by the total square feet.

It was difficult to identify the logistics and supplies used by different types of patients, and hence, the total market value of this item was allocated to all patients. It appeared that the necessary drugs are not always supplied in time, and sometimes there is oversupply of some drugs and under-supply of others. As a result, all patients can not be given all the necessary drugs always. This is also true for diagnostic tests and surgery. All of the patients requiring these services can not be provided so due to certain constraints such as non-availability of the required providers or staff and of all the needed equipments in working condition We computed unit cost and then cost per client and total costs of these inputs and services using the information on the inputs collected from the facilities and the market prices of the inputs.

We conducted an exercise through brain storming with selected providers from the public and private facilities with two objectives: first, to assess the current cost of bed and food for an average in-patient day, and second, to assess the amount of variable costs of services by disease in a hypothetical situation when all the needed drugs and logistics will be provided in time to each patient. These assessments were necessary for two reasons. It appeared during the field survey that bed and food are important inputs for any in-patient. The providers of the public facilities can not tell the actual costs of these items because these are highly subsidized, and the private providers cannot tell these costs because these costs remain amalgamated with fixed costs and profit there. On the other hand, currently there is no way to determine the disease-specific costs from the records that are prepared and maintained in the facilities. After holding several meetings (mini-workshops) with the selected providers at the central level, a consensus was arrived regarding the bed and food costs: A private facility needs to charge about Tk.1000 from an inpatient for bed and food if it is to maintain the minimum necessary quality of inpatient care. The cost of fixed inputs such as space of the facility, general human resources, furniture, utility, maintenance,etc. constitutes about 50 percent, and 15 percent accounts for the profit. The remaining portion, about 35 percent, is the charge absolutely for bed and food, and of that amount the cost of bed is Tk.250 and that of Tk.100. The bed cost includes the cost of cot, cleanliness, services in the ward, and the cost of visits by the provider and staff in the ward.We

has used these values for imputing the costs of bed and food in all survey UHCs. The providers of all facilities said that they cannot provide all necessary drugs and logistics to all patients due to inadequate and irregular supply. However, they mentioned the names of drugs and logistics the patients of each disease should be provided with in order to ensure quality care. These information were shared in the meetings and the participating experts and providers were requested to verify the list of drugs and logistics and mention the prices thereof. The amount of costs of the drugs and logistics for improvement of care was obtained were gathered thus.

The method of calculating the required premium of the SBP has been discussed in the relevant parts of the finding sections. It can be noted here that in calculating the premium per person we have included two cost items in addition to those in the SBP: providers' incentive and cost of administration of the SSK (as a proxy of the cost of NHSO). Based on the opinion of the providers of the survey UHCs, we have assumed that providers will be paid BDT 100 per patient. In every finding section, total fixed cost, total variable costs, and total of all costs, as well as average fixed cost, average variable cost, and average total cost have been shown in one table, the amount of cost per patient by major input categories and type of services received in one table, and the estimated premium in another table in the main text. The unit costs by detailed categories are shown in the annexures. The cost of administration has been assumed to be 10 percent of all other costs. The assumption is based on the experiences of implementing health insurance schemes in Thailand and the Philippines.

5. Findings of Survey in Debhata upazila

This section presents the survey findings in Debhata upazila. The survey included several activities including survey with structured questionnaires, interview of providers with open-ended questionnaires and guidelines, in-depth interview of manager and providers, observation of the inputs and providers' time use by the field investigation, and direct observation discussion by the researchers. The findings comprise the information collected through all of these activities.

The section has been divided into three subsections. Subsection 5.1 analyzes the findings about the Upazila Health Complex (UHC), Subsection 5.2 presents the same about the Union Health

and Family Welfare Centres (UHFWCs) and Subsection 5.3 discusses findings in a private clinic in the upazila.

5.1. Costs of Health Services at UHC of Debhata upazila

5.1.1. Costs of all inputs at UHC of Debhata upazila in 2011

Debhata upazila is a remote and backward upazila as compared with most upazilas of the country. It is located in the area of the south-western corner of the country and it borders with India, with the river Ichhamoti flowing in between. It is a small upazila in size, where 122097 people live in 172.07 square kilometers. The upazila consists of 5 unions, 15 wards and 102 villages. In addition to the UHC, it has four FWCs/ RDs, and 14 community clinics. Eleven NGOs work in the upazila, and most of them conduct some healthcare activities, mainly motivational campaign and BCC activities. There are 108 village doctors working in the upazila.

Due to erosion of Ichhamoti, the UHC premise has been shifted a few years ago from the upazila head quarter site to the Sakhipur, which is about 8 km away from there. The UHC has a large compound, of 5.31 acres of land, and a number of newly constructed buildings. The UHC has sufficient amount of space. The total number of patients visiting the facility every year is also quite large. However, the number of providers who regularly work at the UHC is very low (2-3); some posts remain vacant and some of the persons currently employed do not or cannot regularly stay there due to certain personal constraints of them.

Table 1.1.1 presents in summary the total cost and average cost of inputs of the facility. The total cost is BDT 18069943, of which fixed cost is 56.30 percent and variable cost is 43.70 percent. The pie chart shows the proportion of input costs. Of the total cost, the cost for human resources is highest (45 percent), followed by the bed cost and drug cost. The average total cost (per patient visit) is BDT 295.84, BDT 166.55 and BDT 129.28 being the average fixed cost and average variable cost, respectively. The average costs for equipments, drugs, and logistics/ supplies are quite low --- BDT 14.54, BDT 33.08, and BDT 3.41 respectively. This finding may be indicative of the fact that while human resources sufficiently exist (although all not regularly),

the other necessary inputs are not there in adequate quantities, and thus the input-mix is greatly inappropriate and unbalanced. The inappropriate input-mix can be a serious constraint to properly provide care to the patients visiting the facility. This aside, the findings also suggests that the computed cost of human resources is overestimated and that of equipments, drugs and logistics underestimated here. In the absence of all the appropriate information cost of human resources has been computed using the expenditure (annual salary and allowances) incurred by the government on human resources. Since some of the employed personnel receive salary from the UHC without regularly working there, the expenditure is much higher than the cost to be estimated at the highest possible efficiency level. On the other hand, the providers and several clients of the UHC stated that the number of equipments is not sufficient to conduct the diagnostic tests for all the cases with need, and the facility cannot provide sufficient amount of drugs and logistics for all patients in view of the inadequate and irregular supply of these inputs. This indicates that the costs of these inputs are underestimated in the sense that they are much lower than that of the minimum necessary amount of them.

Table 1.1.1. Costs of inputs for health care at UHC, Debhata upazila

Sl	Line items	Total annual cost in BDT	No of patients	Average cost (cost per patient visit) in BDT
Fixed Cost				
A. Human Resources				
1	General human resources (Health) including 50% time of surgeons	5090730	61081	83.34
2	Special human resources (Surgery) (50% time)	600972	800	751.22
3	Special human resources (Diagnostic test)	108660	2179	49.87
3	Human resources (FP)	1296816	5656	229.28
Subtotal for A		7097178	61081	124.02
B. Equipments (Health)				
5	General equipments	186006	55425	3.36
6	Diagnostic equipments	282518	2179	129.65
7	Surgical equipments	163822	800	204.78
8	Special equipments	173675	2710	64.09
Subtotal for B		806021	55425	14.54
9. Furniture		322842	61081	5.29
10. Land and infrastructure		1050000	61081	17.19
11. Miscellaneous (utility, maintenance, etc.)		401064	61081	2.16
GRAND TOTAL		10173105	61081	166.55
12	Drugs (general)	2020613.10	61081	33.08
13	Logistics and supplies	202810	61081	3.41
14	Bed and food cost of in-patients	4378661	3768	1162.10
Total Variable Cost		7896838	61081	129.28
GRAND TOTAL (FC+VC)		18069943	61081	295.84

Debhata

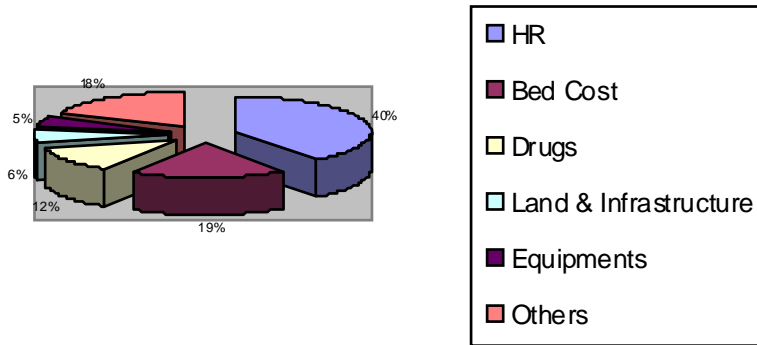


Table 1.1.2 shows the unit costs for different types of patients. The two broad types of patients, outpatients and inpatients, have been divided into five types: outpatients (normal) who did not require any lab test, outpatients who received lab tests, inpatients (normal) who did not require any lab test or surgery, inpatients who received lab tests, and inpatients who received surgery. The classification was needed to show the unit costs since some unit cost considerably varied by subgroup even within each broad group (outpatients and inpatients). Table 1.1.2 shows that there were 3768 inpatients in total: 2653 received normal inpatient care and lab tests, and 800 had surgery. The table shows that the average total cost is quite high for the inpatients for whom diagnostic tests were performed, as well as for the inpatients of surgery. The average cost of inpatient care of all types is the sum total of the weighted average of the costs of normal inpatient care, inpatient care with lab test, and inpatient care with surgery, and average fixed cost of the normal outpatient care (which applies to all types of patients); and it is estimated to be BDT 1553.

Table 1.1.2. Cost per patient by type of patients at UHC, Debhata upazila Upazila (in 2011)

Sl. No.	Type of Patients	Number of patients	AFC	Drugs	Logistics	Bed and Food	AVC	ATC
1	Outpatient (Normal)	55431	136.66 ^{*1}	33.08	3.41	---	36.49	173.15
2	Outpatient with lab test	1882	314.71 ^{*2}	33.08	3.41	---	36.49	351.20
3	Inpatient (Normal)	2653	136.66	33.08	3.41	1162.10	1198.60	1335.26
4	Inpatient with lab test	315	314.71	33.08	3.41	1162.10	1198.60	1513.31
5	Inpatient with surgery	800	1092.66 ^{*3}	33.08	3.41	1162.10	1198.60	2291.26
6	All inpatient care	3768	354.52	33.08	3.41	1162.10	1198.60	1553.12

^{*1} Rows 1+4+5+9+10+11 of Table 1.1.1./total number of normal outpatients and normal inpatients.

^{*2} Rows 3+6 of Table 1.1.1./number of outpatients with lab test and inpatient with lab test. This includes TFC of both outpatients with lab test and inpatients with lab test.

^{*3} Cost of surgeons and surgical equipments divided by inpatients with surgery plus normal AFC.

Table 1.1.1 and 1.1.2 have been compiled from Table A1.1.1 through A1.1.7 in Annexure 1. In the UHC of Debhata upazila, as shown in Table A1.1.1, 30 persons are employed, of whom 11 are medical doctors (for both inpatients and outpatients), including the UHFPO (although only two doctors are regularly available). The amount of annual salary and allowances is BDT 7575378. There are 88 medical equipments (general) and the total annualized cost of all general equipments is BDT 186006. The total cost (annualized) of 7 diagnostic equipments is BDT 282518, the total annual cost of surgical equipments is BDT 163822, and that of special equipments --- equipments which are used for dental care, eye care, ear care, etc. amount BDT 173675 (Table A1.1.2). The total cost of 515 units of furniture and fixtures is BDT 1839100 (Table A1.1.3). The UHC has a large premise on 5.31 acres of land (87615 square foot), of which an amount of 70115 sf is being used as barren field, pond, and gardens, and an amount of 17500 sf is used for housing the UHC and as quarters of UHC personnel. At the market price of land in the locality, the annualized value of the unused amount of land (field, pond, garden) is BDT 429000 and the annual rent of the space of all of the 7 buildings (with 53 rooms) is BDT 621000, calculated at the local market price. The facility received in 2011 about 55 items of drugs in varying quantities. The value of the drugs is calculated at the market price as BDT 2020613 (Table A1.1.6). Only 7 items of logistics and supplies were received in 2011, whose

value is BDT 208210 (Table A1.1.7). Table A1.1.8 shows that the average length of stay of the inpatients in the hospital was 3.32 days per patient and the bed occupancy rate was 68.54 percent in 2011. The cost of bed and food for the UHC inpatients has been calculated as BDT 4378661 in the year.

Table A1.1.11 shows the number of outpatients and inpatients at the UHC in three years from 2009 to 2011, by disease. In 2009, the total number of patients was 61081, of whom 57313 were outpatients and 3768 were inpatients. The major diseases/ conditions for which outpatient care was sought were: ANC, diarrhea, dysentery, helminthiasis, scabies, and family planning, while the major conditions for inpatient care were: EmOC, delivery care, diarrhoea, appendicitis, assault/ injury, and road traffic accident.

Table A1.1.9 shows the imputed costs of drugs for all the prevalent diseases and for all types of patients of each disease. The table has been computed assuming a hypothetical situation when all necessary drugs will be provided to all patients. It appears from the table that the average cost of care (non-surgical) will be the highest for the patients of tuberculosis, followed by that of poisoning, diabetes mellitus, hernia, acute abdomen, and rheumatic fever. (The imputed unit costs of the minimum necessary drugs for individual diseases have been shown in Annexure 4). As shown in Table A1.1.9, if all necessary drugs are given to every patient, then the total drug and logistics cost will increase from the present amount of BDT 2223423 to BDT 17612412 (or by 692 percent).

Table 1.1.3 below shows the trend of total patients over three years. The trend does not render any clear direction. It declined in 2010 and then increased in 2011. We can assume that fixed inputs did not change during the period (2009-2011), given the existing excess capacity, and the variable inputs changed proportionately with the change in the number of patients over time. As a result, average total cost increased to BDT 297.5 in 2010 from BDT 246.67 in 2009 and then declined to BDT 274.43 in 2011. The yearly average of the average total cost is BDT 272.87. The table indicates that the UHC can deal with at least 73336 patients, as it did in 2009, without

raising any major complaints about the capacity problem. That is to say, the UHC is even able to manage at least a 20 percent increase of patients over that in 2011.

Table 1.1.3. Trend of cost of health care at UHC, Debhata upazila

Year	Number of patients	AFC	AVC	ATC
2009	73336	138.48	108.19	246.67
2010	53653	189.3	108.19	297.5
2011	61081	166.26	108.19	274.43

5.1.2. Cost of health services covered under and required premium for SSK Benefit Package (SBP), UHC of Debhata upazila

The costs of health services to be provided under the SSK can be computed using the information on costs in Tables 1.1.1 and 1.1.2. Table 1.1.4 shows the costs of SBP per patient visit. The costs have been shown separately for three types of patient care --- outpatient care, inpatient care, and referral, and by services in SBP. The current number of patients of the UHC has been put for each type of care to facilitate computation of total cost for each service in the SBP, although the number can change after implementation of the scheme.

In order to calculate the cost of physician’s consultation, three alternative methods were considered. First, cost of physician time spent for a patient on average was estimated. But the amount obtained was extremely low. Tables A1.1.10 through A1.1.14 show the amount of time of providers obtained through use of three different methods: diary method, time motion observation, and group interview of providers. The overall average of the averages of time in all methods is 6.5 minutes per patient. A senior medical officer gets BDT 31500 as monthly salary and allowances. A provider works (or is supposed to work) for 25 days in a month and for 7 hours per day. Hence, the estimated cost of time spent by a provider for a patient is only BDT 19.05. Second, the amount of annual salary and allowances was divided by the number of total patient visits in the year and the estimated time cost was BDT 33.17. The amounts of time cost estimated using the two methods are very low, as compared to the amount charged by a physician for a patient visit in the private market (at least BDT 200) and appear to be unrealistic. Given this, it was considered that the cost of physician consultation should include not only the

amount of time spent by providers, but also the costs of other fixed inputs. It is reasonable to argue that in the private market the amount of consultation fees charged by a physician includes the cost of his time as well as the cost of space, furniture, management, etc. Therefore, the third method of obtaining cost of physician's consultation was to use the amount of average fixed cost (AFC) incurred for the normal outdoor patients of the UHC. The amount of this cost is found as BDT 143.70 in Table 1.1.2. The amount put in Table 1.1.4 is BDT 142.99, which is a bit lower because now the referral cases have been included in the patient category. The total fixed cost (TFC) is assumed to be constant, since there is considerable amount of excess capacity in terms of fixed inputs. Increase in the number of patients (including referrals) when TFC is constant has reduced AFC to some extent. The average fixed costs of the diagnostic tests and surgery have been obtained from Table 1.1.2 after deducting the amount BDT 142.99 from each. The amount 142.99 can be considered AFC (general) since it applies to all patients. Table 1.1.2 shows the costs for patient visit and the average fixed costs for diagnostic tests and surgery include the AFC (general) as well. In Table 1.1.4 the computed amounts represent the cost of particular services in the package and the amount of AFC (general) has been deducted from the average costs for tests and surgery as shown in Table 1.1.2. Otherwise, overlapping would occur.

Table 1.1.2 does not show the costs of two services which will be carried out in the SBP: transportation of referrals from the UHC to the district facilities, and organizing mobile 'camp clinics' in each union once a month. The providers said that Debhata upazila UHC refers one patient per day on average, or 300 patients in a year, and the cost of transportation is BDT 450 for a referred patient. Organization of one mobile camp clinic will involve an additional cost of BDT 6000 for transportation of personnel and some equipments, assuming that time cost of providers and staff is covered in their salary and allowance (and, hence, no additional amount is needed for it).

The cost of SBP will considerably increase if we assume that the UHC will provide all the necessary drugs to each patient visiting the facility. In that case, the additional amount of drug cost will be BDT 15388989 and the total cost of service provision will be the present amount BDT 18069943 + additional amount BDT 15388989 = BDT 33458932. In addition to this

amount, an amount of BDT 6108100 (BDT 100 per patient) will be paid as provider incentive, BDT 135000 will be required for payment of transport cost to referrals, BDT 360000 will be required for organizing mobile camps, and BDT 4006203 will be needed to meet the administration cost. Hence, the total cost of the package will be BDT 44068235.

Table 1.1.4. Cost of Health Services under SSK Benefit Package by Type of Services and Type of Patients, UHC of Debhata upazila

Sl. No.	Services under SBP	Outpatient Care		Inpatient Care		Referral	
		Number	Cost per Patient (BDT)	Number	Cost per Patient (BDT)	Number	Total Cost (BDT)
1	Physician Consultation	57313	142.99	3768	142.99	300	142.99
2	Drugs	57313	33.08	3768	33.08		
3	Logistics	57313	3.41	3768	3.41		
4	Diagnostic Test	1882	6.73	315	6.73		
5	Surgery			800	948.96		
6	Bed and Food			3768	1162.10		
7	Transportation of Referrals from UHC to District					300	450
8	Organizing Mobile Camp Clinics*						

Note: The transport cost for organizing one mobile camp clinic is assumed to be BDT 6000. There are 5 unions in the upazila and hence 60 clinics will be organized in a year. The total transport cost will be BDT360000. The cost of time of the manpower to be involved in this activity is included in the salary and allowances item of Table 1.1.1; no additional payment will be required for the manpower.

An attempt has also been made to estimate, albeit very crudely, the amount of premium per enrollee, that will be required to cover the total cost of services under SSK. Needless to mention, if total cost is not covered with the premium, subsidy has to be covered with the premium, subsidy has to be paid and the amount of subsidy will be the difference between total cost of service provision and amount of premium to be collected.

In estimating the premium, four situations have been assumed: all SBP services are provided to the current number of UHC patients in the year, all SBP services provided to the patients even if the number of patients increase by 10 percent, all SBP services are provided to the current number of patients when the package will include all the necessary drugs and logistics. The providers as well as many clients in all the upazilas maintained that the current supply of drugs and logistics is much less than needed. Hence, the last situation assumes that the package will provide the minimum necessary drugs and logistics to every patient. On the other hand, the number of potential enrollees in the SSK has been assumed for three scenarios: 12.5 percent of

the upazila population enroll, 25 percent of the population enroll, and 50 percent of population enroll.

The amount of premium (P) per enrollee is the total cost of services (C) divided by the number of enrollees (E): $P = \frac{C}{E}$. Total cost of SBP services will have five components:

C_1 = the total cost of physician consultation, drugs, logistics, diagnostic tests, surgery, and bed and food;

C_2 = incentive for the providers, assumed based on providers' opinion as BDT100 per patient visit;

C_3 = transportation cost of referrals (BDT 450 per referral);

C_4 = cost of organizing mobile camp clinics;

C_5 = cost of administration of the SSK, assumed to be 10 percent of $C_1+C_2+C_3+C_4$.

Providers in all the upazilas held that the proposed scheme should keep a provision of giving BDT 100 for each patient as an incentive. It may also be noted that we have assumed the cost of administration of the SSK as 10 percent of the total of other costs. The assumption is made based on the experiences of Thailand and the Philippines where the cost of administration of health insurance is around 10 percent of the total cost.

In Debhata upazila, C_1 at present is BDT 18069943, $C_2 = \text{BDT } 100 \times 61081 = \text{BDT } 6108100$, $C_3 = \text{BDT } 450 \times 300 = \text{BDT } 135000$, $C_4 = \text{BDT } 6000 \times 60 = 360000$, and $C_5 = \text{BDT } 24673043 \times 0.10 = \text{BDT } 2467304$. Hence, $C = C_1+C_2+C_3+C_4+C_5 = \text{BDT } 27140347$. The number of enrollees is $E_1=15270$, $E_2=30540$ and $E_3=61080$ if the proportion of population covered is 12.5 percent, 25 percent, and 50 percent respectively. The amount of premium per enrollee person will be as shown in the first row of the table.

The second row of the table has been obtained in the similar way but making the following changes: the number of patient visits is now $N_2=67189$, $C_1=\text{TFC}+(\text{AVC} \times N_2) = \text{BDT } 18859299$, $C_2=6718900$, and $C_5 = \text{BDT } 260732$. In the third row, number of patient visits is $N_3=73297$, $C_1=\text{TFC}+(\text{AVC} \times N_3) = \text{BDT } 19648941$, $C_2=7329700$, and $C_5 = \text{BDT } 2747364$. The last row has been computed assuming the provision of all necessary drugs and logistics, so that $C_1=\text{TFC}+(\text{AVC} \times N_1) = \text{BDT } 10173105 + (288.35 \times 61081) = \text{BDT } 27785811$ and $C_5 = 3438891$.

The required amount of premium has also been calculated also for the inpatient care, considering the inpatient care of all types (normal, with lab test and with surgery). The above subsection estimated the average cost of providing all inpatient care estimated as BDT 1553 (including average fixed cost). The total number of inpatients was 3768 in Debhata upazila UHC. If 12.5% of population is enrolled in the SSK, then the amount of premium is BDT 449; the amount significantly declines as the number of enrollees increases.

Besides, the amount of the required premium has been estimated, both for all services and for inpatient care, in a situation when all necessary drugs are provided to the patients visiting the UHC. In this scenario, the total cost of providing all services by the SSK will be BDT 44068235, as shown above, and the estimated premiums are shown in the sixth row in the table below. For inpatient care, drug cost will increase by BDT 812042 and total cost of service provision will increase from BDT 5853663 to BDT 6665705. Added to this will be the cost of provider incentive (BDT 376800) and the cost of administration (10 percent of other costs). Hence, the total cost of the SSK for only inpatient care will be BDT 7746756. The estimated premiums for this case are shown in the last row of the table below.

Table 1.1.5. Required amount of Premium for SBP (in BDT) in Debhata

Sl. No.	Scenarios	Premium if 12.5% Population Enrolled	Premium if 25% Population Enrolled	Premium if 50% Population Enrolled
1.	All SBP services free for current number of patients	1777.36	888.68	444.34
2.	For 10% increase in number of patients	1878.23	939.11	469.56
3.	For 20% increase in number of patients	1979	989.55	494.78
4.	All SBP services are free for current patients when minimum necessary variable inputs are there	2477	1238	619
5.	Only inpatient care provided under SSK	449	224.50	112
6.	All SBP services including all necessary drugs provided under SSK to current number of patients	2886	1443	721
7.	All inpatient care including all necessary drugs provided under SSK	507	254	127

The table shows an interesting pattern of the change in premium as the number of patients increases. If the number of patients increases by 10 percent, the amount of required premium increases less (5.67 percent). As the number of patients increases by another 10 percent, the amount of required premium declines to 5.37 percent. The pattern clearly indicates that some

amount of internal economies is embodied in the process of increasing number of patients visiting the UHC.

5.2. Costs of Health Services at UHFWCs in Debhata upazila

The survey collected data from two FWCs in Debhata upazila on the inputs, cost of inputs, and number of patients. The surveyed FWCs are: Sakhipur (Debhata upazila Sadar) and Kulia. Table 1.2.1 shows the average annual cost of inputs by broad group of inputs and Table 1.2.2 shows the average number of patients who visited the two FWCs, by disease and year. The two tables have been compiled from Table A1.2.1 through Table A1.2.8 in Annexure 1.

Table 1.2.1. Cost of health services at UHFWCs of Debhata upazila

Item	Total cost (BDT)	Number of patients in 2011	Average cost (BDT)
Human Resources	922686.00	13588	67.90
Equipments	29566.58		2.18
Furnitures	10229.16		0.75
Infrastructure	109468.685		8.06
Utility	132000.00		9.71
Supply and Logistics	17350.00		1.28
Drugs	1844535.00		135.75
Others			
Total	3065835.43		

As Table 1.2.1 shows, the total cost of inputs in an average FWCs was BDT3065835 in 2011, and the average cost per patient was BDT225. The cost of drugs alone-constituted 60 percent of total cost; the next most expensive input groups were human resources (30 percent) and utility services (4 percent).

Table A1.2.1 in the Annexure shows that there are 4 personnel in Sakhipur FWC and 6 personnel in Kulia. Kulia FWC has one medical doctor, but Sakhipur FWC does not have that. Each FWC has a large list of small equipments (Table A1.2.2). The number of items of furniture is also large in each FWC (A1.2.3). The amount of infrastructure is small in Sakhipur FWC --- actually the

FWC is located there within the UHC. It has only 1526 sf space in 8 rooms, although it gets benefits of the space and premise of the UHC. The Kulia FWC has 18.58 decimals of land remaining unused and 2380 sf of space in 7 rooms of the building (A1.2.4). The amount of supplies and logistics is low in both (A1.2.8), covering only few items. However, both have small amount of drugs in each item of drugs (A1.2.6).

Table 1.2.2 (in the text) shows that the average number of patients increased in 2010 and then declined in 2011 to 13588, the annual average being 14453. The finding suggests that average cost of service provision in the FWCs is almost stable over the recent years. The major conditions for which the patients visit the FWCs are: gynecological diseases, child health care, diarrhoea, ARI, and family planning.

Table 1.2.2. Number of patients who visited the UHFWCs of Debhata upazila by disease and year

Name of disease/ condition/service	2009	2010	2011
a) Maternal Health			
- ANC 1	703	735	811
- ANC 2	255	276	244
- ANC 3	253	253	285
- Delivery care	0	1	7
- Abortion	14	2	2
- Post abortion care	163	0	0
- PNC	107	308	347
c) STI/RTI			
- Prevention and management of STI/RTI	788	789	3
ARI	1626	1164	1017
Diarrhoea	1734	2245	1384
eye infection	188	0	0
Scabies	952	1272	0
helminthiasis,	882	1321	0
Family planning for male	114	96	60
Family planning for female	1235	912	891
Dysmenorrhoea	0	15	9
Anemia	1	822	35
General patient (male)	234	3599	912
General patient (female)	2254	4	4723

Malnutrition	1	17	22
Child care	1554	2850	2807
ECP	3	29	28
Others (infertile couple)	0	0	1
Total:	13061	16710	13588

5.3 Costs of Health Services at Private Clinic in Debhata upazila

Attempts were made to collect information on costs of health services from three NGOs and three private clinics which hold the status of a clinic (to have at least three inpatient beds) and provide some inpatient care. But no NGO of the required status exists in Debhata upazila or even in the neighbouring upazila (Satkhira sadar not considered). Only one private clinic was found with the status of a clinic. The clinic has 10 sanctioned beds. But it has at present only 3 beds, since it is not getting the desired number of patients for in-bed care. Only one medical doctor, one nurse, one paramedic, one assistant, and one Aya work in the clinic. Table 1.3.1 shows the annual cost of inputs in the clinic. The total cost is BDT746886. The clinic does not maintain any register of patients. The provider said that the clinic is visited by 15 patients in a month on average. Hence, the average cost per patient is BDT4150 per annum. Table A1.3.1 through A1.3.5 show the inputs existing in the clinic.

Table 1.3.1. Cost of health services at the private clinic in Debhata upazila

Item	Total cost (BDT)	Number of patients in 2011	Average cost (BDT)
Human Resources	396000		2200.00
Equipments	101850		565.83
Furnitures	21156.25		117.53
Infrastructure	147600.00		820.00
Others	80280.00		446.00
Total	746886.25	180	4149.37

6. Findings of Survey in Tungipara Upazila

This section presents the survey findings in Tungipara upazila. The survey included several activities including survey with structured questionnaires, interview of providers with open-

ended questionnaires and guidelines, in-depth interview of manager and providers, observation of the inputs and providers' time use by the field investigation, and direct observation discussion by the researchers. The findings comprise the information collected through all of these activities.

The section has been divided into three subsections. Subsection 5.1 analyses the findings about the Upazila Health Complex (UHC), Subsection 5.2 presents the same about the Union Health and Family Welfare Centres (UHFWCs) and Subsection 5.3 discusses a private clinic in the upazila.

6.1. Costs of Health Services at UHC of Tungipara

6.1.1. Costs of all inputs at UHC of Tungipara

Tungipara is a remote and backward upazila in Gopalganj district. Tungipara Upazila with an area of 127.25 sq km, is bounded by Gopalganj Sader and Kotalipara upazilas on the north, Chitalmari and Nazirpur upazilas on the south, Kotalipara upazila on the east, Mollarhat and Gopalganj Sadar upazilas on the west. Main rivers of the upazila are Madhumati, Ghagar and Shailadaha. It is a small upazila in size, where 1,00136 people live in 127.25 square kilometers. The upazila consists of 5 unions, 15 wards and 69 villages. In addition to the UHC, it has four FWCs/ RDs, and 16 community clinics.

The UHC premise has a 6.00 acres of land in document but it actually has in its possession a lower amount, because some amount of its land remain occupied by private individuals. The real amount of land is lower than needed, as the providers held. The UHC has sufficient amount of space. The total number of patients visiting the facility every year is also quite large. However, the number of providers who regularly work at the UHC during the survey is five; some posts remain vacant and some of the persons currently employed do not or cannot regularly remain there due to certain personal constraints of them.

Table 2.1.1 presents in summary the total cost and average cost of inputs of the facility. The total cost is BDT 24243794, of which fixed cost is 61 percent and variable cost is only 39 percent.

The pie chart shows the proportion of input costs. Of the total cost, the cost for human resources is highest (54 percent), followed by the bed cost and drug cost. The average total cost (per patient visit) is BDT 258.29, of which BDT 156.44 and BDT 101.85 are the average fixed cost and average variable cost, respectively. The average costs for equipments, drugs, and logistics/supplies are quite low --- BDT 2.87, BDT 22.08, and BDT 5.62 respectively. This finding may be indicative of the fact that while human resources sufficiently exist (although all not regularly), the other necessary inputs are not there in adequate quantities, and thus the input-mix is greatly inappropriate and unbalanced. The inappropriate input-mix can be a serious constraint to properly provide care to the patients visiting the facility. This aside, the findings also suggest that the computed cost of human resources is overestimated and that of equipments, drugs and logistics underestimated here. In the absence of all the appropriate information cost of human resources has been computed using the expenditure (annual salary and allowances) incurred by the government on human resources. Since some of the employed personnel receive salary from the UHC without regularly working there, the expenditure is much higher than the cost to be estimated at the efficiency level. On the other hand, the providers and several clients of the UHC stated that the number of equipments is not sufficient to conduct the diagnostic tests for all the cases with need, and the facility cannot provide sufficient amount of drugs and logistics for all patients in view of the inadequate and irregular supply of these inputs. This indicates that the costs of these inputs are underestimated in the sense that they are much lower than that of the minimum necessary amount of them.

Table 2.1.1. Costs of inputs for health care at UHC, Tungipara upazila

Sl	Line items	Total annual cost (BDT)	No of patients	Average cost (BDT)
Fixed Cost				
12. Human Resources				
1	General human resources (Health) including 50% time of surgeons	10456476	93863	111.40
2	Special human resources (Surgery) (50% time)	599112	294	2037.99
3	Special human resources (Diagnostic test)	868704	5169	168.06
4	Human resources (FP)	1056492	3667	288.11
Subtotal for A		12980784	93863	138.30
13. Equipments (Health)				
5	General equipments	63228.34	90196	0.70
6	Diagnostic equipments	22453.34	5299	4.24
7	Surgical equipments	160001.76	294	54.43
8	Special equipments	24172.58	273	88.54
Subtotal for B		269856.02	93863	2.87
9. Furniture		31030.72	93863	0.33
10. Land and infrastructure		703468	93863	7.49
11. Miscellaneous (utility, maintenance, etc.)		698400	93863	7.44
GRAND TOTAL		14683538	93863	156.44
12	Drugs (general)	2072496	93863	22.02
13	Logistics and supplies	527660	93863	5.62
14	Bed and food cost of in-patients	6960100	8799	791.01
Total Variable Cost		9560256	93863	101.85
GRAND TOTAL (FC+VC)		24243794	93863	258.29

Figure: Tungipara

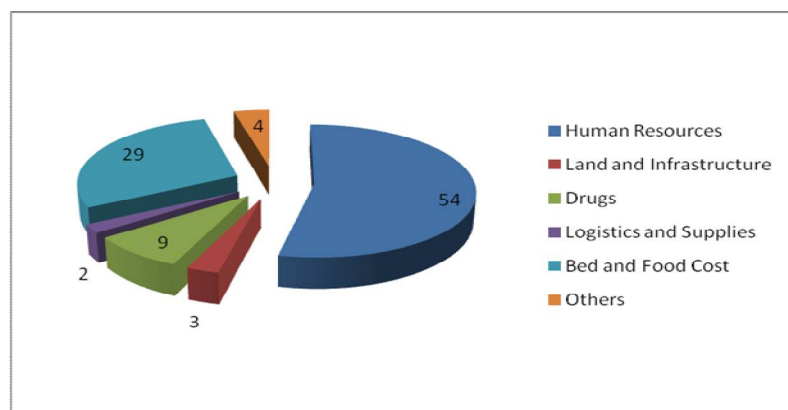


Table 2.1.2 shows the unit costs for different types of patients. The two broad types of patients, outpatients and inpatients, have been divided into five types: outpatients (normal) who did not require any lab test, outpatients who received lab tests, inpatients (normal) who did not require any lab test or surgery, inpatients who received lab tests, and inpatients who received surgery. The Table shows that there were 8799 inpatients in total: 8505 received normal inpatient care

and lab tests, and 294 had surgery. The average total cost for inpatient care was BDT 976.97. The Table shows that the average total cost is quite high for the inpatients for whom diagnostic tests were performed, as well as for the inpatients of surgery. The sole reason for this is that a relatively large number of providers and staff for conducting diagnostic tests and surgery are employed there.

Table 2.1.2. Cost per patient by type of patients at UHC, Tungipara Upazila (in 2011)

Sl. No.	Type of Patients	Patients	AFC	Drugs	Logistics	Bed and Food	AVC	ATC
1	Outpatient (Normal)	79895	138.60 ^{*1}	22.02	5.62		27.70	166.3
2	Outpatient with lab test	5169	171.97 ^{*2}	22.02	5.62		27.70	199.67
3	Inpatient (Normal)	8375	138.60	22.02	5.62	791.01	818.65	957.25
4	Inpatient with lab test	130	171.97	22.02	5.62	791.01	818.65	990.62
5	Inpatient with surgery	294	714.04 ^{*3}	22.08	5.62	791.01	818.65	1532.69
6	All inpatient care	8799	158.32	22.08	5.62	791.01	818.64	976.97

*¹ Rows 1+4+5+9+10+11 of Table 1.1.1. divided by total number of normal outpatients and normal inpatients.

*² Rows 3+6 of Table 1.1.1. divided by number of outpatients with lab test and inpatient with lab test. This includes TFC of both outpatients with lab test and inpatients with lab test.

*³ Cost of surgeons and surgical equipments divided by inpatients with surgery plus normal AFC.

Table 2.1.1 and 2.1.2 have been compiled from Table A2.1.1 through A2.1.9 in Annexure 2. In the UHC of Tungipara, as shown in Table A2.1.1, 72 persons are employed, of whom 08 are medical doctors, including the UHFPO (five doctors are regularly available). The amount of annual salary and allowances is BDT 12702672. There are 567 medical equipments (general) and the total annualized cost of all general equipments is BDT 63228. The total cost (annualized) of 22 diagnostic equipments is BDT 22453, the total annual cost of surgical equipments is BDT 160001, and that of special equipments --- equipments which are used for dental care, eye care, ear care, etc. --- is BDT 24172 (Table A2.1.2). The total cost of furniture and fixtures is BDT 31030 (Table A2.1.3). The UHC has a premise of 6.0 acres of land, of which an amount of 258260sf is being used as barren field, pond, and gardens, and an amount of 3340sf is used for housing the UHC and as quarters of UHC personnel. At the market price of land in the locality, the annualized value of the unused amount of land (field, pond, garden) is BDT 476468.69 and the annual rent of the space (with 18 rooms) is BDT 271000, calculated at the local market price.

The facility received in 2011 a large number of various types quantities. The value of the drugs is calculated at the market price as BDT 2072496 (Table A2.1.6). Only 12 items of logistics and supplies were received in 2011, whose value is BDT 527060 (Table A2.1.7). Table A2.1.8 shows that the average length of stay of the inpatients in the hospital was 2.76 days per patient and the bed occupancy rate was 68.54 percent in 2011. The cost of bed and food for the UHC inpatients has been calculated as in the year.

Table A2.1.11 shows the number of outpatients and inpatients at the UHC in three years from 2009 to 2011, by disease. In 2011 the total number of patients was 93863, of whom 85064 were outpatients and 8799 were inpatients. The major diseases/ conditions for which outpatient care was sought were: ANC, diarrhea, dysentery, helminthiasis, scabies, and family planning, while the major conditions for inpatient care were: EmOC, delivery care, diarrhea, appendicitis, assault/ injury, and road traffic accident.

Table A2.1.9 shows the imputed costs of drugs for all the prevalent diseases and for all types of patients of each disease. The table has been computed assuming a hypothetical situation when all necessary drugs will be provided to all patients. It appears from the table that the average cost of care (non-surgical) will be the highest for the patients of tuberculosis, followed by that of poisoning, tumor, abdominal pain, emergency obstetric care, and gynecological conditions. (The imputed unit costs of the minimum necessary drugs for individual diseases have been shown in Annexure 4). As shown in Table A2.1.9, if all necessary drugs are given to every patient, then the total drug and logistics cost will increase from the present amount of BDT 2600156 to BDT 23392842 (or by 7.99 percent).

Table 2.1.3 below shows the trend of total patients over three years. The trend does not render any clear direction. It declined in 2010 and then increased in 2011. We can assume that fixed inputs did not change during the period (2009-2011), given the existing excess capacity, and the variable inputs changed proportionately with the change in the number of patients over time. The average total cost declined to BDT 397 in 2010 from BDT441 in 2009 and then again declined to

BDT 307 in 2011. The yearly average of the average total cost is BDT 382. The table indicates that the UHC can deal with at least 93863 patients, as it did in 2009, without raising any major complaints about the capacity problem.

Table 2.1.3. Trend of cost of health care at UHC, Tungipara Upazila

Year	Number of patients	AFC	AVC	ATC
2009	64872	401.58	40.38	441.96
2010	72136	361.14	36.31	397.45
2011	93863	277.55	29.89	307.44

6.1.2. Cost of health services covered under and required premium for SSK Benefit Package (SBP), UHC of Tungipara

As in the case of Debhata upazila, costs of health services to be provided under the SSK in Tungipara were computed using the information on costs in Tables 2.1.1 and 2.1.2. Table 2.1.4 shows the costs of SBP per patient visit. The costs have been shown separately for three types of patient care --- outpatient care, inpatient care, and referral, and by services in SBP. The current number of patients of the UHC has been put for each type of care to facilitate computation of total cost for each service in the SBP, although the number can change after implementation of the scheme.

The amount of average fixed cost (AFC) of the UHC incurred for the normal outdoor patients has been used as the cost of physician's consultation. The amount of this cost is found as BDT148.310 in Table 2.1.2. The amount put in Table 2.1.4 is BDT 147.38, which is a bit lower because now the referral cases have been included in the patient category. The total fixed cost (TFC) is assumed to be constant, since there is considerable amount of excess capacity in terms of fixed inputs. Increase in the number of patients (including referrals) when TFC is constant has reduced AFC to some extent. The average fixed costs of the diagnostic tests and surgery have been obtained from Table 2.1.2 after deducting the amount 147.38 from each. Table 2.1.2 shows the costs for patient visit and the average fixed costs for diagnostic tests and surgery include the AFC (general) as well. In Table 2.1.4 the computed amounts represent the cost of particular

services in the package and the amount of AFC (general) has been deducted from the average costs for tests and surgery as shown in Table 2.1.2.

Table 2.1.2 does not show the costs of two services which will be carried out in the SBP: Transportation of referrals from the UHC to the district facilities and organizing mobile camp clinics in each union once a month. The providers said that Tungipara UHC refers one patient per day on an average, or 300 patients in a year, and the cost of transportation is BDT 400 for a referred patient. Organization of one mobile camp clinic will involve an additional cost of BDT 6000 for transportation of personnel and some equipments, assuming that time cost of providers and staff is covered in their salary and allowance (and, hence, no additional amount needed for it).

The cost of SBP will considerably increase if we assume that the UHC will provide all the necessary drugs to each patient visiting the facility. In that case, the additional amount of drug cost will be BDT 20792686 and the total cost of service provision will be the present amount BDT 24243794 + additional amount BDT 20792686 = BDT 45036480. In addition to this amount, an amount of BDT 9386300 (BDT 100 per patient) will be paid as provider incentive, BDT 120000 will be required for payment of transport cost to referrals, BDT 360000 will be required for organizing mobile camps, and BDT 5490278 will be needed to meet the administration cost. Hence, the total cost of the package will be BDT 60393058.

Table 2.1.4. Cost of Health Services under SSK Benefit Package by Type of Services and Type of Patients, UHC of Tungipara

Sl. No.	Services under SBP	Outpatient Care		Inpatient Care		Referral	
		Number	Cost per Patient	Number	Cost per Patient	Number	Total Cost
1	Physician Consultation	85064	147.38	8799	147.38	300	147.38
2	Drugs	85064	22.08	8799	22.08		
3	Logistics	85064	5.62	8799	5.62		
4	Diagnostic Test	5169	168.17	130	168.17		
5	Surgery			294	2582.02		
6	Bed and Food			8799	791.01		
7	Transportation of Referrals from UHC to District					300	400
8	Organizing Mobile Camp Clinics*						

Note: The transport cost for organizing one mobile camp clinic is assumed to be BDT 6000. There are 5 unions in the upazila and hence 60 clinics will be organized in a year. The total transport cost will be BDT360000. The cost of time of the manpower to be involved in this activity is included in the salary and allowances item of Table 2.1.1; no additional payment will be required for the manpower.

The amount of required premium has been calculated also for Tungipara UHC. As in Debhata upazila, four situations have been assumed: all SBP services are provided to the current number of UHC patients in the year, all SBP services provided to the patients even if the number of patients increase by 10 percent, all SBP services are provided to the current number of patients when the package will include all the necessary drugs and logistics. The providers as well as many clients in all the upazilas maintained that the current supply of drugs and logistics is much less than needed. Hence, the last situation assumes that the package will provide the minimum necessary drugs and logistics to every patient. On the other hand, the number of potential enrollees in the SSK has been assumed for three scenarios: if 12.5 percent of the upazila population enroll, if 25 percent of the population enroll, and if 50 percent of population enroll.

In Tungipara, the total number of patients (N_1) at present = 93863, C_1 = BDT 24243794, C_2 = BDT 9386300, C_3 = BDT 120000, C_4 = BDT 360000, and C_5 = BDT 3411009. Hence, $C = C_1+C_2+C_3+C_4+C_5=BDT 37521103$. The number of enrollees is $E_1=12517$, $E_2=25034$ and $E_3=50068$ if the proportion of population covered is 12.5 percent, 25 percent, and 50 percent respectively. The amount of premium per enrolled person is shown in the first row of the table.

The second row of the table has been obtained in the similar way but making the following changes: the number of patient visits is now $N_2=103249$, $C_1=TFC+(AVC \times N_2)=BDT 25199449$, $C_2= BDT 10324900$, $C_5= BDT 3600432$ and total cost (C) = BDT 39604784. In the third row, number of patient visits is $N_3=112636$, $C_1=TFC+(AVC \times N_3)=BDT 26155515$, $C_2=11263600$, $C_5=BDT 3789911.50$, and total cost (C) = BDT 41689026. The last row has been computed assuming the provision of all necessary drugs and logistics, so that $C_1= BDT 38076075$ and $C_5= BDT 4794237$, and total cost (C) = BDT 52736612.

The required amount of premium has been calculated also for the inpatient care, considering the inpatient care of all types (normal, with lab test and with surgery). The above subsection estimated the average cost of providing all inpatient care estimated as BDT 976 (including average fixed cost). The total number of inpatients was 8799 in Tungipara UHC. If 12.5% of population is enrolled in the SSK, then the amount of premium is BDT 833; the amount significantly declines as the number of enrollees increases.

Besides, the amount of the required premium has been estimated, both for all services and for inpatient care, assuming a situation when all necessary drugs will be supplied to each patient of the UHC. In this scenario, the total cost of providing all services by the SSK will be BDT 60393058, as shown above, and the estimated premiums are shown in the sixth row in the table below. For inpatient care, drug cost will increase by BDT 1705422 and total cost of service provision will increase from BDT 8596359 to BDT10301781. Added to this will be the cost of provider incentive (BDT 879900) and the cost of administration (10 percent of other costs). Hence, the total cost of the SSK for only inpatient care will be BDT12299849. The estimated premiums for this case are shown in the last row of the table below.

Table 2.1.5. Required amount of Premium for SBP (in BDT) for UHC, Tungipara

Sl. No.	Scenarios	Premium if 12.5% Population Enrolled	Premium if 25% Population Enrolled	Premium if 50% Population Enrolled
1.	All SBP services free for current number of patients	2255	1128	564
2.	For 10% increase in number of patients	3164	1582	791
3.	For 20% increase in number of patients	3330	1665	833
4.	All SBP services are free for current patients when minimum necessary variable inputs are there	4213	2106	1053
5.	Only inpatient care provided under SSK	833	416.50	208
6.	All SBP services including all necessary drugs provided under SSK to current number of patients	4825	2412	1206
7.	All inpatient care including all necessary drugs provided under SSK	983	491	246

As in Debhata upazila, the table shows an interesting pattern of the change in premium as the number of patients increases. If the number of patients increases by 10 percent, the amount of required premium increases less (5.57 percent). As the number of patients increases by another 10 percent, the amount of required premium declines to 5.24 percent. The pattern clearly indicates that some amount of internal economies is embodied in the process of increasing number of patients visiting the UHC.

6.2. Costs of Health Services at UHFWCs in Tungipara Upazila

The survey collected data from two UHFWCs in Tungipara on the inputs, cost of inputs, and number of patients. The surveyed UHFWCs are: Dumuria and Gopalpur. Table 2.2.1 shows the average annual cost of inputs by broad group of inputs and Table 2.2.2 shows the average

number of patients who visited the two UHFWCs, by disease and year. The two tables have been compiled from Table A2.2.1 through Table A2.2.8 in Annexure 2.

Table 2.2.1: Cost of health services at UHFWCs of Tungipara

Item	Total cost (BDT)	Number of patients in 2011	Average cost (BDT)
Human Resources	437376.00		26.36
Equipments	1821.43		0.11
Furnitures	10344.80		0.62
Infrastructure	99390.15		5.99
Utility	3000.00		0.18
Supply and Logistics	1840.00		0.11
Drugs	163090.00		9.83
Others			
Total:	716862.38		16594

As Table 2.2.1 shows, the total cost of inputs in an average FWCs was BDT716862 in 2011, and the average cost per patient was BDT43.20. The most expensive input groups were human resources (61.01 percent) and the next most of drugs alone-constituted 22.75 percent of total cost; and infrastructure (13.86 percent).

Table A2.2.1 in the Annexure shows that there are 3 personnel in Dumuria FWC and 3 personnel in Gopalpur FWC. Both FWCs have SACMO, Aya and FPI. Each FWC has a small equipments (Table A2.2.2). The number of items of furniture is in each FWC. The amount of infrastructure is small in Gopalpur FWC from Dumuria FWC. Dumuria FWC has 1800 sf space in 7 rooms. The Gopalpur FWC has 45 decimals of land and 1410sf of space in 7 rooms of the building. The amount of supplies and logistics is low in both, covering only few items. However, both have maximum amount of drugs in each item of drugs.

Table 2.2.2 (in the text) shows that the number of patients increased in 2010 and then declined in 2011 to 8033, the annual average being 8392. The finding suggests that average cost of service provision in the FWCs is almost stable over the recent years. The major conditions for which the patients visit the FWCs are: child health care, general patient, ARI, anemia and Family Planning.

Table 2.2.2. Number of patients who visited the UHFWCs of Tungipara by disease and year

Disease/condition	2010	2011
a) Maternal Health		
- ANC 1	64	64
- ANC 2	39	29
- ANC 3	22	3
- EmOC	0	3
- Abortion	0	2
- Post abortion care	0	0
- PNC	41	48
c) STI/RTI	0	0
- Prevention and management of STI/RTI	304	197
ARI	376	576
Diarrohea	80	77
Family planning for male	2	7
Family planning for female	167	143
Anemia	114	16
Dysmenorrhoea	12	20
Child Care	1328	2244
General Patient	6012	4538
Malnutrition	0	66
Total:	8561	8033

6.3 Costs of Health Services at Private Clinic in Tungipara Upazila

Attempts were made to collect information on costs of health services from three NGOs and three Private Clinics which hold the status of a clinic (to have at least three inpatient beds) and provide some inpatient care. But no NGO of the required status exists in Tungipara or even in the neighbouring upazilas. Only one private clinic was found with the status of a clinic. The clinic has 10 sanctioned beds. But it has at present only 3 beds, since it is not getting the desired number of patients for in-bed care. Only two nurses, and one Aya work in the clinic as permanent basis. Table 2.3.1 shows the annual cost of inputs in the clinic. The total cost is BDT461366.60. The clinic does not maintain any register of patients. The provider said that the clinic is visited by 155 patients in a year on average. Hence, the average cost per patient is BDT2976.56 per annum.

Table 2.3.1. Cost of health services at the private clinic of Tungipara

Item	Total cost (BDT)	Number of patients in 2011	Average cost (BDT)
Human Resources	132000.00		851.61
Equipments	137865.40		889.45
Furnitures	23006.25		148.43
Infrastructure	81494.95		525.77
Others	87000.00		561.29
Total	461366.60	155	2976.56

7. Findings of Survey in Rangunia Upazila

This section presents the survey findings in Rangunia upazila. The survey included several activities including survey with structured questionnaires, interview of providers with open-ended questionnaires and guidelines, in-depth interview of manager and providers, observation of the inputs and providers' time use by the field investigation, and direct observation discussion by the researchers. The findings comprise the information collected through all of these activities.

The section has been divided into three subsections. Subsection 7.1 analyzes the findings about the Upazila Health Complex (UHC), Subsection 7.2 presents the same about the Union Health and Family Welfare Centers (UHFWCs) and Subsection 7.3 discusses two NGOs/ private clinics in the upazila.

7.1. Costs of Health Services at UHC of Rangunia

7.1.1. Costs of all inputs at UHC of Rangunia

Rangunia is a remote upazila in Chittagong district. Rangunia Upazila with an area of 351.95 sq km, is bounded by Kawkhali upazila (Rangamati) on the north, Chandanaish, Patiya and Boalkhali upazilas on the south, Kaptai, Rajsthali and Banderban Sader upazilas on the east, Raujan and Kawkhali upazilas on the west. Main rivers that pass through the upazila are Karnafuli, Ichamati, Dolukhali and Ichakhali; noted *khals* (canals): Kulphulmai, Chandraghona,

Katakhali, Mundhari, Shilok Khal and Kodalar Khal; noted hills are: Ghatcheck, Pomra, Betagi, Farangkhil, Shilok, Kodala, Padua, Shukhbilash and Betbunia; main depressions are: Gumai Jheel, Bagha Beel, Laighar Beel, and Bhaguina Beel. The total population is 263217 (1991 Census).

The upazila consists of 15 unions, 71 mouzas and 149 villages. In addition to the UHC, it has 10 FWCs, and 38 community clinics.

The UHC has a large compound of 5.00 acres of land, and a number of newly constructed buildings. The UHC has sufficient amount of space. The total number of patients visiting the facility in 2011 was 40,231. Except UHFPO and RMO there are 4 junior consultants and `10 medical officers. Two posts of Medical Assistants are lying vacant. Besides, some posts of auxiliary personals are also lying vacant.

Table 3.1.1 presents in summary the total cost and average cost of inputs of the facility. The total cost is BDT 23678614, of which fixed cost is 71 percent and variable cost is only 29 percent. The pie chart shows the proportion of input costs. Of the total cost, the cost for human resources is highest (60 percent), followed by the bed cost and drug cost. The average total cost (per patient visit) is BDT 588.57, BDT 415.19 and BDT 173.38 being the average fixed cost and average variable cost, respectively. The average costs for equipments, drugs, and logistics/ supplies are quite low --- BDT 32.11, BDT 98.96, and BDT 2.44 respectively. This finding may be indicative of the fact that while human resources including specialists sufficiently exist (although all not regularly), the other necessary inputs are not there in adequate quantities, and thus the input-mix is greatly inappropriate and unbalanced.

Table 3.1.1. Costs of inputs for health care at UHC, Rangunia Upazila

Sl	Line items	Total annual cost (BDT)	No of patients	Average cost (BDT)
Fixed Cost				
14. Human Resources				
1	General human resources (Health) including 50% time of surgeons	12061374	40231	299.80
2	Special human resources (Surgery) (50% time)	573570	137	4186.64
3	Special human resources (Diagnostic test)	1085376	4362	248.83
4	Human resources (FP)	451968	1683	268.55
Subtotal for A		14172288	40231	352.27
15. Equipments (Health)				
5	General equipments	74899.41	40231	1.86
6	Diagnostic equipments	298973.33	4362	68.55
7	Surgical equipments	132940.70	137	970.37
8	Special equipments	4908.93	---	---
8.1	Equipments for FP	780211.31	1683	463.58
Subtotal for B		1291933.68	40231	32.11
9. Furniture		14709.15	40231	0.37
10. Land and infrastructure		1158525	40231	28.80
11. Miscellaneous (utility, maintenance, etc.)		66000	40231	1.64
GRAND TOTAL		16703455.83	40231	415.19
12	Drugs (general)	3981300.88	40231	98.96
13	Logistics and supplies	98307.50	40231	2.44
14	Bed and Food cost of in-patients	2895550	3451	839.05
Total Variable Cost		6975158.38	40231	173.38
GRAND TOTAL (FC+VC)		23678614.21	40231	588.57

Rangunia

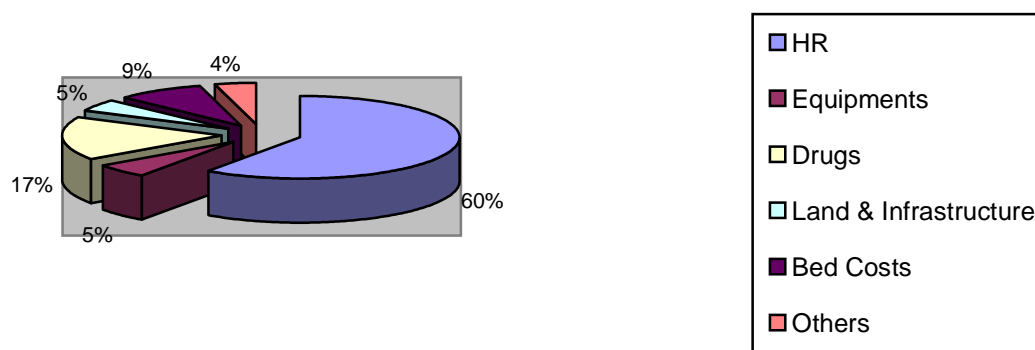


Table 3.1.2 shows the unit costs for different types of patients. The two broad types of patients, outpatients and inpatients, have been divided into five types: outpatients (normal) who did not

require any lab test, outpatients who received lab tests, inpatients (normal) who did not require any lab test or surgery, inpatients who received lab tests, and inpatients who received surgery. The classification was needed to show the unit costs since some unit cost considerably varied by subgroup even within each broad group (outpatients and inpatients). Table 3.1.2 shows that there were 3451 inpatients in total: 3314 received normal inpatient care and lab tests, and 137 had surgery. Among the total patients, 80.69 percent was normal outpatients, whereas 10.73 percent was outpatient with lab tests. Only 8.58 percent of the patients were inpatient of which 8.13 percent was normal inpatient. Only a negligible percent (0.04%) were inpatients with lab test and with surgery. The Table shows that the average total cost is quite high for the inpatients for which diagnostic tests were performed (BDT. 6407), as well as for the inpatients of surgery (BDT 8163). The average cost of inpatient care of all types was BDT 1609.

Table 3.1.2. Cost per patient by type of patients at UHC, Rangunia Upazila (in 2011)

Sl. No.	Type of Patients	Number of patients	AFC	Drugs	Logistics	Bed and Food	AVC	ATC
1	Outpatient (Normal)	32462	443.63 ^{*1}	98.96	2.44	0	101.40	545.03
2	Outpatient with lab test	4318	3400.87 ^{*2}	98.96	2.44	0	101.40	3502.27
3	Inpatient (Normal)	3270	443.63	98.96	2.44	839.05	940.45	1384.08
4	Inpatient with lab test	44	3400.87	98.96	2.44	839.05	940.45	4341.32
5	Inpatient with surgery	137	5157.01 ^{*3}	98.96	2.44	839.05	940.45	6097.46
6	All inpatient care	3451	668.45	98.96	2.44	839.05	940.45	1608.90

^{*1} Rows 1+4+5+9+10+11 of Table 1.1.1. divided by total number of normal outpatients and normal inpatients.

^{*2} Rows 3+6 of Table 1.1.1. divided by number of outpatients with lab test and inpatient with lab test. This includes TFC of both outpatients with lab test and inpatients with lab test.

^{*3} Cost of surgeons and surgical equipments divided by inpatients with surgery plus normal AFC.

Table 3.1.1 and 3.1.2 have been compiled from Table A3.1.1 through A3.1.7 in Annexure 1. In the UHC of Rangunia, as shown in Table A3.1.1, 59 persons are employed, of whom 17 are medical doctors, including the UHFPO. The amount of annual salary and allowances is BDT 11487804. The total annualized cost of all general equipments is BDT 74899. The total cost of general equipments is BDT 74899.41; the total cost of diagnostic equipment is 298973.33. On

the other hand, the costs of surgical and special equipments which are used for dental care, eye care, ear care, etc. is BDT 13294.70 and 4908.93, respectively. The cost of equipments for family planning is BDT 780211.31. The UHC has a large premise on 5.00 acres of land, of which 50% is being used as barren field, pond, and gardens, and an amount of 17500 sft is used for housing the UHC and as quarters of UHC personnel. At the market price of land in the locality, the annualized value of the unused amount of land (field, pond, garden) is BDT 429000 and the annual rent of the space of all of the 7 buildings (with 53 rooms) is BDT 621000, calculated at the local market price. The facility received in 2011 about 55 items of drugs in varying quantities. The value of the drugs is calculated at the market price as BDT 2020613 (Table A3.1.6). Only 7 items of logistics and supplies were received in 2011, whose value is BDT 208210 (Table A3.1.7). Table A3.1.8 shows that the average length of stay of the inpatients in the hospital was 3.32 days per patient and the bed occupancy rate was 68.54 percent in 2011. The cost of bed and food for the UHC inpatients has been calculated as BDT4378661 in the year.

It may be noted that unlike Debhata upazila and Tungipara UHCs, the Rangunia UHC maintains records of referrals sent to the district facilities. Table A3.1.12 shows that a total of 1012 patients were referred to the district hospital. It is quite surprising to find such a large number of referrals from the Rangunia UHC because the UHC is much more endowed with human resources and other inputs than are the other two UHCs. The possible reason for this is that the facilities for surgery is poor there, despite being highly endowed in other inputs.

Table A3.1.10 shows the number of outpatients and inpatients at the UHC in three years from 2009 to 2011, by disease. In 2001 the total number of patients was 61081, of whom 57313 were outpatients and 3768 were inpatients. The major diseases/ conditions for which outpatient care was sought were: ANC, Diarrhea, dysentery, helminthiasis, scabies, and family planning, while the major conditions for inpatient care were: EmOC, delivery care, diarrhea, appendicitis, assault/ injury, and road traffic accident.

Table A3.1.9 shows the imputed costs of drugs for all the prevalent diseases and for all types of patients of each disease. The table has been computed assuming a hypothetical situation when all necessary drugs will be provided to all patients. It appears from the table that, as in Debhata

upazila UHC, the average cost of care (non-surgical) will be the highest for the patients of tuberculosis, followed by that of poisoning, diabetes mellitus, abdominal pain, and rheumatic fever. (The imputed unit costs of the minimum necessary drugs for individual diseases have been shown in Annexure 4). As shown in Table A3.1.9, if all necessary drugs are given to every patient, then the total drug and logistics cost will increase from the present amount of BDT 4079609 to BDT 12566571 (or by 308 percent).

Table 3.1.3 below shows the trend of total patients over three years. The trend does not render any clear direction. It declined in 2010 and then increased in 2011. We can assume that fixed inputs did not change during the period (2009-2011), given the existing excess capacity, and the variable inputs changed proportionately with the change in the number of patients over time. As a result, average total cost increased to BDT 297.5 in 2010 from BDT 246.67 in 2009 and then declined to BDT 274.43 in 2011. The yearly average of the average total cost is BDT 272.87. The table indicates that the UHC can deal with at least 73336 patients, as it did in 2009, without raising any major complaints about the capacity problem. That is to say, the UHC is even able to manage at least a 20 percent increase of patients over that in 2011.

Table 3.1.3. Trend of cost of health care at UHC, Rangunia Upazila

Year	Number of patients	AFC	AVC	ATC
2009	25728	649.23	271.11	920.34
2010	24278	688.01	287.30	975.31
2011	40231	415.19	173.38	588.56

7.1.2. Cost of health services covered under and required premium for SSK Benefit Package (SBP), UHC of Rangunia

The costs of health services to be provided under the SSK have been computed using the information on costs in Tables 3.1.1 and 3.1.2. Table 3.1.4 shows the costs of SBP per patient visit. The costs have been shown separately for three types of patient care --- outpatient care, inpatient care, and referral, and by services in SBP. The current number of patients of the UHC has been put for each type of care to facilitate computation of total cost for each service in the SBP, although the number can change after implementation of the scheme.

The cost of physician consultation has been assumed to be equal to the amount of average fixed cost (AFC) of the UHC incurred for the normal outdoor patients. The amount of this cost is found as BDT 443.63 in Table 3.1.2. The amount put in Table 3.1.4 is BDT 408.81, which is lower because now the referral cases (the number of which is quite large in Rangunia) have been included in the patient category. The total fixed cost (TFC) is assumed to be constant, since there is considerable amount of excess capacity in terms of fixed inputs. The average fixed costs of the diagnostic tests and surgery have been obtained from Table 3.1.2 after deducting the amount BDT 408.81 from each. The amount BDT 408.81 can be considered AFC (general) since it applies to all patients. Table 3.1.2 shows the costs for patient visit and the average fixed costs for diagnostic tests and surgery include the AFC (general) as well. In Table 1.1.4 the computed amounts represent the cost of particular services in the package and the amount of AFC (general) has been deducted from the average costs for tests and surgery as shown in Table 3.1.2.

Table 3.1.2 does not show the costs of two services which will be carried out in the SBP: Transportation of referrals from the UHC to the district facilities and organizing mobile camp clinics in each union once a month. The providers said that Rangunia UHC refers four patients per day on an average, or 1200 patients in a year, and the cost of transportation is BDT 650 for a referred patient. Organization of one mobile camp clinic will involve an additional cost of BDT 6000 for transportation of personnel and some equipments, assuming that time cost of providers and staff is covered in their salary and allowance (and, hence, no additional amount needed for it).

The cost of SBP will considerably increase if we assume that the UHC will provide all the necessary drugs to each patient visiting the facility. In that case, the additional amount of drug cost will be BDT 8486962 and the total cost of service provision will be the present amount BDT 23678614 + additional amount BDT8486962 = BDT 32165576. In addition to this amount, an amount of BDT 4023100 (BDT 100 per patient) will be paid as provider incentive, BDT 780000 will be required for payment of transport cost to referrals, BDT 1080000 will be required for organizing mobile camps, and BDT 3804868 will be needed to meet the administration cost. Hence, the total cost of the package will be BDT 41853544.

Table 3.1.4. Cost of Health Services under SSK Benefit Package by Type of Services and Type of Patients, UHC of Rangunia

Sl. No.	Services under SBP	Outpatient Care		Inpatient Care		Referral	
		Number	Cost per Patient	Number	Cost per Patient	Number	Total Cost
1	Physician Consultation	36780	408.81	3451	408.81	1200	408.81
2	Drugs	36780	98.96	3451	98.96		
3	Logistics	36780	2.44	3451	2.44		
4	Diagnostic Test	4318	93.43	44	93.43		
5	Surgery			137	5250.44		
6	Bed and Food			3451	839.05		
7	Transportation of Referrals from UHC to District					1200	650
8	Organizing Mobile Camp Clinics*						

*The transport cost for organizing one mobile camp clinic is assumed to be BDT 6000. There are 15 unions in the upazila and hence 180 clinics will be organized in a year. The total transport cost will be BDT1080000. The cost of time of the manpower to be involved in this activity is included in the salary and allowances item of Table 3.1.1; no additional payment will be required for the manpower.

The amount of required premium has been calculated for Rangunia as well. The method of calculation is same as that employed for Debhata upazila and Tungipara. The number of patients in Rangunia UHC was 40231 (in 2011). The amount of total cost for service provision (C_1) was BDT 23678614, $C_2 =$ BDT 4023100, $C_3 =$ BDT 780000, $C_4 =$ BDT 1080000, $C_5 =$ BDT 2956171, so that $C = C_1+C_2+C_3+C_4+C_5 =$ BDT 32517885. The assumed number of enrollees is $E_1 = 32902$, $E_2= 30540$ and $E_3=61080$ if the proportion of population covered is 12.5 percent, 25 percent, and 50 percent respectively. The amount of premium per enrollee person is shown in the first row of the table. The second row of the table has been obtained in the similar way but making the following changes: the number of patient visits is now $N_2=44254$, $C_1=TFC+(AVC \times N_2) =$ BDT 27312491, $C_2=$ BDT 4425400, and $C_5=$ BDT 3359789 and total cost (C) = BDT 36957680. In the third row, number of patient visits is $N_3 = 48277$, $C_1=TFC+(AVC \times N_3)=$ BDT 28276901, $C_2=4827700$, $C_5=$ BDT 3496460, and $C =$ BDT 38461061. The last row has been computed assuming the provision of all necessary drugs and logistics, so that $C_1=$ BDT 29270011, $C_5=3515311$, and $C =$ BDT 38668422.

The required amount of premium has also been calculated also for the inpatient care, considering the inpatient care of all types (normal, with lab test and with surgery). The above subsection

estimated the average cost of providing all inpatient care estimated as BDT 1609 (including average fixed cost). The total number of inpatients was 3451 in Rangunia upazila UHC. If 12.5% of population (32902) is enrolled in the SSK, then the amount of premium is BDT 197; the amount significantly declines as the number of enrollees increases.

Besides, the amount of the required premium has been estimated, both for all services and for inpatient care, in a situation when all necessary drugs are provided to the patients visiting the UHC. In this scenario, the total cost of providing all services by the SSK will be BDT41853544, as shown above, and the estimated premiums are shown in the sixth row in the table below. For inpatient care, drug cost will increase by BDT 378230 and total cost of service provision will increase from BDT5552659 to BDT 5930889. Added to this will be the cost of provider incentive (BDT 345100) and the cost of administration (10 percent of other costs). Hence, the total cost of the SSK for only inpatient care will be BDT6903588. The estimated premiums for this case are shown in the last row of the table below

Table 3.1.5. Required amount of Premium for SBP (in BDT) for UHC, Rangunia

Sl. No.	Scenarios	Premium if 12.5% Population Enrolled	Premium if 25% Population Enrolled	Premium if 50% Population Enrolled
1.	All SBP services free for current number of patients	988	494	247
2.	For 10% increase in number of patients	1123	562	281
3.	For 20% increase in number of patients	1169	584	292
4.	All SBP services are free for current patients when minimum necessary variable inputs are ther	1175	587.5	293.75
5.	Only inpatient care provided under SSK	197	99	49
6.	All SBP services including all necessary drugs provided under SSK to current number of patients	1272	636	318
7.	All inpatient care including all necessary drugs provided under SSK	210	105	53

It appears from the table that if the number of patients increases by 10 percent, the amount of required premium increases by 13.66 percent. The reason for such a high rate of increase in premium is that the proportion of the patients to total population is low at present (only 15%), compared to the same in other two upazilas. As a result, 10 percent increase in the number of patients causes a big shift in the amount of total cost of service provision. However, if the number of patients increases by another 10 percent, the amount of required premium increases by only 4.1 percent. The pattern indicates that amount of required premium can increase at a high rate if the number of patients increases at a high rate in a situation where the initial number of patients is low, but the rate of increase in the amount will gradually decline as the number of patients continues to increase.

7.2. Costs of Health Services at UHFWCs in Rangunia Upazila

The survey collected data from two UHFWCs in Rangunia on the inputs, cost of inputs, and number of patients. The surveyed UHFWCs are: Swarupbhata (Rangunia Sadar), Hosnabad, Rajanagar, Padua, Chandraghona and Shilok. Table 3.2.1 shows the average annual cost of inputs by broad group of inputs and Table 3.2.2 shows the average number of patients who visited the FWCs, by disease and year. The two tables have been compiled from Table A3.2.1 through Table A3.2.8 in Annexure 3.

Table 3.2.1. Cost of health services at UHFWCs of Rangunia

Item	Total cost (BDT)	Number of patients in 2011	Average cost (BDT)
Human Resources	559292.00	127743	4.38
Equipments	26990.17		0.21
Furnitures	81365.56		0.64
Infrastructure	175404.54		1.37
Utility	8880.00		0.07
Supply and Logistics	6493.00		0.05
Drugs	156771.1333		1.23
Others			
Total	1015196.40		

As Table 3.2.1 shows, the total cost of inputs in an average FWCs was BDT 3065835 in 2011, and the average cost per patient was BDT 225. The cost of drugs alone-constituted 60 percent of total cost; the next most expensive input groups were human resources (30 percent) and utility services (4 percent).

Table A3.2.1 and Table A3.2.2 in the Annexure 3 show the amount of inputs in the FWCs of Rangunia. Table 3.2.2 (in the text) shows that the average number of patients increased in 2010 and then declined in 2011 to 13588, the annual average being 14453. The finding suggests that average cost of service provision in the FWCs is almost stable over the recent years. The major conditions for which the patients visit the FWCs are: gynecological diseases, child health care, Diarrhoea, ARI, and Family Planning.

Table 3.2.2. Number of patients who visited the UHFWCs of Rangunia by disease and year

Disease/condition	2009	2010	2011
a) Maternal Health			
- ANC 1	1137	1335	1170
- ANC 2	812	852	837
- ANC 3	237	288	435
- ANC4	49	0	0
- Delivery care	102	218	164
- EmOC	20	0	0
- Abortion	144	94	142
- Post abortion care	69	0	0
- PNC	331	505	615
c) STI/RTI	0	0	0
- Prevention and management of STI/RTI	1207	457	1425
- Prevention of HIV/AIDS	575	1438	1641
ARI	1281	1749	2530
Diarrohea	521	641	738
Family planning for male	198	1996	6665
Family planning for female	3035	6935	39141
Pill	26895	37660	37938
Condom	145	29	29
Injection	11411	12498	13155
IUD	3283	2576	2926
Implant	2088	1878	2296
Permanent Method Female	9355	7766	7796
Permanent Method male	872	297	342
Malnutrition	432	374	626
Anemia	1009	978	1522
Dysmenorrhoea	52	22	143
Permanent Method	0	3936	4130
Others	3850	3589	1337
Total	69110	88111	127743

7.3 Costs of Health Services at Private Clinics in Rangunia Upazila

Attempts were made to collect information on costs of health services from three NGOs and three Private Clinics which hold the status of a clinic (to have at least three inpatient beds) and provide some inpatient care. But no NGO of the required status exists in Rangunia. Only two private clinics were found with the status of a clinic. One clinic has 24 sanctioned beds and the other. But it has at present only 3 beds, since it is not getting the desired number of patients for in-bed care. Only one medical doctor, one nurse, one paramedic, one assistant, and one Aya work in the clinic. Table 3.3.1 shows the annual cost of inputs in the clinic. The total cost is BDT 746886. The clinics do not maintain any register of patients. The providers said that each clinic is visited by 15 patients in a month on average. Hence, the average cost per patient is BDT 4150 per annum.

Table 3.3.1. Cost of health services at private clinics of Rangunia

Item	Total cost (BDT)	Number of patients in 2011	Average cost (BDT)
Human Resources	1960050.00	3750	522.68
Equipments	63476.47		16.93
Furnitures	25060.00		6.68
Infrastructure	575418.18		153.44
Others	185400.00		49.44
Total	2809404.65		749.17

8. Comparison of the major findings in the three upazilas

The major indicators and estimates obtained in the survey upazilas can now be compared. Table 4 shows the values of the major indicators and estimates of costs.

Rangunia is the largest and Tungipara smallest among the three upazilas both in terms of area and population. The density of population is highest in Tungipara (787 per sq kilometer); it is 710 in Debhata upazila and 748 in Rangunia. The numbers of FWCs/RDs and CCs are almost same in Debhata upazila and Tungipara, but these are much higher in Rangunia, and quite rightly so, because it is much larger than the other two. But surprisingly, the number of patients is much lower in Rangunia than in the other two. It has also been found that the number of patients

demonstrated same trend over time: it decreased in 2010 and then increased in 2011, although never considerably. The average fixed cost is almost same in Debhata upazila and Tungipara, but it is much higher in Rangunia. The same is true for the average variable cost and, therefore, for the average total cost. The main reason for the higher average costs in Rangunia is the number of patients is considerably lower there. The amount of required premium or the supply-side premium per person for all health services, if 12.5% of the population is assumed to be covered in each upazila, is lowest in Rangunia, and quite high in Tungipara where the proportion of UHC patients to population is extremely high. If we consider the inpatient care (of all types), then the required premium will drastically decline.

The difference in the required amount of premium has been caused by the difference in the average cost of service provision. Table 4 shows the major indicators and estimates of costs in the upazilas.

Table 4. Major indicators and estimates in the upazilas

Sl. No	Indicators	Debhata	Tungipara	Rangunia
1	Area in square kilometer	172.07	127.25	351.95
2	Population	122097	100106	263217
3	Number of unions	5	5	15
4	Number of villages	102	69	149
5	Number of FWCs/ RDs	4	4	15
6	Number of CCs	14	16	38
7	Number of outpatients	57313	85064	36780
8	Number of inpatients	3768	8799	3451
9	Number of total patients	61081	93863	40231
10	Average fixed cost (in BDT)	166.55	156.44	415.19
11	Average variable cost (in BDT)	129.28	101.85	173.38
12	Average total cost (in BDT)	295.84	258.29	588.5
13	Average total cost of in-patient care (in BDT)	1553	977	1609
13	Proportion of cost of human resources to total cost	39	54	60
14	Required premium for all SBP services if 25% of population covered	888	1498	494
15	Required premium for SBP for only inpatient care if 25% of population covered	224	416	99
16.	All SBP services including all necessary drugs provided under SSK to current number of patients (if 25% population enrolled)	1443	2412	636
17.	All inpatient care including all necessary drugs provided under SSK (if 25% population enrolled)	254	491	105

9. Conclusions and recommendations

The major conclusions emerging from the study are as follows:

- Unmet health care need exists in all the three upazilas, especially among the population in the villages which are located away from the UHC. Although the number of patients visiting the UHC is quite large in Debhata upazila and Tungipara, it is very low in Rangunia, if the proportion of the patients to total population is considered. In Debhata upazila and Tungipara, where the number of patients visits is high, the facilities can not provide the required amount of services to the visiting patients due to the lack of regular availability of all employed providers and insufficient availability of drugs and logistics. All UHFWCs and CCs are not properly functioning in any upazila, and some of the CCs are yet to start functioning in each. Hence provision of health care should increase and can be increased if the human resources become fully active and the supply of complementary inputs are increased.
- The cost of human resources constitutes a high proportion of total cost in each upazila. But the since the entire amount of this input is not fully active at present, the amount of cost of human resources calculated using expenditure data has become overestimated. On the other hand, the other inputs do not exist in the required amount (i.e. the amount needed for fully activating the fixed inputs). Since expenditure on the variable inputs is lower than needed, the computed amount of cost for those items is underestimated. The estimates of cost will be optimal and appropriate if all existing inputs work at the highest possible efficiency level and the supply of the variable inputs increases to the level required by the fixed inputs.
- The average costs widely vary among the upazilas due to considerable variation in the number of patients and the volume of existing inputs. In Rangunia, for example, the UHC has huge inputs, compared to that in the other two upazilas, but the number of patient visits is low, clearly demonstrating low demand for health care and existence of high unmet health care need among the population there.
- The three-year trends of the number of patients in the upazilas show almost the same pattern: the number decreased in 2010 and then increased in 2011. However, the

magnitude of variation is not high, indicating that the number of patients is more or less stable over the years.

- The amount of required premium widely varies by the assumed package of services in all upazilas, and quite reasonably so. The larger package will require higher premium. The amount of required premium is highest in Tungipara and lowest in Rangunia upazila. If we consider the inpatient care (of all types), then the required premium will drastically decline.
- The amount of drugs provided to the patients of UHCs is highly inadequate at present. If we assume that under the SSK all necessary drugs will be provided to all patients, then the amount of required premium for all services will increase by 62% in Debhata, 114% in Tungipara and 29% in Rangunia; and the same for inpatient care will increase by 13% in Debhata, 180% in Tungipara and 7% in Rangunia.

On the whole, the study has revealed that insofar as the supply side of health services is concerned, SSK can be implemented without bringing about any major change in the UHC. The only changes required are: proper utilization of the employed providers, to improve the input mix through increased employment of support staff, and increased supply of drugs. These changes will improve quality of care and at the same time reduce average fixed cost of services. Payment of incentives to the providers will increase utilization of provider's time and increase authority of the providers to procure drugs and logistics, as and when needed, will induce these changes. Implementation of the SSK will gradually address these issues by way of improving finance of the facilities, paying incentives to providers, and involving a third party (which will make the providers more accountable). Except in Tungipara, the amount of required premium is reasonable. If 25 percent of the population are enrolled in the SSK, an enrolled household will have to pay 5 to 7 percent of annual income to receive all types of primary health care for all of its members (if it is assumed that per capita income is \$800 and there are 5 members in an average household). In Tungipara, the amount will be higher because the proportion of patients to population is very high at present. The premium will decline everywhere if the number of enrollees increases.

Based on the above findings, the following recommendations can be put forward:

- Expansion of coverage of the public health facilities is needed and possible.
- The input mix should be more appropriate and more emphasis is needed on the supply of the variable inputs, such as drugs and logistics. This will increase the patients and reduce the cost.
- In Ranguia, special measures should be adopted without delay so as to rapidly increase the number of patient visits to the public facilities.
- The providers are very keen to implement the SSK. Some of them expect that some incentive for them will remain there in the scheme. It will be appropriate if the provision of giving some financial incentive out of the premium received is in-built in the scheme.
- The enrollees in the scheme should constitute at least 10-15% of the population in the initial years. Otherwise, the amount of required premium will far exceed the apparent willingness- and ability to pay for the scheme by the larger section of population. Furthermore, two other measures are needed to keep the premium within the appropriate amount and reduce it over time: first, to rapidly increase the number of enrollees over time through motivation and incentives; and second, through reduction of patient visits at the UHC by way of increased prevention of diseases (with the preventive measures) and implementing referral mechanism for the facilities so that the CCs and FWCs deal with the common cases and they refer only the relatively complicated cases to the UHC.

Annexure-1

Table A 1.1.1. Cost of human resources of UHC of Debhatta Upazila

	Designation	Number	Educational qualification (highest degree)	Total monthly salary and allowances	Annual Salary and allowances
	UH &FPO	1	MBBS	31200	374400
Clinical Staff	RMO	1	MBBS	25820	309840
	Jr Consultant (Orthopedics) 2	0			
	Jr Consultant (Cardiology) 3	0			
	Jr Consultant (Ophthalmology) 4	0			
	Jr Consultant (ENT) 5	0			
	Medical Officer 1	1	MBBS	22000	264000
	Medical Officer 2	1	MBBS	31500	378000
	Medical Officer 3	1	MBBS	18158	217896
	Medical Officer 4	1	MBBS	16990	203880
	Medical Officer 5	1	MBBS	23176	278112
	Medical Officer 6	0			
	Medical Officer 7	0			
	Dental Surgeon	1			
	Pharmacist	1			
	Medical Assistant (all)	6			
Nursing Staffs	Nursing Supervisor	1	SSC	26726	320712
	Senior Staff Nurse (All)	10		26926*10	3231120
	Assistant Nurse (All)	0			
Support Staff	Aya	1	Class-VIII	10113	121356
	Ward Boy	0			
Admin Staff	Statistician	0			
	Store keeper	0			
	Head assistant cum Accountant	1	BA	14179	170148
	Cashier	1	BA	14279	171348
	Head Assistant	0			
	Health Inspector	1	HSC	15992	191904
	Assistant Health Inspector	4		14830*4	711840
	Health Assistant	13		14329*13	2235324
	TLCA	0			
	Compounder	0			
	Cardiographer	0			
	Junior Mechanic	0			
	Office Assistant	2		12843*2	308232
	MLSS (all)	1		11648	139776
	Peon (all)				
	Sweeper/Cleaner	4		10880*4	522240
	Gardener	1		10495	125940
Lab Attendant	0				

	O.T. Attendant	0			
	Driver (all)	1		15194	182328
	Guard (all)	2		9345*2	224280
	Herbal Assistant	1		7900	94800
	Medical Technologist				
	Others				
	Sub total- General Health				
Surgery	Anesthetist	0			
	Jr Consultant (Surgery)	0			
	Jr Consultant (Gynae)	0			
	Subtotal for surgery				
Lab	Medical Technologist (Dental)	1	SSC	14342	172104
	Medical Technologist (Rad)	1	SSC	18300	219600
	Medical Technologist (Lab)	2		24670	296040
	Medical Technologist (EPI)	1	HSC	15080	180960
	Subtotal for Lab				868704
	Sub total for Surgery and Lab				868704
FP	UFPO	1	MSS, BCS	27880	334560
	Medical Officer	0			
	AFPO	0			
	Senior FWV				
	FWV (all)	1		14180	170160
	FPI (all)				
	FP Assistant	1			
	Head Office Assistant				
	Office Assistant (all)	1		14531	174372
	MLSS (all)	2		11817	141804
	Peon (all)				
	Sweeper/Cleaner (all)				
	Aya	1	Class - VII	11433	137196
	Others (TFPA)	1	BA (Hon's)	8200	98400
	Sub total- Family planning				1056492
	TOTAL				12702672

Table A 1.1.2.1. Cost of general equipments at UHC, Debhatta Upazila

Type	Name of the equipment (Vintage)	Disease	Year of procurement	Total number	Price	Value (BDT)	Expected life years	Annualized Cost of Equipments
					(BDT)			
	Air Cooler, Split type (for X-Ray machine)	All						
	Air Cooler, Window type	All						

	Air Cooler, split type	All	97-1, 10-5, 11-1	2	65000	130000	10	13000
	ECG Machine	All		0		0		
	Refrigerator 10cft	All	2001	2	65000	130000	12	10833.33
	B.P. machine Aneroid	All	2011-10, 2010-9	7	1000	7000	14	500
	Stethoscope	All	200-9, 2010-10	7	1000	7000	14	250
	Thermometer clinical	All		5	40	200	10	20
	Thermometer stand	All		0		0		
	Timer	All	-	0	-	0	-	-
	Weight machine	All		0	-	0	7	-
	Bucket plastic (large, medium and small)	All		0		0	2	
	Drum sterilizer (shallow) SS	All	2010-15, 2011-5	5	250	1250	10	125
	Examination table	All		10	30000	30000	30	1000
	Patient stretcher	All	2010-5	5	1700	8500	15	566.67
	Resuscitator	All		0		0		
	Hammer percussion	All		0		0		
	Instrument cabinet	All	2010-1, 2011-2,	5	44000	220000	25	8800
	Fan	All		8	2000	16000	16	1000
	Light	All		8	350	2800	24	116.67
	Computer	All	2010-1, 2006-1	1	42000	42000	3	14000
	Printer	All		1	7500	7500	2	3750
	Fax Machine	All		0		0		
	UPS	All		1	3200	3200	2	1600
	IPS	All		1	20000	20000.01	3	6666.67
	Multi Media Projector	All		0		0		
	Public address system (hand mike)	All		0		0		

	Photocopier	All		0		0		
	Telephone	All	1984	4	1000	4000	4	1000
	Laptop	All				0		
	Vacuum Extractor	All				0		
	Others					0		
	Total							63228.34

Table A 1.1.2.2. Cost of diagnostic equipments at UHC, Debhatta Upazila

Type	Name of the equipment (Vintage)	Disease	Year of procurement	Total number	Price	Value (BDT)	Expected life years	Annualized Cost of Equipments
Diagnostic equipments	X-Ray Machine (300 M.A.) with accessories	All						
	X-Ray Machine (100 M.A.) with accessories	All	1997	1	65000	65000	3	21666.67
	Haemocytometer	All	1997	1	2600	2600	4	650
	Haemoglobinometer	All	1997-2, 2008-5	1	650	650	5	130
	Test tube holder	All	1997-2, 2010-10	5	20	100	15	6.67
	X-Ray View box Double	All						
	Subtotal for diagnostic equipments							22453.34

Table 1.1.2.3. Cost of equipments for surgery at UHC, Debhatta Upazila

Name of the equipment (Vintage)	Disease	Year of procurement	Total number	Price (BDT)	Value (BDT)	Expected life years	Annualized Cost of Equipments
Anesthesia Machine with accessories and Haothene Vaporizer	Surgery	2004-1, 2011-1	1	45000	45000	4	11250
Dehumidifier	Surgery	2010	1	100000	100000	3	33333.33

Diathermy machine	Surgery	2009-1, 2011-1	1	65000	65000	2	32500
Nitrous oxide Cylinder	Surgery	2008	1	16000	16000	3	5333.33
O.T. Light, Ceilling 9 bulb	Surgery	2002-1, 2009-1	1	45000	45000	2	22500
Obstetric Delivery Table	Surgery	2009-1, 2002-1, 2006-1, 2007-1, 2008-1	1	7500	7500	3	2500
Oxygen Cylinder	Surgery		2	22952	45904	14	3278.86
Oxygen Cylinder Trolley	Surgery		2	1600	3200	6	533.33
Patient Trolley	Surgery	2010-2, 2011-5	5	2200	11000	10	1100
Oxygen flow meter	Surgery	2011-1, 2012-5, 2000-3	4	2815	11260	10	1126
Pulse Oxymeter	Surgery	2011-1, p- 1	2	3000	6000	8	750
Sucker machine 250 w/400 watt	Surgery	2003-1, 2008-1, 2011-2	2	170000	85000	4	42500
Artery forceps curved-5''	Surgery		10	120	1200	10	120
Artery forceps-5'' straight	Surgery		5	80	400	10	40
Bandage cutting scissors	Surgery		4	200	800	4	200
Bowl SS 10	Surgery	2011	1	1800	1800	10	180
Curved cutting needle	Surgery	2002	10	120	1200	10	120
Dissecting forceps plain and toothed	Surgery		10	50	500	12	4.17
Foreign body hook	Surgery		0		0		
Instrument tray 10''-12''	Surgery		2	500	1000	20	50
Mouth gag rubber	Surgery	2010-2, 2011-5,	1	250	250	7	35.71

Needle holder	Surgery		1	120	120	9	13.33
Rubber Sheet Yard	Surgery	2011	0	-	0	-	-
Rubber tourniquet	Surgery		-		0		
Sinus forceps	Surgery		0		0		
Sponge holding forceps	Surgery		5	120	600	15	40
Sterilizer small	Surgery		1	2600	2600	2	1300
Tissue forceps	Surgery		-		0		
Air way (Different size)	Surgery		5	100	500	10	50
Boiling water sterilizer	Surgery		0		0		
Dissecting forceps (plain /toothed)	Surgery		0		0		
Dressing bowl	Surgery		0		0		
Dressing tray (Shallow) SS	Surgery		0		0		
Forceps sponge holding (plain)	Surgery		0		0		
Gauge cutting scissors	Surgery		0		0		
Hemostat forceps	Surgery		10	120	1200	10	120
Instrument tray	Surgery		1	250	250	10	25
Kidney tray	Surgery		10	50	500	25	20
Suction unit portable (manual)	Surgery	2011-1	0		0	-	-
Cuscos vaginal speculum	Gyne		5	350	1750	15	116.67
D&C set	Gyne, FP	2010-1, 2011-2,	2	2600	5200	6	866.67
Sims vaginal speculum	Gyne						

Total						160001.76
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Table A 1.1.2.4. Cost of special equipments (equipments used by specific disciplines)

Name of the equipment (Vintage)	Disease	Total number	Price	Value (BDT)	Expected life years	Annualized Cost of Equipments
Hanging weight machine	Child	1	5000	5000.01	3	1666.67
Dental Chair with Lart Unit	Dentistry	1	85000	85000	8	10625
Dental OT Light	Dentistry	1	35000	35000	5	7000
Spirit lamp	All	1	120	120	1	120
Ultra Sonic Scalar	Gyne			0		
Nasal speculum	ENT			0		
Tongue depressor	ENT	1	120	120	11	10.91
Aural Syringe	ENT	0		0		
Ophthalmoscope	Eye	1	9500	9500	2	4750
Total						24172.58

Table A1.1.3. Cost of furniture and fixtures at UHC, Debhatta Upazila

Name of the furniture	Year of procurement/ purchase	Total number	Price per unit (BDT)	Total value (BDT)	Total expected life years	Annualized cost of furniture (BDT)
Patient Table	1997-6, 2011-7	37	1000	37000	50	740
Patient bed	2010-30, 2011-40	70	1000	70000	50	1400
Mattress	2010-4, 2011-45	75	27	2000	10	640.67
Plastic chair	2012	30	17	500	2	250
Fixed chair	2010	10	200	1999.98	6	333.33
Cushion Chair	1997-8, 2010-12, 2011-23	43	58	2500.02	6	416.67
Cushion Chair without hand	2011	30	67	1999.98	6	333.33
Revolving chair	2011	1	3000	3000	5	600
Executive chair	2012, 2011	6	417	2499.98	7	357.14

Wood chair with hand	1997	18	200	3600	20	180
Visitor chair	2012	10	100	1000	7	142.86
Half Secretary Table	1997-10, 2011-9, 2010-2	21	1670	35000	60	583.33
Wood Bench	1997-9, 2011-1	10	80	800	7	114.29
Display Board	1997	2	600	1200	10	120
White Board	2011	1	1500	1500	10	150
Emergency Duty Roster Board	2011	1	1200	1200	2	600
Revolving Tool	2010	4	500	2000	12	166.67
Patient Tool	2010	4	125	500	4	125
Tool Wood	1997	5	40	199.98	6	33.33
Table Wood			0	0		
Drawer Table Wood	1997	12	125	1500	6	250
Tent Plain Cell			0	0		
Tent Plain Cell			0	0		
Iron cot Bed	2010	2	2750	5499.97	7	785.71
Iron Scot Bed			0	0		
Dispensing Table	2011	2	2250	4500	6	750
Laboratory Table			0	0		
Bedside Locker Steel	2010, 2011	20	200	4000	5	800
Saline stand (Steel)	2011	5	500	2500	9	266.67
Saline stand (Steel)			0	0		
Food Trolley (Steel)	2011	2	2000	4000	6	666.67
Food Trolley (Steel)			0	0		
Small Table	2012	4	625	2500.02	6	416.67
Side Table	2011	1	2500	2500	7	357.14
Computer Table	2006, 2010, 2011	3	1000	3000	10	300

Conference Table	2011	1	16000	16000	10	1600
Full Secretariat Table	2012	1	15000	15000	6	2500
Full Secretariat Table	1997-9, 2011-1	10	1500	15000	10	1500
Mid Set (Wood)			0	0		
Bed Side Skin			0	0		
Rack Steel	1997	12	833	10000	10	1000
Rack Wood	1997	6	667	4000	10	400
Medicine Cabinet	2012	1	6500	6500	10	650
Medicine cupboard	2012	1	5000	5000	10	500
Bed side cabinet	2010-30, 2011-45	75	200	15000	50	300
Office cabinet	2012	1	6500	6500	10	650
Medicine Trolley	2012, 2011	3	600	1800	7	257.14
Patient Trolley	2011	1	4500	4500	5	900
Patient Trolley	2011	1	4500	4500	7	642.86
File Cabinet	1997	30	600	18000	10	1800
Almirah Steel			0	0		
Almirah Steel	1997-6, 2010-1	8	2500	20000	9	2285.71
Kuf Board Steel			0	0		
Book self	2011	1	5000	5000	10	500
Plain self	1997-3, 2011-6	9	390	3510	10	351
Mit self	2011	2	1750	3500	7	500
Mit self Steel	1997	2	5000	10000	10	1000
Status Chart			0	0		
Status Chart			0	0		
Plastic Bucket	2010	4	25	100	3	33.33
Steel Drum	2010	2	500	1000	7	142.86
Sofa set	2010	12	1667	20000	12	1666.67
Total						31030.72

Table A1.1.4. Cost of land and space of UHC, Debhatta Upazila

Item	Description	Number	Amount (SF)	Annual Rent/ SF (BDT)	Annualized Value (BDT)
Unused Land		1	215078		429000
Building		7			
Room 1	Ward	3	4500	60	270000
Room 2	Doctor	10	3000	60	180000
Room 3	Office	4	1200	60	72000
Room 4	Store	1	1600	60	96000
Room 5	X-Ray	1	375	60	22500
Room 6	Pathology	2	375	60	22500
Room 7	EPI	1	1200	60	72000
Room 8	OT	3	900	60	54000
Room 9	Recovery	1	500	60	30000
Room 10	Labour	1	180	60	10800
Room 11	Emergency	1	180	60	10800
Other Room/ Space		26	3490	60	209400
Total		53			1479000

Note. Total amount of land is 5.31 acres or 531 decimal or $531 \times 165 =$ sf for UHC. Of this amount sf remains unused and 17,500sf has been used for constructing the buildings for UHC. The value of unused land is assumed to be Taka one lakh/decimal. The rental rate per sf of a building per annum is assumed to be Taka 60 in Debhatta.

Table A 1.1.5. Utility service and miscellaneous of UHC of Debhatta Upazila

Item	Average monthly bill (BDT)	Annual cost
Electricity	35000	420000
Gas	3200	38400
Water	8000	96000
Generator	12000	144000
Total		698400

Table A 1.1.6. Cost of drugs at UHC of Debhatta upazila in 2011

Name	Quantity in 2011	Price per unit (BDT)	Value (BDT)
Tab Metronidazole 400 mg	40000	1	40000
Tab Vitamin B1			
Tab Hyoscine N Butyl Bromide		3.45	
Tab Ranitidin 150 mg	2000	2	4000
Tab Antacyd	45000	1	45000
Tab Cotrim 400 mg	70000	1.5	105000
Tab Ibuprofen 400 mg			
Cap Tetracycline 200 mg		2.2	
Cap Indomethacin		1	
Cap Cephradine 500 mg	5000	12.5	62500
Cap Flucloxin 500 mg	2000	10.5	21000
Cap Amoxicillin 250 mg	12000	3.5	42000
Cap Amoxicillin 500 mg	50000	2.75	137500

Cap Doxycycline 100 mg		6.6	
Syp Metronidazole		25	
Syp Histacin	100	10	1000
Syp Penicillin		28.97	
Syp Amoxycillin 100	700	47	32900
Syp Flucloxacilin		60	
Syp Mebendazole			
Dorby Lotion			
Whitfield Ointment	10 Bottle	40	400
Inj Dexamethacin		10	
Surgical gloves (Sterile)	5513	26	143338
IV Canula	503	36	18108
Micropore 3"	300	60	18000
Micropore 2"	200	60	12000
Disposable syringe	5000	5	25000
ORS	40000	5	200000
Bleaching Powder		150	
Inj Cephtriaxone 1 gm	400	160	64000
Inj Stemetil			
Salbutamol Solution	300	120	36000
Syp Cotrim	2500	21.5	53750
Syp Paracetamol	2800	20	56000
Syp Erythromycin	1000	60	60000
Tab Zinc Sulphate	35000	2	
Fetorolac		10	
Tab Levofloxacin		15	
Tab Paracetamol 500 mg	124000	1	124000
Tab Histacin		0.5	
Tab Albendazole	50000	4	200000
Tab Omeprazol		4	
Tab Ferrous Sulphate		2	
Tab Ferrous Fumerate	30000	0.25	7500
Chloramphenicol Eye Drop		30	
Tab Vitamin B complex	55000	1	55000
Tab Salbutamol	40000	0.4	16000
Tab Siprofloxacin	30000	14	420000
Tab Tetracycline 500	20000	2.5	50000
Tab Histacin	90000	0.25	22500
Others			
Total			2072496

Table A1.1.7. Cost of supplies and logistics of Debhatta Upazila in 2011

Item of supplies and logistics	Quantity received in 2011	Price per unit (BDT)	Value (BDT)
Blood glass slide	144 Pac	100	14400
Rubber sheet Yard	70 meter	100	7000

Rubber tourniquet			
Test tube 6"			
Gauze	200 than	1000	200000
Cotton	200 role	180	36000
Plaster of paris	624 role	140	87360
Cloth, duster			
D&C set			
Delivery kit	25 set	3000	75000
Foley's catheter different size	400	60	24000
Naso-gastric Ryle's tube (adult, child, infant)			
Needle of different size and shape	300	120	36000
NSV set	5	3000	15000
Implantation set	128	250	32000
IUD kit	2 set	350	700
M.R. set with canula			
Stomach wash tube	4	50	200
Tubectomy kit		150	
Others			
Total			527660

Note: No supply since 2005

Table A 1.1.8. Average length of stay by disease at UHC, Debhatta

Name of disease/ condition	Year 2011																										
	January		February		March		April		May		June		July		August		September		October		November		December				
	No of patients	Average duration	No of patients	Average	No of patients	Average	No of patients	Average	No of patients	Average	No of patients	Average	No of patients	Average	No of patients	Average	No of patients	Average	No of patients	Average	No of patients	Average	No of patients	Average duration			
Abortion	7	3	2	1	7	1	8	1	6	1	9	2	4	2	3	1	5	1	3	1	1	7	1	15	1		
Delivery Care	2	3	4	3	1	3	0	4	5	1	4	5	5	4	3	5	4	7	3	5	3	3	5	4	81	5	
Anemia	1	2	2	3	1	9	2	2	1	7	2	2	3	4	2	1	2	5	3	4	3	9	2	11	2		
Diarrohea	1	2	1	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	3	1	1	1	1	1	1	2
Appendicitis	3	8	5	3	1	5	5	5	0	6	9	5	0	5	7	5	1	5	8	5	9	5	8	5	18	5	
Bronchial Asthma	7	3	2	5	-	-	1	4	7	3	8	3	3	3	3	1	4	3	5	4	5	5	4	4	5	5	
Hernia	2	2	0	0	6	3	2	4	3	4	3	4	3	4	3	3	1	5	1	6	2	3	1	3	1	3	
Hypertension	1	8	2	7	2	-	-	-	-	9	3	1	3	0	2	2	3	1	3	7	4	2	2	19	2	2	
Poisoning	-	-	-	1	1	-	-	-	-	2	1	-	-	2	1	1	2	-	-	1	1	-	-	1	1	1	1
UTI	5	3	2	4	-	-	-	-	5	4	4	3	1	3	-	-	-	-	3	4	2	5	-	-	-	-	
Assault	7	5	8	4	1	9	6	7	3	4	5	6	5	3	5	0	4	3	4	3	5	5	4	28	3	3	
Road Traffic Accident	7	2	6	3	8	3	6	2	1	3	3	3	2	2	7	2	1	3	7	3	9	3	16	4	4	4	

Table A 1.1.9. Imputed cost of minimum necessary drugs and logistics of UHC by disease, Debhatta

Disease/ Condition	Category of cost	Total patients	Variable cost (in BDT)			Total cost (in BDT)
			Drugs	Logistics/supplies	Total	
ANC-1	Out-patient (normal)	5512	180	3.41	183.41	1010955.92
	Out-patient (with lab test)	763	180	3.41	183.41	139941.83
Delivery	In-patient (Normal)	577	610	3.41	613.41	353937.57
	In-patient (with lab test)	53	610	3.41	613.41	32510.73
Caesarean section	In-patient (surgery)	345	1735	3.41	1738.41	599751.45
PNC	Out-patient (Normal)	577	120	3.41	123.41	71207.57

	Out-patient (with lab test)	53	120	3.41	123.41	6540.73
Abortion	In-patient (Normal)	55	690	3.41	693.41	38137.55
	In-patient (with lab test)	65	690	3.41	693.41	45071.65
D&C	In-patient (with surgery)	5	1715	3.41	1718.41	8592.05
Gynecological conditions (fibroid)	In-patient (surgery, hysterectomy)	69	1770	3.41	1773.41	122365.29
ARI	Out-patient (normal)	1985	265	3.41	268.41	532793.85
	Out-patient (with lab test)	67	265	3.41	268.41	17983.47
Diarrhea	Out-patient (normal)	4240	198	3.41	201.41	853978.4
	Out-patient (with lab test)	256	198	3.41	201.41	51560.96
	In-patient (Normal)	1155	198	3.41	201.41	232628.55
	In-patient (with lab test)	137	198	3.41	201.41	27593.17
Eye infection/disease	Out-patient (normal)	1756	60	3.41	63.41	111347.96
	Out-patient (with lab test)	60	60	3.41	63.41	3804.6
Scabies/skin disease	Out-patient (normal)	4843	57.8	3.41	61.21	296440.03
Helminthiasis	Out-patient (normal)	9215	13	3.41	16.41	151218.15
	Out-patient (with lab test)	313	13	3.41	16.41	5136.33
Tuberculosis	Out-patient (normal)	98	9360	3.41	9363.41	917614.18
	Out-patient (with lab test)	3	9360	3.41	9363.41	28090.23
Family planning for male	Out-patient (normal)	420	500	3.41	503.41	211432.2
Family planning for female	Out-patient (normal)	5236	365	3.41	368.41	1928994.76

Dysentery	Out-patient (normal)	6833	176	3.41	179.41	1225908.53
	Out-patient (with lab test)	23	176	3.41	179.41	4126.43
Appendicitis, Acute abdomen	Out-patient (normal)	2123	1470	3.41	1473.41	3128049.43
	Out-patient (with lab test)	72	1470	3.41	1473.41	106085.52
	In-patient (Normal)	179	1470	3.41	1473.41	263740.39
	In-patient (surgery)	225	4314	3.41	4317.41	971417.25
Anemia	Out-patient (normal)	2985	282	3.41	285.41	851948.85
	Out-patient (with lab test)	101	282	3.41	285.41	28826.41
	In-patient (Normal)	100	282	3.41	285.41	28541
	In-patient (with lab test)	9	282	3.41	285.41	2568.69
Dental infection	Out-patient (normal)	1555	221	3.41	224.41	348957.55
Diabetes	Out-patient (normal)	767	1490	3.41	1493.41	1145445.47
	Out-patient (with lab test)	41	1490	3.41	1493.41	61229.81
Peptic ulcer	Out-patient (normal)	1562	100	3.41	103.41	161526.42
Abdominal pain	Out-patient (normal)	2195	100	3.41	103.41	226984.95
Cholecystitis	In-patient (with surgery, cholecystectomy)	3	4314	3.41	4317.41	12952.23
Ear infection	Out-patient (normal)	894	179.8	3.41	183.21	163789.74
Asthma (Bronchial asthma)	Out-patient (normal)	989	252	3.41	255.41	252600.49
	Out-patient (with lab test)	51	252	3.41	255.41	13025.91
	In-patient (normal)	69	252	3.41	255.41	17623.29
	In-patient (with lab test)	6	252	3.41	255.41	1532.46

Obstructed labor	Out-patient (Normal)	653	346	3.41	349.41	228164.73
	Out-patient (with lab test)	60	346	3.41	349.41	20964.6
Hernia	In-patient (Normal)	7	1484	3.41	1487.41	10411.87
	In-patient (surgery)	17	2673	3.41	2676.41	45498.97
Hypertension	In-patient (Normal)	106	150	3.41	153.41	16261.46
	In-patient (with lab test)	10	150	3.41	153.41	1534.1
Pelvic infection, UTI	In-patient (Normal)	97	206	3.41	209.41	20312.77
	In-patient (with lab test)	9	206	3.41	209.41	1884.69
Rheumatic fever	Out-patient (Normal)	53	840	3.41	843.41	44700.73
	Out-patient (with lab test)	5	840	3.41	843.41	4217.05
Poisoning	In-patient (Normal)	8	2980	3.41	2983.41	23867.28
Arthritis	Out-patient (Normal)	147	282	3.41	285.41	41955.27
	Out-patient (with lab test)	13	282	3.41	285.41	3710.33
Assault (Physical)	Out-patient (Normal)	27	150	3.41	153.41	4142.07
	Out-patient (with lab test)	1	150	3.41	153.41	153.41
	In-patient (Normal)	168	150	3.41	153.41	25772.88
	In-patient (with lab test)	15	150	3.41	153.41	2301.15
Road traffic accident	In-patient (Normal)	132	290	3.41	293.41	38730.12
	In-patient (with lab test)	11	198	3.41	201.41	2215.51
Viral fever	Out-patient (normal)	69	7	3.41	10.41	718.29
Blood related ailments	Out-patient (normal)	697		3.41	3.41	2376.77
Other conditions (ovarian tumor, thyroid tumor)	In-patient (surgery, tumor resection)	136	1879	3.41	1882.41	256007.76
Total		61081				17612411.8

Average cost (imputed) amounts to 17612411.8/61081 = BDT 288.35

Table A1.1.10.1. Amount of time spent by providers and staffs on a day obtained through Diary Method

Designation of persons	For non-clinical activities (minutes)	Out-patients			In-patients			Total amount of time spent (minutes)
		Number of patients seen	Total amount of time	Amount of time/patient	Number of pts seen	Total amount of time	Amount of time/patient	
Consultant 1								
Consultant 2								
Consultant 3								
Consultant 4								
Average of consultant time								
M. O. 1	60	48	210	4.375	10	60	6	330
M. O. 2	40	40	120	3	40	120	3	280
M. O. 3	2	73	155	2.13	22	33	1.5	191
M. O. 4	20	100	240	2.4	0	0	0	260
M. O. 5								
M. O. 6								
Average of M. O.'s time								
Nurse 1	65				200	240	1.2	305
Nurse 2	75				196	240	1.22	315
Nurse 3	72				165	240	1.45	312
Nurse 4	87				205	240	1.17	327
Nurse 5	69				232	240	1.03	309
Average of Nurse's time								
Paramedic 1								
Paramedic 2								
Average of Paramedic's time								
Technician 1	25	27	213	7.89				238
Technician 2	40	4	135	33.75				175
Technician 3								
Average of Technician's time								

Table A 1.1.10.2. Amount of time spent by providers and staffs (general) per patient obtained through Time Motion Observations at UHC, Debhatta Upazila

Designation of persons	Out-patients			
	Disease/ condition	Number of patients	Total amount of time	Amount of time/patient
Consultant 1				
Consultant 2				
Overall of consultant time				
M. O. 1	Gyne, Scabies, Weakness, Acute Abdomen, Vomiting,	5	21	4.2
M. O. 2	Diarrhea, Cold cough, Scabies, Mumps,	5	16	3.2
M. O. 3	Headache, Anemia, Chest pain,	5	29	5.8
M. O. 4	Body pain, Fever, cough, Scabies, Ear pain, Weakness	5	22	4.4

Overall of M. O.'s time				
Nurse 1	Poisoning, Diarrhea, Burn, Hernia, RTA	5	285.6	
Nurse 2	Fever, RTA, Asthma, Typhoid, Diarrhea	5	35	7
Nurse 3	Diarrhea, Hernia, RTA, Pneumonia, Burn 5	5	27	5.4
Nurse 4	Appendicitis, Diarrhea, Chest pain, Gyne	5	21	4.2
Nurse 5	Pneumonia, Cutting injury, RTA, Gyne	5	43	8.6
Average of Nurse's time				
Paramedic 1				
Paramedic 2				
Average of Paramedic's time				
Technician 1	Urine test, CBC, HBsAg, Blood group	5	150	30
Technician 2	Teeth disease,	5	71	14.2
Technician 3				
Average of Technician's time				

Table A1.1.10.3. Use of time for laboratory testing at UHC, Debhatta (Time motion observations)

Name of test (with name of patient)	Person 1		Person 2		Person 3		Equipment	
	Designation	Time spent	Designation	Time spent	Designation	Time spent	Name of equipment	Time spent
Hb% Blood group (Mrs Laigu Begum)	Lab Technologist	30					Microscope, Hemoglobinometer	
TC, DC, Blood group, HBsAg, Urine (Mrs Rikta Begum)	Lab Technologist	60					Microscope, Hemocytometer, C Machine	
CBC, Urine (Mustaem)	Lab Technologist	60					Microscope, Hemocytometer, C Machine	

Table A 1.1.10.4. Use of time for surgery at UHC, Debhatta (Time motion observations)

Provider	Patient 1			Patient 2			Patient 3			Patient 4			Patient 5		
	Name. Disease.			Name. Disease.			Name. Disease.			Name. Disease.			Name. Disease.		
	From	To	Total time spent	From	To	Total time spent	From	To	Total time spent	From	To	Total time spent	From	To	Total time spent
Surgeon	9.3	10.15	45	10.3	11.15	35	12.05	12.35	30						
Medical Officer	9.3	10.15	45				12.05	12.05	30						
Anesthetist															
Medical Assistant															
Nurse	9	10.3	1.3	10.3	11.3	60	12	12.4	40						
Aya	9	10.4	1.4	10.3	11.35	1.05	12	12.45	45						
Other (Specify)															
Anaesthesia Machine with accessories & Haothene Vaporizer															

OT Table with light	9.3	10.15	45	10.3	11.15	35	12	12.4	40						
Surgeon															

Table A 1.1.10.5. Amount of time spent by providers for one patient by disease at UHC, Debhatta Upazila obtained through group interview

Name of disease/ condition	First visit	Second visit
a) Maternal Health	15	10
- ANC 1		
- ANC 2	10	10
- ANC 3	10	10
- ANC 4		
- Delivery care	15	10
- EmOC	10	10
- Abortion	15	15
- Post abortion care	15	10
- PNC	15	10
c) STI/RTI		
- Prevention and management of STI/RTI	10	10
- Prevention of HIV/AIDS		
ARI	10	10
Diarrohea	7	7
eye infection		
Scabies		
Helminthiasis		
cold-cough		
Tuberculosis		
Malaria		
Leprosy		
Kala-azar		
Family planning for male		
Family planning for female		

Table A1.1.11. Number of patients who visited the UHC by disease and year in Debhatta Upazila

Name of disease/ condition/service	2009			2010			2011		
	Out-patient	In-patient	Total	Out-patient	In-patient	Total	Out-patient	In-patient	Total
a) Maternal Health	0		833	0	2375	2375	6275	0	
- ANC		833							6275
- Delivery care	0	268	268	0	278	278	0	975	975
- EmOC (Obstructed labor)	0	130	130	0	81	81	0	713	713
- Abortion	0	0	0	0	30	30	0	125	125
- PNC	0	263	263	0	278	278	630	0	630
c) Pelvic infections, STI/RTI /UTI	0	09	09	0	11	11	0	106	
- Prevention & management of STI/RTI, UTI, PID									106
- Prevention of HIV/AIDS	0	0	0	0	0	0	0	0	0
ARI	0	11	11	2336	116	2452	2052	0	2052

Bronchial asthma	0	44	44	0	0	0	1040	75	1115
Diarrhea	0	92	92	6184	0	6184	4496	1292	5788
Dysentery	0	23	23	6269	76	6345	6856	0	6856
Peptic Ulcer	0	21	21	2445	72	2517	1562	0	1562
Abdominal pain	0	0	0	0	0	0	2195	0	2195
Eye infection	0	0	0	2144	0	2144	1816	0	1816
Ear infection	0	0	0	789	0	789	894	0	894
Dental infection	0	0	0	1990	0	1990	1555	0	1555
Scabies	0	06	06	7339	60	7399	4843	0	4843
Helminthiasis,	0	0	0	9060	0	9060	9528	0	9528
cold-cough	0	0	0	0	0	0	0	0	0
Tuberculosis	113	0	113	132	0	132	101	0	101
Family planning for male	686	0	686	310	0	310	420	0	420
Family planning for female	3404	0	3404	4112	0	4112	5236	0	5236
Non-Communicable Disease Diabetes	0	07	07	613	26	639	664	144	808
Hypertension, CHD	0	07	07	764	0	764	0	116	116
Arthritis	0	36	36	0	73	73	160	0	160
Assault/Injury	0	134	134	709	204	913	28	183	211
Road traffic accident (RTA)	0	35	35	0	112	112	0	143	143
Anemia	0	0	0	3121	0	3121	3086	109	3195
Viral fever, Pyrexia of unknown origin)	0	0	0	1369	59	1428	69	0	69
Rheumatic fever							58	0	58
Appendicitis, Acute abdomen	0	0	0	0	114	114	2195	404	2599
Poisoning	0	0	0	0	0	0	0	08	08
Blood disorders	0	0	0	0	06	06	697	0	697
Hernia	0	0	0	0	0	0	0	24	24
Cholecystitis	0	0	0	0	0	0	0	3	3

Others	0	987	987	0	1304	1304	0	136	136
Total	4203	1919	6122	49686	3971	53657	57313	3768	61081

Table A1.2.1. Cost of human resources in UHFWCs of Debhatta Upazila by designation

Designation	FWC-1 (Debhatta/Sakhipur)			FWC-2 (Kulia)			Average salary in FWCs (BDT)
	No of employed persons	Monthly salary and allowances (BDT)	Annual salary and allowances (BDT)	No of employed persons	Monthly salary and allowances (BDT)	Annual salary and allowances (BDT)	
Medical Officer	--	--	0	1	16990	203880	101940
SACMO	1	30870	370440	--		0	185220
FWV	1	25470	305640	1	17851	214212	259926
Pharmacist	1	15000	180000	1	24600	295200	237600
Other (Aya)	1	12000	144000	1	18200	132000	138000
Total	4		1000080	4		845292	922686

Table A1.2.2a. Cost of important equipments at FWC-(Debhatta) of Debhatta Upazila

Name of the equipment	Year of procurement	Total number	Price at procurement (BDT)	Total expected life years	Total value	Annualized value
Air way (different sizes)						
Ambu bag	2010	3	2500	2	7500	3750
Artery forceps (different size)	2005	15	120	10	1800	180
Aural Syringe					0	0
B.P. handle	2005	2	150	20	300	15
B.P. machine Aneroid	2010	2	1000	1	2000	2000
Bandage cutting scissors	2010	16	200	10	3200	320
Boiling water sterilizer					0	0
Bowl SS 10"					0	0
Bowl stand 10"					0	0
Bucket, plastic (large, medium, small)	2010	10	250	2	2500	1250
Cloth, duster					0	0
Cuscors vaginal speculam	2010	9	350	20	3150	157.5
D&C set					0	0
Delivery Kit					0	0
Dissecting forcep (plain/toothed)	2005		200	10	0	0
Dressing bowl					0	0
Dressing forceps					0	0
Dressing tray (shallow) SS	2011	1	250	20	250	12.5
Drum sterilizer (shallow) SS					0	0
Examination table	1995	2	3000	20	6000	300

Foley's catheter different size					0	0
Forcep sponge holding plan	2000	1	120	20	120	6
Forcep tissue 2x3 teeth 191 mm	2005	6	120	20	720	36
Gauge cutting scissors					0	0
Haemostat forceps					0	0
Hammer percussion					0	0
Hanging weighing scale	1992	1	2400	15	2400	160
Implantation set					0	0
Instrument cabinet					0	0
Instrument tray	2002	1	250	15	250	16.66667
IUD kit	2002	4	3000	10	12000	1200
Kidney tray	2002	9	180	15	1620	108
M.R set with canula	2002	2	2500	6	5000	833.3333
Mouth gag	2002	1	250	1	250	250
Nasal Speculum	2002	1	350	15	350	23.33333
Naso gastric Ryle's tube (adult, child, infant)					0	0
Needle of different size and shape					0	0
NSV set					0	0
Patient stretcher					0	0
Resuscitator					0	0
Rubber catheter different size					0	0
Sims Vaginal Speculum					0	0
Stethoscope	2010	13	1000	2	13000	6500
Stomach wash tube	2011	19	100	2	1900	950
Suction unit portable (manual)					0	0
Tongue depressor	2005	2	120	20	240	12
Tourniquet					0	0
Tubectomy kit					0	0
Weight machine	2011	1	7500	4	7500	1875
Fan	1995	6	2000	15	12000	800
Light	2010	3	350	1	1050	1050
Other						
Total					85100	21805.33

Table A1.2.2 b. Cost of important equipments at FWC-(Kulia) of Debhatta Upazila

Name of the equipment	Year of procurement	Total number	Price at procurement (BDT)	Total expected life years	Value (BDT)	Annualized value (BDT)
Air way (different sizes)						
Ambu bag	2010	3	2500	1	7500	7500
Artery forceps (different size)	1999	23	120	10	2760	276
Aural Syringe					0	
B.P. handle	1997	2	150	50	300	6

B.P. machine Aneroid	2000-1, 2006-2, 2007-3	6	1000	3	6000	2000
Bandage cutting scissors	2010-16, 2011-9	25	200	20	5000	250
Boiling water sterilizer		1	250	15	250	16.6667
Bowl SS 10"					0	-
Bowl stand 10"					0	-
Bucket, plastic (large, medium, small)	2004	14	250	3	3500	1166.67
Cloth, duster					0	-
Cuscors vaginal speculam	1992-1, 1996-1, 2007-5	7	350	10	2450	245
D&C set			10000		0	-
Delivery Kit	2008	1	2500	5	2500	500
Dissecting forcep (plain/toothed)		1	200	10	200	20
Dressing bowl					0	-
Dressing forceps					0	-
Dressing tray (shallow) SS	2011	2	250	5	500	100
Drum sterilizer (shallow) SS	2011	12	1250	15	15000	1000
Examination table	1996	2	3000	5	6000	1200
Foley's catheter different size					0	-
Forcep sponge holding plan	2011	29	120	10	3480	348
Forcep tissue 2x3 teeth 191 mm	1999	6	120	10	720	72
Gauge cutting scissors	2010	49	350	12	17150	1429.17
Haemostat forceps					0	-
Hammer percussion					0	-
Hanging weighing scale		1	2400	20	2400	120
Implantation set					0	-
Instrument cabinet					0	-
Instrument tray	2010	2	250	15	500	33.3333
IUD kit	2007-1, 2011-2	3	3000	15	9000	600
Kidney tray	2011	11	180	8	1980	247.5
M.R set with canula	2000	5	2500	5	12500	2500
Mouth gag	2011	2	250	1	500	500
Nasal Speculum		1	350	5	350	70
Naso gastric Ryle's tube (adult, child, infant)				2	0	0
Needle of different size and shape				2	0	0
NSV set					0	-
Patient stretcher					0	-
Resuscitator					0	-
Rubber catheter different size					0	-
Sims Vaginal Speculum		1	350	14	350	25
Stethoscope	2005-07	11	1000	3	11000	3666.67
Stomach wash tube	2003-11	5	100	2	500	250
Suction unit portable (manual)	2011	1	8500	12	8500	708.333
Tongue depressor		1	120	12	120	10
Tourniquet					0	-
Tubectomy kit					0	-
Weight machine	2006-1, 2011-1	2	7500	5	15000	3000
Fan		8	2000	12	16000	1333.33

Light		16	350	5	5600	1120
Dressing Drum	2010	4	1250	16	5000	312.5
Instrument Trolley	2011	1	5400	9	5400	600
Dressing tray	2011	1	250	10	250	25
Plaster Cutting Scissors	1999	2	500	5	1000	200
Tissue forcep 6"	1999	2	120	8	240	30
Tissue forcep 8"	1999	4	250	1	1000	1000
Lifter	1999	2	2500	5	5000	1000
Niddle Cutter	2010	3	250	2	750	375
Sppny dry forcep	2011	28	120	9	3360	373.333
Lifter 1800cm Layht	2011	16	4700	5	75200	15040
Face Mask	2010	3	850	0.5	2550	5100
Bland hook		1	120	2	120	60
Gally pot		2	250	3	500	166.667
Slide Box		1	60	5	60	12
Bed side locker		1	2000	2	2000	1000
Dressing box		1	1050	5	1050	210
Hemoglobinometer		1	650	3	650	216.667
Sterilizer		1	250	3	250	83.3333
Measuring Spoon		4	20	2	80	40
Niddle holder	2011	17	120	3	2040	680
Dous Con	2011	3	100	2	300	150
Nebulizer Machine	2011	1	3500	1	3500	3500
Sucker Machine	2011	1	8500	5	8500	1700
Others						
Total					276410	37327.8

Table A.1.2.3 (a). Cost of furniture and fixtures of FWC (Sakhipur) of Debhatta Upazila

Name of the furniture	Total number	Price per unit (BDT)	Total value (BDT)	Total expected life years	Annualized value (BDT)
Table	3	2000	6000	15	400
Chair	16	800	12800	15	853.33
Examination Table	1	1000	1000	10	100
Bench	7	1000	7000	10	700
Almirah	3	10000	30000	20	1500
Insertion Table	1	1000	1000	10	100
Self Steel	1	10000	10000	20	500
Tool	2	500	1000	10	100
Dispensary Table	2	2000	4000	20	200
Self wood	2	1000	2000	15	133.3333333
Others					0
Total	38		74800		4586.666667

Table A.1.2.3 b. Cost of furniture and fixtures of FWC (Kulia) of Debhatta Upazila

Name of the furniture	Total number	Price per unit (BDT)	Total value (BDT)	Total expected life years	Annualized value
Half Secretariate Table	3	6000	18000	8	2250
Intern table	5	5000	25000	5	5000
Dispensary Table	2	3000	6000	8	750
IUD Table	1	6500	6500	9	722.2222222
Patient Examination Table	1	10000	10000	10	1000
Arm Chair	4	1200	4800	12	400
Arm Less Wood Chair	12	800	9600	12	800
Pivot tob	2	1000	2000	5	400
Long Bench	7	1000	7000	8	875
Patient Bed	2	10000	20000	18	1111.111111
Steel Almirah	3	8500	25500	25	1020
Steel Rack	1	6000	6000	18	333.3333333
Notice Board	1	1000	1000	5	200
Waste Box	2	150	300	10	30
Waste Box for infectious materials	2	450	900	10	90
Waste Box for sharp cut	2	450	900	10	90
File Cabinet	1	8000	8000	10	800
Others	0		0		0
Total	51		151500		15871.67

Table A1.2.4. Cost of land and space of FWCs of Debhatta upazila

Type of space	Description	Area (Sq ft)	Year of construction	Annual rent per sq ft	Annualized value
Sakhipur FWC					
Room 1	Dispensary	180	1995	60	10800
Room 2	Toilet	54	1995	60	3240
Room 3	Store	180	1995	60	10800
Room 4	Medical Officer	196	1995	60	11760
Room 5	FP Store	180	1995	60	10800
Room 6	FWV Room	196	1995	60	11760
Room 7	OT	180	1995	60	10800
Room 8	Waiting Room	360	1995	60	21600
Total					91560
Kulia FWC					
Unused Land		18.58 decimal	1965	70000/decimal	13137.37
Room 1	MO	120 sq ft	1997	48/sq ft/year	5760
Room 2	FWV	120 sq ft	1997	48/sq ft/year	5760
Room 3	OT	130 sq ft	1997	48/sq ft/year	6240
Room 4	FPI	120 sq ft	1997	48/sq ft/year	5760
Room 5	Pharmacy	120 sq ft	1997	48/sq ft/year	5760
Room 6	Store	120 sq ft	1997	48/sq ft/year	5760
Room 7	Waiting	450 sq ft	1997	48/sq ft/year	21600

Others	Space	1200 sq ft	1997	48/sq ft/year	57600
Total					127377.37

Table A1.2.5. Cost of supplies and logistics of FWCs of Debhata Upazila in 2011

Sakhipur FWC			
Item of supplies/logistics	Quantity (to be written in appropriate units)	Current market price (in BDT)	Value (in BDT)
Gauze	40	25	1000
Cotton	40	45	1800
IUD kit	4	3000	12000
Stomach wash tube	19	200	3800
Total			18600
Kulia FWC			
Cotton	35	100	3500
Delivery kit	1	3000	3000
IUD kit	2	3000	6000
M.R. set with canula	1	3000	3000
Stomach wash tube	3	200	600
Total			16100

Table 1.2.6 (a). Cost of drugs in 2011 by FWC (Sakhipur) Debhata upazila

Name of Drugs	Quantity received in 2011 (to be written in appropriate units)	Current market price (in BDT per unit)	Value of quantity received in 2011
Tab Riboflavin			0
Tab Metronidazole	10000	1	10000
Tab Vitamin B-1			0
Tab Hyoscine N Butyl Bromide	1200	1.75	2100
Tab Ranitidin 150 mg			0
Tab Antacyd	20000	1	20000
Tab Cotrim 400 mg	7500	1.5	11250
Tab Ibuprofen 400 mg	1200	1.5	1800
Cap Tetracycline 200 mg	10000	2.2	22000
Cap Indomethacin			0
Cap Cephradine 500 mg			0
Cap Flucloxin 500 mg			0
Cap Amoxicillin 250 mg	10500	3.5	36750
Cap Amoxicillin 500 mg	1200	3	3600
Cap Doxycycline 100 mg			0
Syp Metronidazole			0
Syp Histacin			0

Syp Penicillin			0
Syp Amoxycillin	240	47	11280
Syp Flucloxacilin			0
Syp Mebendazole			0
Dorby Lotion	24		0
Whitfield Ointment	12		0
Inj Dexamethacin			0
Surgical gloves (Sterile)	85	26	2210
IV Canula			0
Micropore 3"			0
Micropore 2"			0
Disposable syringe			0
ORS	6000	5	30000
Bleaching Powder			0
Inj Cephtriaxone 1 gm			0
Inj Stemetil			0
Salbutamol Solution			0
Syp Cotrim	240	21.58	5179.2
Syp Paracetamol	240		0
Syp Erythromycin			0
Tab Zinc Sulphate			0
Fetorolac	16000	1	16000
Tab Levofloxacin	8900	0.5	4450
Tab Paracetamol 500 mg	3400	5	17000
Tablet Histacin	30000	1	30000
Tab Albendazole	25000	2	50000
Tab Omeprazol	5000	1.5	7500
Tab Ferrous Sulphate	5000	1	5000
Chloramphenicol Eye Drop	100	30	3000
Others			
Total	161841		289119.2

Table 1.2.6 b. Cost of drugs in 2011 by FWC (Kulia) Debhata upazila

Name of Drugs	Quantity received in 2011 (to be written in appropriate units)	Current market price (in BDT per unit)	Value of quantity received in 2011
Tab Riboflavin			0
Tab Metronidazole 400 mg	3000	2	6000
Tab Vitamin B1			0
Tab Hyoscine N	1200		0

Butyl Bromide			
Tab Ranitidin 150 mg	2400		0
Tab Antacyd	20000	0.5	10000
Tab Cotrim 400 mg	21000	1.5	31500
Tab Ibuprofen 400 mg			0
Cap Tetracycline 200 mg	10000	2	20000
Cap Indomethacin			0
Cap Cephadrin 500 mg			0
Cap Flucloxin 500 mg	1000	12	12000
Cap Amoxycillin 250 mg	2000	3	6000
Cap Amoxycillin 500 mg			0
Cap Doxycycline 100 mg	500	7	3500
Syp Metronidazole			0
Syp Histacin			0
Syp Penicillin			0
Syp Amoxycillin	120		0
Syp Flucloxacilin			0
Syp Mebendazole			0
Dorby Lotion	10800		0
Whitfield Ointment	12000		0
Inj Dexamethacin			0
Surgical gloves (Sterile)			0
IV Canula			0
Micropore 3"			0
Micropore 2"			0
Disposable syringe			0
ORS	6000	4	24000
Bleaching Powder			0
Inj Cephtriaxone 1 gm			0
Inj Stemetil	125		0
Salbutamol Solution			0
Syp Cotrim	240		0
Syp Paracetamol	240		0
Syp Erythromycin			0
Tab Zinc Sulphate			0
Fetorolac	36500	0.5	18250
Tab Paracetamol 500 mg	30000	0.5	15000
Tab Penicillin	3000	1.5	4500
Tab Vitamin B Complex	27500	0.5	13750
Tab Histacin	15500	0.5	7750
Tab Diclofo 500mg	1000	200	200000
Tab Cepro 500mg	1950	12	23400

Cap Amoxiclen 500	6500	200	1300000
Cap Amoxiclen 250	11000	150	1650000
Inj Jesocen	5	60	300
Inj Diojipum	8600	6	51600
Eye oinment	160	15	2400
Tab Matonjal	5130		0
Prop Anxixline	120		0
Newaycav	60		0
Polbodizol	2400		0
Elebropen	1600		0
Prektrem	3600		0
Doxicylin	1600		0
Salbatol	1200		0
Eye drop	60		0
Total	248110		3399950

Table A1.2.7a. Number of patients who visited the FWC (Sakhipur) Debhatta Upazila by disease and year

Name of disease/ condition/service	2009	2010	2011	Total
a) Maternal Health				
- ANC 1	113	130	165	408
- ANC 2	255	276	244	775
- ANC 3	253	253	285	791
- ANC4				0
- Delivery care		1	7	8
- EmOC				0
- Abortion	14	2	2	18
- Post abortion care	163	0		163
- PNC		157	167	324
c) STI/RTI				0
- Prevention and management of STI/RTI		7	3	10
- Prevention of HIV/AIDS		0		0
ARI	13	66	58	137
Diarrohea	6	32	20	58
eye infection				0
Scabies				0
helminthiasis,				0
cold-cough				0
Tuberculosis				0
Malaria				0
Leprosy				0
Kala-azar				0
Family planning for male	18	46	35	99
Family planning for female	660	603	604	1867
Dysmenorrohea	0	15	9	24
Anemia	1	822	35	858
General patient (male)	234	3599	912	4745

General patient (female)	2254	4	4723	6981
Malnutrition	1	17	22	40
Child care	1554	2850	2807	7211
ECP	3	29	28	60
Others (infertile couple)			1	1
Total	5542	8909	10127	24578

Table A1.2.7b. Number of patients who visited the FWC (Kulia) Debhatta Upazila by disease and year

Name of disease/ condition/service	2009	2010	2011	Total
a) Maternal Health				
- ANC 1	590	605	646	1841
- ANC 2				0
- PNC	107	151	180	438
c) STI/RTI				0
- Prevention and management of STI/RTI	788	782	0	1570
- Prevention of HIV/AIDS				0
ARI	1613	1098	959	3670
Diarrohea	1728	2213	1364	5305
eye infection	188			188
Scabies	952	1272	0	2224
helminthiasis,	882	1321	0	2203
cold-cough				0
Tuberculosis				0
Malaria				0
Leprosy				0
Kala-azar				0
Family planning for male	96	50	25	171
Family planning for female	575	309	287	1171
Others				0
Total	7519	7801	3461	18781

Table A1.2.8. Amount of time spent by providers and staffs on a day in FWC-1 (Debhatta) obtained through Diary Method

Sakhipur FWC						
Designation of persons	For non-clinical activities	Out-patients				Total amount of time spent
		Disease/ condition	Number	Total amount of time (min)	Amount of time/ patient	
SACMO	90		30	180	6	270
FWV	60		20	210	10.5	270
Kulia FWC						
M.O.						
SACMO						
FWV	30		21	273	21	
Others	15		29	291	10	

Table A1.2.9. Amount of time spent by providers and staffs per patient in FWC-1 (Debhatta) obtained through Time Motion Observations

Sakhipur FWC				
Designation of persons	Out-patients			
	Disease/ condition	Number of patients	Total amount of time	Amount of time/ patient
SACMO		5	57	11.2
FWV		13	78	6
Kulia FWC				
M.O.		8	73	9

SACMO		10	95	9.5
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Table A1.2.10. Amount of time spent by providers for one patient by disease in FWC-1 (Debhata)

Sakhipur FWC		
Name of disease/ condition	First visit	Second visit
a) Maternal Health	15	
- ANC 1		
- ANC 2	12	
- ANC 3	12	
- ANC 4	10	
- EmOC	10	
- PNC	20	15
Total	79	15
Kulia FWC		
a) Maternal Health		
- ANC 1	20	
- ANC 2	15	
- ANC 3	15	
- ANC4	15	
- PNC	15	8
c) STI/RTI		
- Prevention and management of STI/RTI	10	
ARI	15	10
Diarrohea	10	7
Family planning for male	10	7
Family planning for female	20	12
Total	145	44

Table A1.3.1. Cost of human resources in Private Clinic of Debhata

	Designation of employed Persons	Monthly salary and allowances (BDT)	Annual Salary and allowances (BDT)
Private Clinic			
	Medical Officer 1	15000	180000
	Nurse	5000	60000
	Nurse	5000	60000
	Accountant	3000	36000
	Sweeper/Cleaner	2500	30000
	Sweeper/Cleaner	2500	30000

Total			396000
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Table A1.3.2. Cost of important equipments at Private clinics of Debhata Upazila

Name of the equipment	Year of procurement	Total number	Price at procurement (BDT)	Total expected life years	Total Value	Annualized Value
Air way (different sizes)	2005	10		5	0	0
Ambu bag	2011	2	4000	5	8000	1600
Artery forceps (different size)	2002	30	14500	5	435000	87000
Aural Syringe					0	
B.P. handle	2003	3	200	5	600	120
B.P. machine Aneroid	2006	2	1650	5	3300	660
Bandage cutting scissors	2006	3	300	5	900	180
Boiling water sterilizer	2006	1	2500	5	2500	500
Bucket, plastic (large, medium, small)	2006	3	200	5	600	120
Cloth, duster	2005	5	50	5	250	50
Cuscors vaginal speculum	2006	3	150	5	450	90
D&C set					0	
Delivery Kit	2001	1	1000	5	1000	200
Dissecting forcep (plain/toothed)	2005	3	150	5	450	90
Dressing bowl					0	
Dressing forceps	2005	3	150	5	450	90
Dressing tray (shallow) SS	2006	4	150	5	600	120
Drum sterilizer (shallow) SS	2003	1	2500	5	2500	500
Examination table	2004	1	3000	5	3000	600
Gauge cutting scissors	2003	3	150	5	450	90
Haemostat forceps	2004	10	200	5	2000	400
Instrument tray	2005	1	150	5	150	30
Kidney tray	2006	2	150	5	300	60
Mouth gag	2009	1	100	5	100	20
Sims Vaginal Speculum	2008	1	150	5	150	30
Stethoscope	2006	2	100	5	200	40
Tongue depressor	2007	2	100	5	200	40
Tourniquet	2006	1	100	5	100	20
Weight machine	2007	1	300	5	300	60
Fan	2003	10	2000	5	20000	4000
Light	2004	12	100	5	1200	240
Generator	2009	1	24500	5	24500	4900
Total		122				101850

Table A1.3.3. Cost of furniture and fixtures of (Private Clinics) Debhata

Name of the furniture	Total number	Price per unit	Total value (BDT)	Total expected life years	Annualized value (BDT)
Table Wood	2	5000	10000	10	1000

Patient Table Wood	2	4500	9000	10	900
Patient Bed	10	4000	40000	5	8000
Trolley	1	3500	3500	4	875
Chair Wood	5	1450	7250	8	906.25
Steem	10	450	450	6	75
Showcase	2	400	8000	10	800
Box	1	6000	6000	10	600
Tool	10	300	3000	6	500
Operation Table	1	70000	70000	10	7000
Table for Machinery	1	4000	4000	8	500
Total.	45				21156.25

Table A1.3.4. Cost of land and space of Private Clinics of Debhatta upazila

Item	Existing quantity/amount	Year of purchase/construction	Unit Cost of purchase /construction	Expected life years	Current market value	Annualized Value	Remarks
Unused Land							
Land	8.25		30000	99	247500	2500.00	Rented Building
Building	3075	1996	48	50	147600	2952	
Room 1	225		48	50	10800	216	
Room 2	225		48	50	10800	216	
Room 3	1125		48	50	54000	1080	
Room 4	225		48	50	10800	216	
Room 5	300		48	50	14400	288	
Room 6	675		48	50	32400	648	
Room 7	300		48	50	14400	288	
Total						7468.00	

*** The facility does not have any land under its ownership. It is located in the rented in house.

Table A1.3.5. Utility service and miscellaneous of Private Clinics of Debhatta

Item	Monthly bill (in BDT)	Annual Bill
Electricity use	3000	36000
Gas use		0
Water use		0
Cost of maintenance		0
Oesigel	3090	37080
Mobil	600	7200
Total		80280

Annexure-2

Table A 2.1.1. Cost of human resources of UHC of Tungipara Upazila

	Designation	Number	Educational qualification (highest degree)	Total monthly salary and allowances	Annual Salary and allowances
	General manpower				
	UH &FPO	1	MBBS	31200	374400
Clinical Staff	RMO	1	MBBS	25820	309840
	Jr Consultant (Medicine) 1				
	Jr Consultant (Orthopedics) 2	0			
	Jr Consultant (Cardiology) 3	0			
	Jr Consultant (Ophthalmology) 4	0			
	Jr Consultant (ENT) 5	0			
	Medical Officer 1	1	MBBS	22000	264000
	Medical Officer 2	1	MBBS	31500	378000
	Medical Officer 3	1	MBBS	18158	217896
	Medical Officer 4	1	MBBS	16990	203880
	Medical Officer 5	1	MBBS	23176	278112
	Medical Officer 6	0			
	Medical Officer 7	0			
	Dental Surgeon	1			
	Assistant Surgeon				
	I.M.O				
	E.M.O				
	Pathologist				
	Pharmacist	1			
	Medical Assistant (all)	6			
Nursing Staffs	Nursing Supervisor	1	SSC	26726	320712
	Senior Staff Nurse (All)	10		26926*10	3231120
	Assistant Nurse (All)	0			
Support Staff	Aya	1	Class-VIII	10113	121356
	Ward Boy	0			
Admn Staff	Statistician	0			
	Store keeper	0			
	Head assistant cum Accountant	1	BA	14179	170148
	Cashier	1	BA	14279	171348
	Head Assistant	0			
	Health Inspector	1	HSC	15992	191904
	Assistant Health Inspector	4		14830*4	711840
	Health Assistant	13		14329*13	2235324
	TLCA	0			
	Compounder	0			
	Cardiographer	0			
	Junior Mechanic	0			
	Office Assistant	2		12843*2	308232

	MLSS (all)	1		11648	139776
	Peon (all)				
	Sweeper/Cleaner	4		10880*4	522240
	Gardener	1		10495	125940
	Lab Attendant	0			
	O.T. Attendant	0			
	Driver (all)	1		15194	182328
	Guard (all)	2		9345*2	224280
	Herbal Assistant	1		7900	94800
	Medical Technologist				
	Others				
	Sub total- General Health				10777476
Surgery	Anesthetist	0			
	Jr Consultant (Surgery)	0			
	Jr Consultant (Gynae)	0			
	Subtotal for surgery				
Lab	Medical Technologist (Dental)	1	SSC	14342	172104
	Medical Technologist (Rad)	1	SSC	18300	219600
	Medical Technologist (Lab)	2		24670	296040
	Medical Technologist (EPI)	1	HSC	15080	180960
	Subtotal for Lab				868704
	Sub total for Surgery and Lab				868704
FP	UFPO	1	MSS, BCS	27880	334560
	Medical Officer	0			
	AFPO	0			
	Senior FWV				
	FWV (all)	1		14180	170160
	FPI (all)				
	FP Assistant	1			
	Head Office Assistant				
	Office Assistant (all)	1		14531	174372
	MLSS (all)	2		11817	141804
	Peon (all)				
	Sweeper/Cleaner (all)				
	Aya	1	Class - VII	11433	137196
	Others (TFPA)	1	BA (Hon's)	8200	98400
	Sub total- Family planning				1056492
	TOTAL				12702672

Table A 2.1.2. Cost of general equipments at UHC, Tungipara Upazila

Type	Name of the equipment (Vintage)	Disease	Year of procurement	Total number	Price (BDT)	Value (BDT)	Expected life years	Annualized value (BDT)
	Air Cooler, Split type (for X-Ray machine)	All						
	Air Cooler, Window type	All						
	Air Cooler, split type	All	97-1, 10-5, 11-1	1	65000	65000	5	13000
	ECG Machine	All				0		
	Refrigerator 10cft	All	2001	1	65000	65000	6	10833.33
	B.P. machine Aneroid	All	2011-10, 2010-9	70	300	21000	40	502
	Stethoscope	All	200-9, 2010-10	72	100	7200	30	250
	Thermometer clinical	All		5	40	200	10	20
	Thermometer stand	All				0		
	Timer	All	-	0	-	0	-	-
	Weight machine	All	-	0	-	0	-	-
	Bucket plastic (large, medium and small)	All		-		0	-	
	Drum sterilizer (shallow) SS	All	2010-15, 2011-5	20	125	2500	20	125
	Examination table	All		14	1000	14000	14	1000
	Patient stretcher	All	2010-5	4	1500	6000	11	566.67
	Resuscitator	All				0		
	Hammer percussion	All				0		
	Instrument cabinet	All	2010-1, 2011-2,	7	6000	42000	5	8400
	Fan	All		110	100	11000	11	1000
	Light	All		100	350	35000	30	1116.67
	Computer	All	2010-1, 2006-1	2	42000	84000	6	14000
	Printer	All		2	7500	15000	10	1500

	Fax Machine	All				0		
	UPS	All		2	3200	6400	4	1600
	IPS	All		2	20000	40000	6	6666.67
	Multi Media Projector	All				0		
	Public address system (hand mike)	All				0		
	Photocopier	All				0		
	Telephone	All	1984	1	1000	1000	1	1000
	Laptop	All				0		
	Vacuum Extractor	All				0		
	Others					0		
	Total							63228.3

Table A 2.1.2.2. Cost of diagnostic equipments at UHC, Tungipara Upazila

Type	Name of the equipment (Vintage)	Disease	Year of procurement	Total number	Price (BDT)	Value (BDT)	Expected life years	Annualized value (BDT)
Diagnostic equipments	X-Ray Machine (300 M.A.) with accessories	All						
	X-Ray Machine (100 M.A.) with accessories	All	1997	1	65000	65000	3	21666.67
	Haemocytometer	All	1997	2	2525	5050	8	631.67
	Haemoglobin ometer	All	1997-2, 2008-5	6	300	1800	14	130
	Test tube holder	All	1997-2, 2010-10	12	20	240	10	24
	X-Ray View box Double	All						
	Subtotal for diagnostic equipments							

Table 2.1.2.3. Cost of equipments for surgery at UHC, Tungipara Upazila

Name of the equipment (Vintage)	Disease	Year of Procurement	Total number	Price (BDT)	Value (BDT)	Expected life years	Annualized value (BDT)
Anesthesia Machine with accessories and Haothene Vaporizer	Surgery	2004-1, 2011-1	2	45000	90000	8	11250
Dehumidifier	Surgery	2010	1	100000	100000	3	33333.33
Diathermy machine	Surgery	2009-1, 2011-1	2	65000	130000	4	32500
Nitrous oxide Cylinder	Surgery	2008	2	16000	32000	6	5333.33
O.T. Light, Ceiling 9 bulb	Surgery	2002-1, 2009-1	2	45000	90000	4	22500
Obstetric Delivery Table	Surgery	2009-1, 2002-1, 2006-1, 2007-1, 2008-1	9	7500	67500	27	2500
Oxygen Cylinder	Surgery		15	22952	344280	14	3278.86
Oxygen Cylinder Trolley	Surgery		3	1600	4800	9	533.33
Patient Trolley	Surgery	2010-2, 2011-5	8	2200	17600	16	1100
Oxygen flow meter	Surgery	2011-1, 2012-5, 2000-3	9	4500	40500	36	1125
Pulse Oxymeter	Surgery	2011-1, p-1	2	3000	6000	8	750

Sucker machine 250 w/400 watt	Surgery	2003-1, 2008-1, 2011-2	5	85000	425000	10	42500
Artery forceps curved-5''	Surgery		22	100	2200	18	120
Artery forceps-5'' straight	Surgery		36	120	4320	3	40
Bandage cutting scissors	Surgery		2	200	400	1	200
Bowl SS 10	Surgery	2011	4	1800	7200	10	180
Curved cutting needle	Surgery	2002	200	120	24000	20	120
Dissecting forceps plain and toothed	Surgery		46	50	2300	20	115
Foreign body hook	Surgery						
Instrument tray 10''-12''	Surgery		10	50	500	10	50
Mouth gag rubber	Surgery	2010-2, 2011-5,	10	25	250	7	35.71
Needle holder	Surgery		25	12	400	30	13.33
Rubber Sheet Yard	Surgery	-	-	-	-	-	-
Rubber tourniquet	Surgery						
Sinus forceps	Surgery						
Sponge holding forceps	Surgery		26	120	3120	10	312
Sterilizer small	Surgery		10	2600	26000	20	1300
Tissue forceps	Surgery						
Air way (Different size)	Surgery		4	100	400	8	50
Boiling water sterilizer	Surgery		-				
Dissecting forceps (plain /toothed)	Surgery						
Dressing bowl	Surgery						
Dressing tray (Shallow) SS	Surgery						
Forceps sponge holding (plain)	Surgery						
Gauge cutting scissors	Surgery						
Hemostat forceps	Surgery		1	120	120	1	120
Instrument tray	Surgery		10	50	500	20	25
Kidney tray	Surgery		3	180	540	33	16.36
Suction unit portable (manual)	Surgery	-	-	-	-	-	-
Cuscors vaginal speculum	Gyne		15	350	5250	3	116.67
D&C set	Gyne, FP	2010-1, 2011-2,	4	2600	10400	3	866.67
Sims vaginal speculum	Gyne						
Total							160001.76

Table A 2.1.2.4. Cost of special equipments (equipments used by specific disciplines)

Name of the equipment (Vintage)	Disease	Year of procurement	Total number	Price (BDT)	Value (BDT)	Expected life years	Annualized value (BDT)
Ambo bag	Child	-	-	-		-	-
Hanging weight machine	Child		5	5000	25000	15	1666.67
Dental Chair with Lart Unit	Dentistry		1	85000	85000	8	10625
Dental OT Light	Dentistry		1	35000	35000	5	7000
Spirit lamp	All		1	120	120	1	120
Ultra Sonic Scalar	Gyne						
Nasal speculum	ENT						
Tongue depressor	ENT		2	120	240	22	10.91
Aural Syringe	ENT		4				

Ophthalmoscope	Eye	2002	1	9500	9500	2	4750
Total							24172.58

Table A2.1.3. Cost of furniture and fixtures at UHC, Tungipara Upazila

Name of the furniture	Year of procurement/purchase	Total number	Price per unit (BDT)	Total value (BDT)	Total expected life years	Annualized cost of furniture (BDT)
Patient Table	1997-6, 2011-7	37	500	18500	7	714.29
Patient bed	2010-30, 2011-40	70	500	35000	70	500
Mattress	2010-4, 2011-45	75	200	15000	23	666.67
Plastic chair	2012	30	50	1500	6	250
Fixed chair	2010	10	200	2000	6	333.33
Cushion Chair	1997-8, 2010-12, 2011-23	20	250	5000	12	416.67
Cushion Chair without hand	2011	30	200	6000	18	333.33
Revolving chair	2011	1	3000	3000	5	600
Executive chair	2012, 2011	6	500	3000	8	357.14
Wood chair with hand	1997	20	100	2000	12	166.67
Visitor chair	2012	10	500	5000	35	142.86
Half Secretary Table	1997-10, 2011-9, 2010-2	20	1500	30000	50	583.33
Wood Bench	1997-9, 2011-1	10	800	8000	70	114.29
Display Board	1997	2	1200	2400	20	120
White Board	2011	1	1500	1500	10	150
Emergency Duty Roster Board	2011	1	1200	1200	2	600
Revolving Tool	2010	4	1000	4000	24	166.67
Patient Tool	2010	4	500	2000	16	125
Tool Wood	1997	5	200	1000	30	33.33
Table Wood			1500			
Drawer Table Wood	1997	12	750	9000	36	250
Tent Plain Cell			-			
Tent Plain Cell			-			
Iron cot Bed	2010	2	5500	11000	14	785.71
Iron cot Bed			-			
Dispensing Table	2011	2	4500	9000	12	750
Laboratory Table			4500			
Bedside Locker Steel	2010, 2011	10	1000	10000	25	400
Saline stand (Steel)	2011	5	800	4000	15	266.67
Saline stand (Steel)			800			
Food Trolley (Steel)	2011	2	4000	8000	12	666.67
Food Trolley (Steel)			4000			
Small Table	2012	4	2500	10000	24	416.67
Side Table	2011	1	2500	2500	7	357.14
Computer Table	2006, 2010, 2011	3	3000	9000	30	300
Conference Table	2011	1	25000	25000	10	2500
Full Secretariat Table	2012	1	15000	15000	6	2500

Full Secretariat Table	1997-9, 2011-1	10	1500	15000	10	1500
Mid Set (Wood)						
Bed Side Skin						
Rack Steel	1997	12	1000	12000	12	1000
Rack Wood	1997	6	400	2400	60	400
Medicine Cabinet	2012	1	6500	6500	10	650
Medicine cupboard	2012	1	5000	5000	10	500
Bed side cabinet	2010-30, 2011-45	75	200	15000	52	285.71
Office cabinet	2012	1	6500	6500	10	650
Medicine Trolley	2012, 2011	3	1800	5400	21	257.14
Patient Trolley	2011	1	4500	4500	5	900
Patient Trolley	2011	1	4500	4500	7	642.86
Almirah Steel	1997	34	1800	61200	34	1800
Almirah Steel			-			
File Cabinet	1997-6, 2010-1	7	16000	112000	7	2285.71
Cupboard Steel			-			
Book self	2011	1	5000	5000	10	500
Plain self	1997-3, 2011-6	10	350	3500	10	350
Mit self	2011	2	3500	7000	14	500
Mit self Steel	1997	2	10000	20000	20	1000
Status Chart						
Status Chart						
Plastic Bucket	2010	4	100	400	12	33.33
Steel Drum	2010	2	1000	2000	1424	142.86
Sofa set	2010	12	20000	24000	14	1666.67
Total						31030.72

Table A2.1.4. Cost of land and space of UHC, Tungipara Upazila

Item	Description	Number	Amount (sq ft)	Annual rent/sq ft (BDT)	Expected life years	Value	Annualized value (BDT)
Unused land			258260		99	47170400	47648.69
Room 2	Doctor	5	1500	50	30		75000
Room 3	Office	3	540	50	30		27000
Room 4	Store						20000
Room 5	X-Ray	1	400	50	30		
Room 6	Pathology	1	200	50	30		10000
Room 7	EPI	1	200	50	30		10000
Room 11	Emergency	1	500	50	30		25000
Other rooms/space		6	1200	50	30		60000
Total			2325278				703468

Note. Out of total land area of 6 acres (= 600 dc = 600*438 = 262800 sf ft) UHC Building occupies 4540 sqft. The rest i.e 258260 sf ft of land is unused. The value of unused land is assumed to be BDT eighty thousand/decimal. The rented rate per sqft of a building per annum is assumed to be BDT 50 in Tungipara.

Table A 2.1.5. Utility service and miscellaneous of UHC of Tungipara Upazila

Item	Average monthly bill (BDT)	Annual cost
Electricity	35000	420000
Gas	3200	38400
Water	8000	96000
Generator	12000	144000
Total		698400

Table A 2.1.6. Cost of drugs at UHC of Tungipara upazila in 2011

Name	Quantity in 2011	Price per unit (BDT)	Value (BDT)
Tab Metronidazole 400 mg	40000	1	40000
Tab Vitamin B1			
Tab Hyoscine N Butyl Bromide		3.45	
Tab Ranitidin 150 mg	2000	2	4000
Tab Antacyd	45000	1	45000
Tab Cotrim 400 mg	70000	1.5	105000
Tab Ibuprofen 400 mg			
Cap Tetracycline 200 mg		2.2	
Cap Indomethacin		1	
Cap Cephradine 500 mg	5000	12.5	62500
Cap Flucloxacillin 500 mg	2000	10.5	21000
Cap Amoxicillin 250 mg	12000	3.5	42000
Cap Amoxicillin 500 mg	50000	2.75	137500
Cap Doxycycline 100 mg		6.6	
Syp Metronidazole		25	
Syp Histacin	100	10	1000
Syp Penicillin		28.97	
Syp Amoxicillin 100	700	47	32900
Syp Flucloxacillin		60	
Syp Mebendazole			
Dorby Lotion			
Whitfield Ointment	10 Bottle	40	400
Inj Dexamethacin		10	
Surgical gloves (Sterile)	5513	26	143338
IV Canula	503	36	18108
Micropore 3"	300	60	18000
Micropore 2"	200	60	12000
Disposable syringe	5000	5	25000
ORS	40000	5	200000
Bleaching Powder		150	
Inj Cephtriaxone 1 gm	400	160	64000
Inj Stemetil			
Salbutamol Solution	300	120	36000
Syp Cotrim	2500	21.5	53750
Syp Paracetamol	2800	20	56000
Syp Erythromycin	1000	60	60000

Tab Zinc Sulphate	35000	2	
Fetorolac		10	
Tab Levofloxacin		15	
Tab Paracetamol 500 mg	124000	1	124000
Tab Histacin		0.5	
Tab Albendazole	50000	4	200000
Tab Omeprazol		4	
Tab Ferrous Sulphate		2	
Tab Ferrous Fumerate	30000	0.25	7500
Chloramphenicol Eye Drop		30	
Tab Vitamin B complex	55000	1	55000
Tab Salbutamol	40000	0.4	16000
Tab Siprofloxacine	30000	14	420000
Tab Tetracycline 500	20000	2.5	50000
Tab Histacin	90000	0.25	22500
Others			
Total			2072496

Table A2.1.7. Cost of supplies and logistics of Tungipara Upazila in 2011

Item of supplies and logistics	Quantity received in 2011	Price per unit (BDT)	Value (BDT)
Blood glass slide	144 Pac	100	14400
Rubber sheet Yard	70 meter	100	7000
Gauze	200 than	1000	200000
Cotton	200 role	180	36000
Plaster of paris	624 role	140	87360
Delivery kit	25 set	3000	75000
Foley's catheter different size	400	60	24000
Needle of different size and shape	300	120	36000
NSV set	5	3000	15000
Implantation set	128	250	32000
IUD kit	2 set	350	700
Stomach wash tube	4	50	200
Tubectomy kit		150	
Total			527660

Table A2.1.8. Average bed days for individual disease/condition at UHC, Tungipara in 2011

Name of disease / condition	Year 2011																							
	January		February		March		April		May		June		July		August		September		October		November		December	
	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration
Delivery	53	3	102	3	114	2	42	2	51	2	53	2	107	1.6	104	2	101	1.7	151	1.7	98	2.2	65	1.9
PNC	101	2	152	1	164	1.5	44	2	49	1.8	153	2	155	1.4	214	2	31	2	131	2.25	99	1.78	197	2.9
EmOC	53	2.3	90	2	109	3.5	81	1.4	40	2.5	115	1.8	122	2	43	2.5	25	2	35	2	28	2.5	12	1.2
ARI	25	1.9	30	1.9	26	1.5	24	1.9	28	2	22	1.5	16	2.2	54	2.3	45	2	15	1.9	10	1.9	35	2.1
Gynecological conditions	163	2	102	1	98	1.5	97	2	103	5	95	2	105	1.5	110	1.5	90	2	130	2	70	2.7	2	3

Diarrhea	44	3.1	50	2.8	45	3.6	55	3.2	42	2.6	58	2.7	62	2.8	38	3	35	3.2	64	1.8	73	3.2	28	4.8
Eye infection	24	3	22	2.7	23	2	22	1.3	26	1.1	25	2.1	18	1.4	22	1.3	25	2.3	26	2.4	20	3.8	20	4.3
Dysentery	-	-	-	-	-	-	-	-	-	-	-	-	1	3	-	-	-	-	-	----	1	2	-	-
TB	5	3.1	6	2.8	7	3.6	5	3.2	7	2.6	8	2.7	5	2.8	6	3	10	3.2	11	1.8	3	3.2	-	-
Acute Abdomen	16	2.4	17	2	11	2.1	15	1.7	25	1.9	19	1.9	16	2.5	15	2.3	14	2.3	14	2.2	15	2.1	17	2
Anemia	5	1.9	6	1.9	4	1.5	8	1.9	7	2	10	1.5	24	2.2	-	-	-	-	-	-	-	-	-	-
Hypertension	4	4	5	2.7	4	2	6	1.8	5	2.1	3	2.1	5	2.4	4	2	5	3	-	-	-	-	8	2.4
Poisoning	13	3.9	12	8.5	17	2.6	17	2.4	12	2.8	13	2.3	14	1.8	15	2.2	12	2.9	9	2.6	17	2.4	8	1
PUD	9	2.2	13	2.4	18	2	31	1.8	35	2.2	21	2.5	36	2.3	18	2.6	16	2.6	15	2.4	12	2.8	8	2.6
RTI	13	2.1	4	2.8	0	0	6	1.5	2	2	4	2	13	1.9	6	2.2	8	1.9	8	3.9	0	0	7	1.8
Assault	66	2.2	74	1.6	76	5	24	2.2	27	1.4	73	1.6	77	2.1	23	3	22	2.2	178	1.3	55	1.8	54	2.3
Tumor	104	5.6	320	2	101	3.7	98	5	102	3	99	4	97	3.8	95	4	93	5	11	2	152	2.8	52	4.1

Table A 2.1.9. Imputed cost of patient by disease at UHC, Tungipara

Disease/Condition	Category of cost	Total patients	Variable cost			Total cost
			Drugs	Logistics/supplies	Average (total) variable cost	
ANC-1	Out-patient (normal)	52140	180	3.41	183.41	9562997.4
	Out-patient (with lab test)	3193	180	3.41	183.41	585628.13
Delivery	In-patient (Normal)	1007	610	3.41	613.41	617703.87
	In-patient (surgery)	36	1735	3.41	1738.41	62582.76
PNC	In-patient (Normal)	1490	120	3.41	123.41	183880.9
EmOC	In-patient (Normal)	690	690	3.41	693.41	478452.9
	In-patient (with lab test)	63	690	3.41	693.41	43684.83
Gynecological conditions	In-patient (Normal)	1363	690	3.41	693.41	945117.83
ARI	In-patient (normal)	304	265	3.41	268.41	81596.64
	In-patient (with lab test)	21	265	3.41	268.41	5636.61
Diarrhea	Out-patient (normal)	14943	198	3.41	201.41	3009669.63
	Out-patient (with lab test)	1207	198	3.41	201.41	243101.87
	In-patient (Normal)	575	198	3.41	201.41	115810.75
	In-patient (with lab test)	19	198	3.41	201.41	3826.79
Eye infection/disease	In-patient (normal)	273	60	3.41	63.41	17310.93
Dysentery	Out-patient (normal)	9145	176	3.41	179.41	1640704.45
	Out-patient (with lab test)	549	176	3.41	179.41	98496.09
	In-patient (normal)	1	176	3.41	179.41	179.41
	In-patient (with lab test)	1	176	3.41	179.41	179.41
Tuberculosis	In-patient (normal)	47	9360	3.41	9363.41	440080.27
	In-patient (with lab test)	26	9360	3.41	9363.41	243448.66
Family planning for male	Out-patient (normal)	447	500	3.41	503.41	225024.27
	Out-patient (Lab test)	27	500	3.41	503.41	13592.07
Family planning	Out-patient (normal)	3220	365	3.41	368.41	1186280.2

for female	Out-patient (Lab test)	193	365	3.41	368.41	71103.13
	In-patient (Normal)	295	365	3.41	368.41	108680.95
Abdominal pain (e.g. Appendicitis)	In-patient (Normal)	180	1470	3.41	1473.41	265213.8
	In-patient (surgery)	13	4314	3.41	4317.41	56126.33
Anemia	In-patient (Normal)	64	282	3.41	285.41	18266.24
Hypertension	In-patient (Normal)	49	150	3.41	153.41	7517.09
Poisoning	In-patient (Normal)	149	2980	3.41	2983.41	444528.09
Assault (Physical)	In-patient (Normal)	564	150	3.41	153.41	86523.24
	In-patient (with surgery)	245	225	3.41	228.41	37585.45
Other conditions (ovarian tumor, thyroid tumor)	In-patient (normal)	1324	1879	3.41	1882.41	2492310.84
Total		93863				23392841.8

Table A 2.1.10.1. Amount of time spent by providers and staffs on a day obtained through Diary Method

Designation of persons	For non- clinical activities (minutes)	Out-patients			In-patients			Total amount of time spent (minutes)
		Number of patients seen	Total amount of time	Amount of time/patient	Number of pts seen	Total amount of time	Amount of time/patient	
Consultant 1								
Consultant 2								
Consultant 3								
Consultant 4								
Average of consultant time								
M. O. 1	60	48	210	4.375	10	60	6	330
M. O. 2	40	40	120	3	40	120	3	280
M. O. 3	2	73	155	2.13	22	33	1.5	191
M. O. 4	20	100	240	2.4	0	0	0	260
M. O. 5								
M. O. 6								
Average of M. O.'s time								
Nurse 1	65				200	240	1.2	305
Nurse 2	75				196	240	1.22	315
Nurse 3	72				165	240	1.45	312
Nurse 4	87				205	240	1.17	327
Nurse 5	69				232	240	1.03	309
Average of Nurse's time								
Paramedic 1								
Paramedic 2								
Average of Paramedic's time								
Technician 1	25	27	213	7.89				238
Technician 2	40	4	135	33.75				175
Technician 3								
Average of Technician's time								

Table A 2.1.10.2. Amount of time spent by providers and staffs (general) per patient obtained through Time Motion Observations at UHC, Tungipara Upazila

Designation of persons	Out-patients			
	Disease/condition	Number of patients	Total amount of time	Amount of time/ patient
Consultant 1				
Consultant 2				
Overall of consultant time				
M. O. 1	Gyne, Scabies, Weakness, Acute Abdomen, Vomiting,	5	21	4.2
M. O. 2	Diarrhea, Cold cough, Scabies, Mumps,	5	16	3.2
M. O. 3	Headache, Anemia, Chest pain,	5	29	5.8
M. O. 4	Body pain, Fever, cough, Scabies, Ear pain, Weakness	5	22	4.4
Overall of M. O.'s time				
Nurse 1	Poisoning, Diarrhea, Burn, Hernia, RTA	5	285.6	
Nurse 2	Fever, RTA, Asthma, Typhoid, Diarrhea	5	35	7
Nurse 3	Diarrhea, Hernia, RTA, Pneumonia, Burn 5	5	27	5.4
Nurse 4	Appendicitis, Diarrhea, Chest pain, Gyne	5	21	4.2
Nurse 5	Pneumonia, Cutting injury, RTA, Gyne	5	43	8.6
Average of Nurse's time				
Paramedic 1				
Paramedic 2				
Average of Paramedic's time				
Technician 1	Urine test, CBC, HBsAg, Blood group	5	150	30
Technician 2	Teeth disease,	5	71	14.2
Technician 3				
Average of Technician's time				

Table A2.1.10.3. Use of time for laboratory testing at UHC, Tungipara (Time motion observations)

Name of test (with name of patient)	Person 1		Person 2		Person 3		Equipment	
	Designation	Time spent	Designation	Time spent	Designation	Time spent	Name of equipment	Time spent
Hb% Blood group (Mrs Laigu Begum)	Lab Technologist	30					Microscope, Hemoglobin bow	
TC, DC, Blood group, HBsAg, Urine (Mrs Rikta Begum)	Lab Technologist	60					Microscope, Hemocytometer, C Machine	
CBC, Urine (Mustaem)	Lab Technologist	60					Microscope, Hemocytometer, C Machine	

Table A 2.1.10.4. Use of time for surgery at UHC, Tungipara (Time motion observations)

Provider	Patient 1			Patient 2			Patient 3		
	Name.			Name.			Name.		
	Disease.			Disease.			Disease.		
	From	To	Total time spent	From	To	Total time spent	From	To	Total time spent
Surgeon	9.3	10.2	45	10.3	11.2	35	12.1	12.4	30
Medical Officer	9.3	10.2	45				12.1	12.1	30
Anesthetist									
Medical Assistant									
Nurse	9	10.3	1.3	10.3	11.3	60	12	12.4	40
Aya	9	10.4	1.4	10.3	11.4	1.05	12	12.5	45
Other (Specify)									
Anaesthesia Machine with accessories & Haothene Vaporizer									
OT Table with light	9.3	10.2	45	10.3	11.2	35	12	12.4	40
Surgeon									

Table A 2.1.10.5. Amount of time spent by providers for one patient by disease at UHC, Tungipara Upazila obtained through group interview

Name of disease/ condition	First visit	Second visit
a) Maternal Health		
- ANC 1	15	10
- ANC 2	10	10
- ANC 3	10	10
- Delivery care	15	10
- EmOC	10	10
- Abortion	15	15
- Post abortion care	15	10
- PNC	15	10
c) STI/RTI		
- Prevention and management of STI/RTI	10	10
ARI	10	10
Diarrohea	7	7

Table A2.1.11. Number of patients who visited the UHC by disease and year in Tungipara Upazila

Name of disease/ condition/service	2009			2010			2011		
	Out-patient	In-patient	Total	Out-patient	In-patient	Total	Out-patient	In-patient	Total
a) Maternal Health	3453	0	3453	4058	0	4058	55333	0	
- ANC 1									55333
- Delivery care	0	573	573	0	636	636	0	1043	1043
- EmOC (Obstructed labor)	0	487	487	0	470	470	0	753	753
- Abortion	0	0	0	0	0	0	0	0	0
- PNC	0	1046	1046	0	1924	1924	0	1490	1490
c) Pelvic inflammatory disease	0	0	0	0	0	0	0		
- Prevention & management of STI/R TI, UTI, PID								0	0
- Prevention of HIV/AIDS	0	0	0	0	0	0	0	0	0
ARI	0	156	156	0	270	270	0	325	325
Bronchial asthma	0	69	69	0	84	84	0	0	0
Diarrhea	0	615	615	0	373	373	16150	594	16744
Dysentery	0	2	2	0	2	2	9694	2	9696
Peptic Ulcer	0	0	0	0	0	0	0	0	0
Abdominal pain	0	169	169	0	175	175	0	193	193
Eye infection	0	0	0	0	0	0	0	273	273
Ear infection	0	0	0	0	0	0	0	0	0
Dental infection	0	0	0	0	0	0	0	0	0
Scabies	0	0	0	0	0	0	0	0	0
Helminthiasis,	0	0	0	0	0	0	0	0	0
cold-cough	0	0	0	0	0	0	0	0	0
Tuberculosis	92	0	92	65	0	65	0	73	73
Family planning for male	370	0	370	846	0	864	474	0	474
Family planning for female	1125	0	1125	3415	0	3415	3413	295	3708
Non-Communicable Disease: Diabetes	0	1	1	0	1	1	0	0	0
Hypertension, CHD	0	35	35	0	50	50	0	49	49
Arthritis	0	0	0	0	0	0	0	0	0
Assault/Injury	0	647	647	0	719	719	0	809	809
Road traffic accident (RTA)	0	0	0	0	0	0	0	0	0
Anemia	0	32	32	0	26	26	0	64	64
Viral fever, Pyrexia of unknown origin)	0	0	0	0	0	0	0	0	0
Rheumatic fever	0	0	0	0	0	0	0	0	0
Appendicitis, Acute abdomen	0	0	0	0	0	0	0	0	0
Poisoning	0	109	109	0	113	113	0	149	149
Blood disorders	0	0	0	0	0	0	0	0	0
Gynecological/Maternal disease	0	790	790	0	991	991	0	1363	1363
IUD	0	0	0	0	0	0	0	0	0
PUO	0	359	359	0	276	276	0	0	0
Hernia	0	0	0	0	0	0	0	0	0
Others (tumor)	0	987	0	0	1304	1304	0	1324	1324

Total	58795	6077	64872	64722	7414	72136	85064	8799	93863
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Table A 2.2.1. Cost of human resources in FWCs of Tungipara Upazila by designation

Designation	FWC-1 (Tungipara, Dumuria)			FWC-2 (Tungipara, Gopalpur)			Average Salary in FWCs (BDT)
	Number of employed Persons	Monthly salary and allowances (BDT)	Annual Salary and allowances (BDT)	Number of employed Persons	Monthly salary and allowances (BDT)	Annual Salary and allowances (BDT)	
Medical Officer							
SACMO	1	24670	296040	1	10130	121560	208800
Aya	1	11333	135996	1	11433	137196	136596
Guard			0				
FPI	1	7665	91980	1	7665	91980	91980
Total	3			3			437376

Table A 2.2.2 Cost of important equipments at Tungipara Upazila

Name of the equipment	Year of procurement	Total number	Price at procurement (BDT)	Total expected life years	Equipment required after SBP	Total Value	Annualized Value	Value of additional inputs (BDT)	Annualize value of additional inputs (BDT)
FWC Dumuria									
B.P. machine Aneroid	2009	1	1000	4	1	1000	250	250	
Stethoscope	2009	2	1000	4	1	2000	500	500	
Weight machine	2009	1	7500	7	1	7500	1071.4	1071.4	
Total.							1821.43		
FWC Gopalpur									
B.P. machine Aneroid		1	1000	2	1	1000	500	500	
Bucket, plastic (large, medium, small)		1	250	2		250	125	0	
Gauge cutting scissors		1	350	7	2	350	50	100	
Weight machine		1	7500	7	2	7500	1071.4	2142.9	
Fan		1	2000	5	5	2000	400	2000	
Light		1	350	1	10	350	350	3500	
Delivery Table		1	7500	5	3	7500	1500	4500	
Total.							3996.42		

Table A2.2.3. Cost of furniture and fixtures of FWC-1 (Dumuria) and FWC-2 (Gopalpur)

Name of the furniture	Total number	Price per Unit (BDT)	Total value (BDT)	Total expected life years	Annualized value (BDT)	Furniture required for SBP	Value of Additional furniture	Annualized value of additional furniture
FWC Dumuria								
Almirah	2	15000	30000	20	1500	4	60000	3000
Table	1	3000	3000	15	200	3	9000	600
Chair Steel	1	1500	1500	10	150	4	6000	600

Chair Wooden	1	1500	1500	10	150	4	6000	600
Chair Plastic	4	500	2000	2	1000	10	5000	2500
Tool	2	300	600	5	120	2	600	120
Bench wooden	1	1000	1000	10	100	5	5000	500
Generator	1	24500	24500	15	1633.33		0	0
Iron Cot	1	5500	5500	5	1100	10	55000	0
Total.					5953.33			
FWC Gopalpur								
Steel Almirah	3	18000	54000	12	4500	5	90000	7500
Office Table	2	15000	30000	10	3000	6	90000	
Saline Stand	1	800	800	10	80		0	
Examination Table	1	10000	10000	10	1000	4	40000	
Bench	3	1000	3000	10	300		0	
Plastic chair	1	350	350	2	175	24	8400	
Table	5	1500	7500	6	1250		0	
Patient Bed	1	10000	10000	18	555.56		0	
Notice Board	1	1200	1200	10	120		0	
Wooden Chair	24	1500	36000	10	3600			
Tool	1	200	200	10	20			
Iron Kit Cabinet	1	950	950	7	135.71			
Total.					14736.27			

Table A2.2.4. Cost of land and space of FWC-1 (Dumuria) and FWC-2 (Gopalpur) of Tungipara upazila

Item	Room Name	Room Number	Existing quantity/amount	Year of purchase/ construction	Unit cost of purchase/ value	Expected life years	Market Value	Annualized value (BDT)
A. FWC Dumuria								
Unused Land			47.875		60000	99	2875500	29015.15
Building			1800		45/sf/year	25	202500	81000.00
Room 1	SACMO		144			25		
Room 2	FWV		144			25		
Room 3	OT		144			25		
Room 4	Post Delivery		144			25		
Room 5	Waiting		420			25		
Room 6	Extra		288			25		
Room 7	Toilet		80			25		
Total.								110015.15
FWC Gopalpur								
Unused Land			41.77		60000/Decimal	99	2506200	25315.15
Building			1410	1981	45/sf/year	25	1586250	63450.00
Room 1	OT		192			25		
Room 2	SACMO		144			25		
Room 3	FWV		144			25		
Room 4	Pharmacist		144			25		
Room 5	Delivery		192			25		

Room 6	doctor		144		25	
Room 7	Waiting		450		25	
Total						88765.15

TableA2.2.5. Cost of supplies and logistics of FWC-1 (Dumuria) and FWC-2 (Gopalpur) of Tungipara upazila in 2011

Item of supplies/logistics	Quantity (to be written in appropriate units)	Current market price (BDT)	Value (BDT)	Number/ Amount required at present	Value (BDT)	Number or amount required after implementation of SBP	Value (BDT)
16. FWC Dumuria							
Gauze	50	25	1250	200	5000	300	7500
Cotton	30	45	1350	20	900	50	2250
Total			2600		5900		9750
17. FWC Gopalpur							
Cotton	24	45	1080				
Total			1080				

Table A2.2.6. Cost of drugs in 2011 by FWCs in Tungipara

Name of Drugs	Quantity received in 2011 (to be written in appropriate units)	Current market price (in BDT per unit)	Value quantity received in 2011
FWC Dumuria			
Tab Metronidazole	6000	1	6000
Tab Ranitidin 150mg	3600	1.5	5400
Tab Entacyd	6000	1	6000
Cap Amoxycilin 250	6000	4.5	27000
Cap Doxycycline 100	1200	2.75	3300
Syp Flucloxacilin	240	47	11280
Syp Erythromycin	180	20	3600
Tab Ferrus Fumaret	24000	1	24000
Tab Vitamin B Com	12000	1	12000
Tab Albendazole	2400	4	9600
Tab Paracetamol	12000	1	12000
Tab Chlorfeniramin	2400	0.5	1200
Tab Salbutamol	1200	0.4	480
Tab Diagipum	600	0.7	420
Tab Cotrimoxazol	6000	2	12000
Tab Ciprofloxacin	2400	14	33600
Amoxicilin Drop	120	30	3600
Chloramfenical Eye Ointment	240	20	4800
Neomycin & Bactrocin	60	15	900
Benzym Benjoit Lotion			0
Total.	86640		177180

FWC Gopalpur			
Tab Metronidazole	6000	1	6000
Tab Ranitidin 150mg	2400	2	4800
Tab Entacyd	6000	1	6000
Tab Ibuprofen 400mg	1200	1.5	1800
Cap Amoxicilin 250	6000	4.5	27000
Cap Doxycycline 100	1200	2	2400
Syp Flucloxacilin	400	47	18800
Syp Erythromycin	240	20	4800
Tab Ferrus Fumaret	24000	0.25	6000
Tab Vitamin B Com	12000	1	12000
Tab Albendazole	2400	4	9600
Tab Paracetamol	12000	1	12000
Tab Chlorfeniramin	2400	0.5	1200
Tab Salbutamol	1200	0.4	480
Tab Diagipum	600	0.7	420
Tab Cotrimoxasol	3600	2	7200
Tab Ciprofloxacin	1200	14	16800
Amoxacilin Drop	120	30	3600
Chloramfenical Eye Ointment	240	30	7200
Chloramfenical Eye drop			0
Neomycin & Bactrocin	60	15	900
Benzym Benjoit Lotion	24		0
Total.	83284		149000

TableA2.2.7. Number of patients who visited the FWC-1 (Dumuria) and FWC-2 (Gopalpur) of Tungipara upazila by disease and year

Disease/condition	2009	2010	2011	Total
18. FWC Dumuria				
a) Maternal Health				
- ANC 1		42	3	45
- ANC 2		30	2	32
- ANC 3		19	1	20
- EmOC			3	3
- PNC		28	3	31
c) STI/RTI				0
- Prevention and management of STI/RTI		244	109	353
ARI		271	314	585
Diarrohea		80	77	157
Family planning for male		2	7	9
Family planning for female		63	56	119
Anemia		101		101
Dysmenorrhoea				0
Child Care		1115	2010	3125

General Patient		4870	3508	8378
Malnutrition			59	59
19. FWC-2 (Gopalpur)				
a) Maternal Health				
- ANC 1		22	61	83
- ANC 2		9	27	36
- ANC 3		3	2	5
- Abortion			2	2
- Post abortion care				0
- PNC		13	45	58
c) STI/RTI				0
- Prevention and management of STI/RTI		60	88	148
- Prevention of HIV/AIDS				0
ARI		105	262	367
Family planning for female		104	87	191
Anemia		13	16	29
Dysmenorrhoea		12	20	32
Child Care		213	234	447
General Patient		1142	1030	2172
Malnutrition			7	7

TableA2.2.8. Amount of time spent by providers and staffs on a day in FWC-1 (Dumuria) and FWC-2 (Gopalpur) of Tungipara upazila obtained through diary method

Designation of persons		Outpatients		Inpatient		Total Amount of time spent
		Number	Total amount of time (Min)	Amount of time/ Patient		
FWC-1 (Dumuria)	For non-clinical activities					
SACMO		40	138	3.45	138	276
FWC-2 (Gopalpur)	For non-clinical activities					
SACMO						

Table A2.2.9. Amount of time spent by providers and staffs per patient in FWC-1 (Dumuria) and FWC-2 (Gopalpur) of Tungipara upazila obtained through time motion observations

Designation of persons	Number of patients	Total amount of time	Amount of time/patient
FWC-1 (Dumuria)			
SACMO	12	31	2.58
FWC-2 (Gopalpur)			
SACMO	7	16	2.29

Table A2.2.10. Amount of time spent by providers for one patient by disease in FWC-1 (Dumuria) and FWC-2 (Gopalpur) of Tungipara upazila obtained through group interview

Name of disease/ condition	First visit	Second visit
FWC-1 (Dumuria)		
c) STI/RTI		
- Prevention and management of STI/RTI	7	6
- Prevention of HIV/AIDS		
ARI	8	6
Diarrohea	10	5
eye infection	5	5
Scabies	7	5
helminthiasis,	4	4
cold-cough	5	4
Total.	46	35
FWC-2 (Gopalpur)		
- Post abortion care	35	25
Diarrohea	20	15
Scabies	20	10
helminthiasis,	12	7
cold-cough	15	10
Family planning for male	35	25
Family planning for female	35	20
Total.	172	112

Table A3.2.1. Cost of human resources in private clinic of Tungipara

	Designation of employed Persons	Monthly salary and allowances (BDT)	Annual Salary and allowances (BDT)
Private Clinic			
	Nurse	4000	48000
	Nurse	4000	48000
	Aya	3000	36000
Total.			132000

TableA3.2.2. Cost of important equipments at private clinic of Tungipara Upazila

Name of the equipment	Total number	Price at procurement (BDT)	Total expected life years	Equipment required after SBP	Total Value	Annulized Value
Refregarator	1	65000	6		65000	10833.33
Electric Sacker Machine	1	85000	1		85000	85000
Oxygen cylinder Machine	1	22952	5		22952	4590.4
Flowmeter	1	4500	1		4500	4500
OT Light 4 Bulb	1	25000	3		25000	8333.333
OT Light 1Bulb	2	15000	3		30000	10000
OT Table	1	7500	2		7500	3750
Auto clab machine	1				0	
baby weight machine	1	1000	2		1000	500
Weight machine	1	300	1		300	300
Patient Trolley	1	4500	5		4500	900
Generator	1	24500	5		24500	4900
Electric Needle Crush x Syringe pump machine	1				0	
Sterilizer	1	250	2		250	125
Trolley	1	4000	5		4000	800
AC1.5 ton	1	50000	15		50000	3333.333
Total.	17					137865.4

Table A3.2.3. Cost of furniture and fixtures of (private clinic) Tungipara

Name of the furniture	Total number	Price per unit	Total value (BDT)	Total expected life years	Annualized value (BDT)	Furniture required for SBP	Value of Additional furniture	Annualized value of additional furniture
Table	4	2500	10000	15	666.666667		0	0
Chair Plastic	12	500	6000	2	3000		0	0
Chair Other	5	1450	7250	8	906.25		0	0
Almirah	1	18000	18000	12	1500		0	0
Examination Table	1	5000	5000	10	500		0	0
Patient Trolley	1	4500	4500	5	900		0	0
Fan	6	2000	12000	5	2400		0	0
AC	1	65000	65000	15	4333.33333		0	0

Locker	8		0			0	
Patient Bed	8	5500	44000	5	8800	0	0
Saline Stand	9		0			0	
Total.	56				23006.25	0	0

Table A3.2.4. Cost of land and space of private clinic of Tungipara upazila

Item	Existing quantity/amount	Year of purchase/construction	Unit Cost of purchase /construction	Expected life years	Current market value	Annualized Value
Unused Land	3.87		60000	99	232200	2345.45
Building	1800		45/sf/year	50	4050000	81000
Room 1				50	0	0
Room 5				50	0	0
Total.						83345.45

Table A3.2.1.5. Utility service and miscellaneous of private clinic of Tungipara

Item	Monthly bill (in BDT)	Annual Bill
Electricity use	1500	18000
Gas use	2600	31200
Water use	150	1800
Cost of maintenance		0
Generator	3000	36000
Total.		87000

TableA3.1.1. Cost of human resources of UHC of Rangunia Upazila

Category	Designation	Number of person	Total monthly salary and allowances	Annual Value
Admin	UH &FPO	1	36475	437700
Clinical	RMO	0		0
Clinical	Jr Consultant (Medicine)	1	16990	203880
Clinical	Jr Consultant (Paediatrics)	1	28760	345120
Clinical	Jr Consultant (Cardiology)	1	34615	415380
Clinical	Jr Consultant (Skin & VD)	1	35695	428340
Clinical	Medical Officer	1	23860	286320
Clinical	Medical Officer	1	33300	399600
Clinical	Medical Officer	1	16990	203880
Clinical	Medical Officer	1	16990	203880
Clinical	Medical Officer	1	16990	203880
Clinical	Medical Officer	1	16500	198000
Clinical	Medical Officer	1	18189	218268
Clinical	Medical Officer	1	18189	218268
Clinical	Medical Officer	1	16500	198000
Clinical	Medical Officer	1	18158	217896
Clinical	I.M.O.	1	16990	203880
Clinical	E.M.O. (Emergency Medical Officer)	1	16990	203880
Clinical	Medical Assistant (all)			0
Clinical	Health Assistant	0		0
Clinical	Nursing Supervisor	1	26725	320700
Clinical	Senior Staff Nurse (All)	0	0	0
Clinical	Assistant Nurse (all)	0	0	0

Clinical	Emergency Attendant	1	7560	90720
Clinical	Herbal Assistant	1	8050	96600
	Pharmacist	1	24670	296040
Clinical	Ward Boy	1	7390	88680
Clinical	Ward Boy	1	7390	88680
Clinical	Aya	1	10186	122232
Clinical	Ward Boy	1	7390	88680
Clinical	Aya	1	10186	122232
Clinical	Sr Staff Nurse	1	26186	314232
Clinical	Sr Staff Nurse	1	25396	304752
Clinical	Sr Staff Nurse	1	17342	208104
Clinical	Sr Staff Nurse	1	17342	208104
Clinical	Sr Staff Nurse	1	12209	146508
Clinical	Sr Staff Nurse	1	12209	146508
Clinical	Sr Staff Nurse	1	12209	146508
Clinical	Sr Staff Nurse	1	12209	146508
Clinical	Sr Staff Nurse	1	12209	146508
Clinical	Sr Staff Nurse	1	17342	208104
Clinical	Sr Staff Nurse	1	17342	208104
Clinical	Sr Staff Nurse	1	17676	212112
Supporting/admin	Pharmacist	1	27930	335160
Supporting/admin	Statistician	1	16955	203460
Supporting/admin	Store keeper	0		0
Supporting/admin	Head assistant cum Accountant	0		0
Supporting/admin	Cashier	1	15367	184404
Supporting/admin	Head Assistant	0		0
Supporting/admin	Health Inspector	1	15522	186264

Supporting/admin	Assistant Health Inspector	1	14379	172548
Supporting/admin	TLCA	1	13728	164736
Supporting/admin	Compounder	1	30825	369900
Supporting/admin	Junior Mechanic	1	8297	99564
Supporting/admin	Sweeper/Cleaner (all)	0		0
Supporting/admin	Gardener	0		0
Supporting/admin	Driver (all)	0		0
Supporting/admin	Guard (all)	0		0
Supporting/admin	MLSS	1	10287	123444
Supporting/admin	MLSS	1	11382	136584
Supporting/admin	MLSS	1	11541	138492
Supporting/admin	MLSS	1	7390	88680
Supporting/admin	Health Inspector	2	16092	193104
Supporting/admin	Sanitary Inspector	1	13740	164880
Supporting/admin	Cook	1	7390	88680
Supporting/admin	Sweeper/Cleaner	1	10958	131496
Supporting/admin		1	11154	133848
Supporting/admin		2	7390	88680
Supporting/admin	Store Keeper	1	15591	187092
Subtotal for A				11487804

B. Manpower for family planning

Category	Designation	Number of person	Total monthly salary and allowances	Value
FP	AFPO	1	18500	222000
	Senior FWV	1	19164	229968
Subtotal for B				451968

C. Manpower for surgery

Category	Designation	Number of person	Total monthly salary and allowances	Value
General surgery	Jr Consultant (Surgery)	0	0	0
Anesthesia	Jr Consultant (Anesthesia)	1	16990	203880
Gynae	Jr Consultant (Gynae)	1	35897	430764

Orthopedic surgery	Jr Consultant (Orthopedics)	1	16990	203880
Dental surgery	Dental Surgeon	1	18158	217896
Surgery	O.T. Attendant	1	7560	90720
Subtotal for C				1147140

D. Diagnostics

Category	Designation	Number of person	Total monthly salary and allowances	Value
Dentistry Lab	Medical Technologist (Dental)	1	11935	143220
Diagnostics (Radiology)	Medical Technologist (Rad)	1	19194	230328
Diagnostics (Lab)	Medical Technologist (Lab)	1		0
Diagnostics (EPI)	Medical Technologist (EPI)	1	15932	191184
Diagnostics	Cardiographer	1	8297	99564
Diagnostics	Lab Attendant	1	7560	90720
Diagnostics	Medical Technologist (TFGO)	1	13790	165480
Diagnostics	Technologist	1	13740	164880
Subtotal for D				1085376

E. Manpower for special disciplines

Category	Designation	Number of person	Total monthly salary and allowances	Value
	Jr Consultant (Ophthalmology)	1	21202	254424
	Jr Consultant (ENT)	1	29540	354480
Subtotal for E				608904

Total cost of human resources (A+B+C+D+E)

Category	Designation	Number of person	Total monthly salary and allowances	Value
GRAND TOTAL				14781192

TableA3.1.2. Cost of general equipments at UHC of Rangunia Upazila

Name of the equipment (Vintage)	Year of procurement	Total number	Price at procurement (BDT)	Total expected life years	Equipment required after SBP	Value	Annualized value
Air Cooler, Window type							
Air Cooler, split type	2005	1	65000	15	2	65000	4333.3333
B.P. machine Aneroid	2010, 11	22	1000	5	50	22000	4400
Hanging weight machine			5000	6		0	0
Ambo bag	2009	1	2500	2	2	2500	1250
Boiling water sterilizer			250	6		0	0
Bucket, plastic (large, medium, small)				8		0	0
Examination table			3000	7		0	0
Patient stretcher			1700	2		0	0
Hammer percussion			75	2		0	0
Instrument cabinet			44000	4		0	0
Fan	2002	45	2000	2	60	90000	45000
Light		75	350	7	80	26250	3750
Computer	2011	2	42000	6	4	84000	14000
Printer	2010	1	7500	8	4	7500	937.5
Fax Machine							
UPS	2012	1	3200	4	4	3200	800
IPS							
Multi Media Projector							
Public address system (hand mike)							
Photocopier							
Telephone		3	1000	7	20	3000	428.57143
Nebulizer	2007	7		2	4	0	0
Generator	1996	1		2	2	0	0
							74899.405

Table A3.1.2.1. Cost of diagnostic equipments at UHC of Rangunia Upazila

Name of the equipment (Vintage)	Year of procurement	Total number	Price at procurement (BDT)	Total expected life years	Annualized value
X-Ray Machine (300 M.A.) with accessories	2005	1	650000	10	65000
X-Ray Machine (100 M.A.) with accessories	1992	1	650000	15	43333.333
X-Ray View box. Double "	2008	1	2600	10	260
X-Ray View box. Double " Stand	2008	1		10	0
Air Cooler, Split type (for X-Ray machine)	2005	1	65000	2	32500
ECG Machine	2007	1	150000	10	150000
Haemocytometer	2007	2	2600	10	5200
Haemoglobinometer	2004, 2007	4	650	10	2600
Test tube holder	9	4	20	2	80
					298973.33

TableA3.1.2.2 Cost of surgical equipments at UHC of Rangunia Upazila

Name	Year of procurement	Total number	Price (BDT)	Total expected life years	Value	Annualized value
Anesthesia Machine with accessories & Haothene Vaporizer	2006	1	45000	10	45000	4500
Dehumidifier	2005	1	100000	10	100000	10000
Diathermy machine	2010	1	65000	2	65000	32500
Nitrous oxide cylinder	2011	2	16000	20	32000	1600
O.T. Light, Ceiling 9 bulb	2009, 10	2	45000	4	90000	22500
Obstetric Delivery Table	2007	1	7500	2	7500	3750
Oxygen cylinder	2009	27	2295	27	62965	2295.2
Oxygen cylinder trolley			1600	2	0	800
Oxygen flow meter	2009	1	4500	10	4500	450
Patient Trolley			2200	2	0	1100
Pulse oxymeter			3000	1	0	3000
Sucker machine 250 w/400 watt	2000. 04	3	85000	9	255000	28333.333
Artery forceps curved -5"	2008, 12	10	120	20	1200	60

Artery forceps straight -5"	2008, 12	10	120	40	1200	30
Bandage cutting scissors	2012	2	200	4	400	100
Bowl SS 10		2	900	2	1800	900
Curved cutting needle	2009	10	120	6	1200	20
Dissecting forceps plain and toothed	2005	1	50	2	50	25
Foreign body hook			170	7	0	24.285714
Instrument tray 10"-12"	1982	2	500	16	1000	62.5
Mouth gag rubber			250	2	0	125
Needle holder	2010, 12	22	120	2	2640	60
Rubber sheet Yard			100	1	0	100
Rubber tourniquet			15	2	0	7.5
Sinus forceps	2008	8	120	1	960	120
Spirit lamp		1	120	7	120	17.142857
Sponge holding forceps	2011	10	120	2	1200	60
Sterilizer small			2600	2	0	1300
Tissue forceps			120	2	0	60
Air way (different sizes)			100	6	0	16.666667
Cuscors vaginal speculum	9	16	350	2	5600	175
D&C set	2009	1	2600	4	2600	650
Dissecting forceps (plain / toothed)	2009	25	200	2	5000	100
Dressing bowl			100	1	0	100
Dressing tray (shallow) SS			250	2	0	125
Drum sterilizer (shallow) SS			1250	1	0	1250
Examination table			3000	7	0	428.57143
Patient stretcher			1700	2	0	850
Resuscitator			4200	2	0	2100
Forceps sponge holding (plain)	2009	8	120	1	960	120
Gauge cutting scissors	2009	3	350	2	1050	175
Hemostat forceps	2009	7	120	3	840	40
Hammer percussion			75	2	0	37.5
Instrument cabinet			44000	4	0	11000

Instrument tray	2009	4	250	2	1000	125
Kidney tray	2009	11	180	5	1980	36
Sims Vaginal Speculam			350	2	0	175
Suction unit portable (manual)			8500	6	0	1416.6667
Artery Forcep (All)	2009	62	120	1	7440	120
Total						132940.7

TableA3.1.2.3. Cost of equipments for specific discipline at UHC of Rangunia Upazila

Name of the equipment (Vintage)	Year of procurement	Total number	Price at procurement (BDT)	Total expected life years	Value	Annualized value
Ophthalmoscope		1	9500	2	9500	4750
Nasal Speculum		1	350	4	350	87.5
Aural Syringe		1	500	7	500	71.428571
						4908.9286

TableA3.1.2.4. Cost of equipments of family planning

Name of the equipment (Vintage)	Year of procurement	Total number	Price (BDT)	Total expected life years	Value	Annualized value
Instrument Tray	4		650000	2		325000
Gauge Cutting Scissor	3		650000	5		130000
Ligation Sewing cutting scissors	1		2600	2		1300
Uterine Tenaculum	8			6		0
Abdominal Retake	31		65000	2		32500
Metal Chathater	6		50000	7		7142.8571
Succer Machine	1		65000	6		10833.333
Vaginal coscos	5		45000	8		5625
Vaginal cuscus	11		100000	2		50000
Tissue bar safe	13	8	65000	4		16250
Artery forceps curved	9		150000	2		75000
Artery toothed (straight)	1		2600	1		2600
Pelvic Meter	1		650	2		325
Utarine Sound	3		16000	1		16000

Lipter Jar	2		45000	7		6428.5714
IUD Removal forcef	1		7500	2		3750
Niddle Curve (Cutting and Round)	68	58	9500	2		4750
Stem Stalizer	2	1	22952	1		22952
EPI Rack	4		1600	2		800
D & C Set	1		4500	3		1500
Machine stalizer Tray	9		2200	2		1100
Kidney Tray	11		3000	4		750
Towel Clip (Big)	48		65000	2		32500
Towel Clip (Small)	5		85000	5		17000
Thermometer	1		120	2		60
Niddle Staite	20		120	6		20
Scissor OT	48	40	200	2		100
Hemostate forcef	7		1000	7		142.85714
Tunk the pressure	3		1800	6		300
Ambu bag	1		120	8		15
Oxigen cyllinder with trolly	1		50	2		25
Instrument trolly	1		170	4		42.5
Sponge holding forcef	8		5000	2		2500
Bek cork	24	22	500	1		500
Baby scale hanging	1		250	2		125
Mosquito forcef	79	70	350	1		350
Tuth Dessecting forcef	25	20	120	7		17.142857
Plain dessecting	16		100	2		50
Atary forcef stait (Big)	31		15	2		7.5
Atary forcef stait (Medium)	12		120	1		120
Atary forcef stait (small)	19		120	2		60
Scissor Small -Vasectomy	24		120	3		40
Ring forcef - Vasectomy	20		2600	2		1300
Surf forcef - vasectomy	21		1000	4		250
U forcef - Norplant			20	2		10
Talker with cannula	43	42	40	5		8
Gally Pot	4		20	2		10
BP handle	20	19	220	6		36.666667

Test Tube Holder	4		120	2		60
MR Syringe	2		120	7		17.142857
Fitus Scope	3			6		0
Rubber Catheter	5		100	8		12.5
Syringe 50cc	2		2500	2		1250
Spirit Lamp	1		500	4		125
Scissor curve	19		250	2		125
Small Scissor	24			1		0
Plain catheter	7		350	2		175
Autoclave machine	3		2600	1		2600
Machinery Drum	7		200	7		28.571429
Machinery Trolley	1		100	2		50
IUD kit	3		250	2		125
NSV set	19		1250	1		1250
Stethoscope	2		3000	2		1500
BP Machine	2		1700	3		566.66667
OT Light	2		4200	2		2100
MVA Kit	1		120	4		30
Total						780211.31

Table A3.1.3. Cost of furniture and fixtures at UHC of Rangunia Upazila

Name of the furniture	Year of procurement/purchase	Total number	Price per unit (BDT)	Total value (BDT)	Total expected life years
Patient Table			5000		
Patient Table			5000		
Cushion Chair		1	2500	2500	3
Cushion Chair			2500		
Cushion Chair without hand			2000		
Cushion Chair without hand			2000		
Revolving Chair		4	2500	10000	3
Wood Chair with hand		29	800	23200	10
Wood Chair without hand		23	500	11500	10
Half Secretary Table			3500		
Bench		1	800	800	5
Wood Bench			800		
Wood Bench			800		
Display Board		3	1200	2600	5
Display Board			1200		
Emergency Duty Roster Board			1200		
Tool Wood		9	200	1800	3

Tool Wood			200		
Tool Steel		20	400	8000	8
Tool Spring		3			
Table		20	1000	20000	12
Bed side Table					
Table Wood			1500		
Table Wood			1500		
Tent Plain Cell			5000		
Tent Plain Cell			5000		
Cot		46	5000	230000	10
Iron Scot Bed			5500		
Iron Scot Bed			5500		
Dispensing Table			4500		
Laboratory Table			4500		
Bedside Locker Steel		53	4000	212000	10
Saline stand (Steel)			800		
Saline stand (Steel)			800		
Food Trolley (Steel)		3	4000	12000	3
Food Trolley (Steel)			4000		
Conference Table			25000		
Full Secretariat Table		2	15000	30000	4
Full Secretariat Table			15000		
Half Secretariat Table		1	7000	7000	4
Mid Set (Wood)			1200		
Bed Side Skin			1800		
Medicine Cabinet		4	6500	26000	6
Medicine Trolley			1800		
Patient Trolley			4500		
Patient Trolley			4500		
Almirah Steel		24	18000	432000	15
Almirah Wood		20	4000	80000	10
File Cabinet		9	3000	27000	8
Kuf Board Steel			14000		
Status Chart			1500		
Status Chart			1500		
Rack		4	1000	4000	5
Wooden Rack		6	1000	6000	5
Steel Rack		4	1500	6000	8
Small Rack		2	500	1000	5
Computer Table		1	2500	2500	3

Total				1155900	
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Table A3.1.4. Cost of land and space of UHC of Rangunia Upazila

Item	Description	Room Number	Existing quantity/amount (sf)	Year of purchase/construction	Cost of purchase/construction	Expected life years	Current market value	Annualized value
Unused land			202572	1962	2000000	99	25000000	252525.3
Building				1965		30		-
Room 1	RMO	1	150	2006		30	60	9000
Room 2	MO-Male	1	150	2006		30	60	9000
Room 3	MO-Female	1	96	2006		30	60	5760
Room 4	MO	1	96	2006		30	60	5760
Room 5	Dental Surgeon	1	180	2006		30	60	10800
Room 6	MO	1	150	2006		30	60	9000
Room 7	Consultant	1	180	2006		30	60	10800
Room 8	Gynae	1	96	2006		30	60	5760
Room 9	Laboratory	1	180	2006		30	60	10800
Room 10	Emergency	1	150	2006		30	60	9000
Other building and building space			13672				60	820320
Total		10	220428					1158525

Note. Total amount of land is 5 acres or 500 decimals or $531 \times 348 = 219000$ sq ft. for UHC. Of this amount, 202572 sq ft remains unused and 15000 sq ft has been used for constructing the buildings for UHC. The value of unused land is assumed to be Taka one lakh/decimal. The rental rate per sq ft of a building per annum is assumed to be Taka 60 in Rangunia.

Table A3.1.5. Utility service and miscellaneous of UHC of Rangunia Upazila

	Average monthly bill in Taka	Additional amount required for SBP (in Taka)
Electricity	35000	
Gas	4000	
Ambulance cost (Fuel and Maintenance cost)	23,000	
Maintenance cost	4000	
Total	66000	

Table A3.1.6.. Cost of supplies and logistics of Rangunia Upazila in 2011

Item of supplies and logistics	Quantity received in 2011	Price per unit (BDT)	Value (BDT)
Blood glass slide	30	1995	59850
Gauze		1000	
Cotton	200 Pound	180	36000
Cloth, duster			
D&C set			
Foley's catheter different size		60	
Needle of different size and shape	30 Dozen	80.25 TK Per Dozen	2407.5
Stomach wash tube	1	50	50
Total			98307.5

Table A3.1.7. Cost of drugs in UHC of Rangunia upazila in 2011

Name	Quantity in 2011	Price per unit (BDT)	Value (BDT)
Tab Metronidazole 400 mg	40847	1	40847
Tab Vitamin B1	157500	1	157500
Tab Hyoscine N Butyl Bromide	1885	3.45	6503.25
Tab Ranitidin 150 mg	51650	2	103300
Tab Antacyd	101394	1	101394
Tab Cotrim 400 mg	80800	1.5	121200
Tab Ibuprofen 400 mg			
Cap Tetracycline 200 mg	35019	2.2	77041.8
Cap Indomethacin		1	
Cap Cephradine 500 mg	800	12.5	10000
Cap Flucloxacillin 500 mg	13100	10.5	137550
Cap Amoxicillin 250 mg	25036	3.5	87626
Cap Amoxicillin 500 mg		2.75	
Cap Doxycycline 100 mg	16669	6.6	110015.4
Syp Metronidazole	200	25	5000
Syp Histacin	500	10	5000
Tab Histacin 4 mg	80428	0.5	40214
Tab Penicillin	62119	28.97	1799587.43
Syp Amoxicillin	1380	47	64860
Syp Flucloxacillin	654	60	39340
Syp Mebendazole			
Dorby Lotion	390	50	19500
Whitfield Ointment	70 kg	40	2800
Inj Dexamethacin		10	
Inj Cotson	1210	10	12100
Surgical gloves (Sterile)	760	26	19760
IV Canula	1100	36	39600
Micropore 3"	80	60	4800
Micropore 2"	34	60	2040
Disposable syringe	7500	5	37500
ORS	73430	5	367150
Bleaching Powder		150	
Inj Cephtriaxone 1 gm	1100	160	176000
Inj Stemetil			
Salbutamol Solution	375	120	45000
Syp Cotrim	1650	21.5	35475
Syp Paracetamol	3450	20	69000
Syp Erythromycin	830	60	49800
Tab Zinc Sulphate	2000	2	4000
Fetorolac		10	
Tab Levofloxacin		15	
Tab Paracetamol 500 mg	163797	1	163797
Tab Histacin		0.5	
Tab Albendazole		4	
Tab Omeprazol		4	
Tab Ferrous Sulphate		2	
Chloramphenicol Eye Drop		30	
Liba misule 15mg	13000	2	26000
Others			
Total			3981300.88

Table A3.1.8. Average length of stay by disease at UHC, Rangunia (Source: DCI 8 of Set 2)

Name of disease / condition	Year 2011																							
	January		February		March		April		May		June		July		August		September		October		November		December	
	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration	No of patients	Average duration
Delivery	41	1.9	44	1.9	51	1.5	41	1.9	30	2	51	1.5	49	2.2	60	2.3	40	2	71	1.9	29	2.9	35	2.1
Diarrhoeal disease	27	2.3	4	2	101	1.5	99	1.4	112	1.9	78	1.8	72	2	123	2.2	89	2.1	111	2	112	2.5	88	1.2
Acute Abdomen	3	3	4	2	5	2.1	9	2	4	4	5	2.2	4	2.5	8	2.5	7	2.3	-	-	-	-	2	2
Anemia	37	1.9	9	1.9	10	1.5	9	1.9	11	2	8	1.5	12	2.2	6	2.3	12	2	5	1.9	4	1.9	14	2.1
B Asthma	24	4	15	2.7	25	2	17	1.8	16	2.1	17	2.1	28	2.4	-	-	-	-	-	-	-	-	2	4.5
Hypertension	31	3.1	7	2.8	40	3.6	21	3.2	19	-	-	-	-	-	-	-	-	-	-	-	11	3.2	9	4.8
Poisoning	12	3.5	10	8.5	30	2.6	28	2.4	32	2.8	34	2.3	26	1.8	26	2.2	32	2.9	36	2.6	31	2.4	29	1
PUD	9	2.2	13	2.4	18	2	31	1.8	35	2.2	21	2.5	36	2.3	18	2.6	16	2.6	15	2.4	12	2.8	8	2.6
PID, RTI, UTI	13	2.1	4	2.8	-	-	6	1.5	2	2	4	2	13	1.9	6	2.2	8	1.9	8	3.9	49	2	7	1.8
Assault	36	2.2	35	1.6	20	5	18	2.2	22	1.4	19	1.6	21	2.1	18	3	18	2.2	26	1.3	21	1.8	19	2.3
RTA	5	5.6	10	1	22	3.7	18	2	21	3	19	2	23	5	17	3	18	2	22	3	25	1.6	15	2.6
Tumor	43	2	10	1	41	1.5	-	-	-	-	42	2	-	-	-	-	-	-	-	-	6	2.5	2	3

A3.1.9. Imputed cost by disease at UHC, Rangunia

Disease/ Condition	Category of cost	Total patients	Variable cost (in BDT)			Total cost (in BDT)
			Drugs	Logistics/supplies	Total	
ANC-1	Out-patient (normal)	9798	180	3.41	183.41	1797051.18
	Out-patient (with lab test)	1442	180	3.41	183.41	264477.22
Delivery	In-patient (Normal)	490	610	3.41	613.41	300570.9
	In-patient (with lab test)	11	610	3.41	613.41	6747.51
PNC	Out-patient (Normal)	2351	120	3.41	123.41	290136.91
	Out-patient (with lab test)	125	120	3.41	123.41	15426.25
Abortion	In-patient (Normal)	42	690	3.41	693.41	29123.22

Gynecological problems	In-patient (with lab test)	1	690	3.41	693.41	693.41
	In-patient (normal)	97	690	3.41	693.41	67260.77
ARI	Out-patient (normal)	3651	265	3.41	268.41	979964.91
	Out-patient (with lab test)	1051	265	3.41	268.41	282098.91
Diarrhea	Out-patient (normal)	3561	198	3.41	201.41	717221.01
	Out-patient (with lab test)	561	198	3.41	201.41	112991.01
	In-patient (Normal)	1125	198	3.41	201.41	226586.25
	In-patient (with lab test)	6	198	3.41	201.41	1208.46
Eye infection/disease	Out-patient (normal)	159	60	3.41	63.41	10082.19
	Out-patient (with lab test)	7	60	3.41	63.41	443.87
Scabies/skin disease	Out-patient (normal)	1051	57.8	3.41	61.21	64331.71
Helminthiasis	Out-patient (normal)	2354	13	3.41	16.41	38629.14
	Out-patient (with lab test)	146	13	3.41	16.41	2395.86
Tuberculosis	Out-patient (normal)	158	9360	3.41	9363.41	1479418.78
	Out-patient (with lab test)	105	9360	3.41	9363.41	983158.05
Family planning for male	Out-patient (normal)	249	500	3.41	503.41	125349.09
Family planning for female	Out-patient (normal)	1434	365	3.41	368.41	528299.94
Permanent sterilization	In-patient (Surgery)	137	1865	3.41	1868.41	255972.17
Dysentery	Out-patient (normal)	115	176	3.41	179.41	20632.15
	Out-patient (with lab test)	31	176	3.41	179.41	5561.71
Abdominal pain	Out-patient (normal)	245	1470	3.41	1473.41	360985.45

	Out-patient (with lab test)	13	1470	3.41	1473.41	19154.33
	In-patient (Normal)	51	1470	3.41	1473.41	75143.91
Anemia	Out-patient (normal)	1998	282	3.41	285.41	570249.18
	Out-patient (with lab test)	252	282	3.41	285.41	71923.32
	In-patient (Normal)	131	282	3.41	285.41	37388.71
	In-patient (with lab test)	6	282	3.41	285.41	1712.46
Dental infection	Out-patient (normal)	361	221	3.41	224.41	81012.01
Diabetes	Out-patient (normal)	241	1490	3.41	1493.41	359911.81
	Out-patient (with lab test)	116	1490	3.41	1493.41	173235.56
Peptic ulcer	Out-patient (normal)	1355	100	3.41	103.41	140120.55
Ear infection	Out-patient (normal)	894	179.8	3.41	183.21	163789.74
Asthma (Bronchial asthma)	Out-patient (normal)	691	252	3.41	255.41	176488.31
	Out-patient (with lab test)	222	252	3.41	255.41	56701.02
	In-patient (normal)	139	252	3.41	255.41	35501.99
	In-patient (with lab test)	5	252	3.41	255.41	1277.05
					0	0
Hypertension	In-patient (Normal)	132	150	3.41	153.41	20250.12
	In-patient (with lab test)	6	150	3.41	153.41	920.46
Pelvic infection, UTI	In-patient (Normal)	118	206	3.41	209.41	24710.38
	In-patient (with lab test)	2	206	3.41	209.41	418.82
Rheumatic fever	Out-patient (Normal)	142	840	3.41	843.41	119764.22
	Out-patient (with lab test)	23	840	3.41	843.41	19398.43

Poisoning	In-patient (Normal)	322	2980	3.41	2983.41	960658.02
Arthritis	Out-patient (Normal)	35	282	3.41	285.41	9989.35
	Out-patient (with lab test)	11	282	3.41	285.41	3139.51
Assault (Physical)	Out-patient (Normal)	1561	150	3.41	153.41	239473.01
	Out-patient (with lab test)	213	150	3.41	153.41	32676.33
	In-patient (Normal)	268	150	3.41	153.41	41113.88
	In-patient (with lab test)	3	150	3.41	153.41	460.23
Road traffic accident	In-patient (Normal)	211	290	3.41	293.41	61909.51
	In-patient (with lab test)	4	198	3.41	201.41	805.64
Viral fever	Out-patient (normal)	58	7	3.41	10.41	603.78
Other conditions	In-patient (normal)	144	690	3.41	693.41	99851.04
Total		40231				12566570.7

Average cost per patient amounts to BDT 312.36

TableA3.1.10.1. Amount of time spent by providers and staffs on a day obtained through Diary Method

Designation of persons	For non-clinical activities (minutes)	Out-patients			In-patients			Total amount of time spent (minutes)
		Number of patients seen	Total amount of time	Amount of time/patient	Number of pts seen	Total amount of time	Amount of time/patient	
Consultant 1	0	32	225	7.03	0	0	0	225
Consultant 2	0	31	205	6.61	0	0	0	205
Consultant 3	0	23	130	5.64	0	0	0	130
Consultant 4	0	14	130	9.29	2	30	15	160
Consultant 5	0	41	215	5.24	0	0	0	215
Average of consultant time	0	141	905	6.42	2	30	15	187
M. O. 1	0	34	235	6.91	0	0	0	235
M. O. 2	0	47	240	5.1	0	0	0	240
M. O. 3	0	45	225	5	0	0	0	225
M. O. 4	30	20	110	5.5	0	0	0	140
M. O. 5	45	39	140	3.59	0	0	0	185
M. O. 6	69	30	170	5.67	0	0	0	239
M. O. 7	0	21	130	6.19	5	40	8	170
M. O. 8	126	14	70	5	0	0	0	196
Average of M. O.'s time	33.75	250	1320	5.28	5	40	8	203.75

Nurse 1	0	0	0	0	45	275	6.11	275
Nurse 2	0	0	0	0	53	210	3.96	210
Nurse 3	0	0	0	0	34	210	6.17	210
Nurse 4	0	0	0	0	38	200	5.26	200
Average of Nurse's time	0	0	0	0	170	895	5.26	223.75
Paramedic 1	0	11	85	7.73	0	0	0	85
Paramedic 2	0	26	177	6.81	0	0	0	177
Average of Paramedic's time	0	37	262	7.1	0	0	0	131
Technician 1	330	0	0	0	0	0	0	330
Technician 2	0	3	53	17.67	0	0	0	53
Average of Technician's time	330	3	53	17.67	0	0	0	191.5
Medical Technologist 1	10	238	118	0.5	0	0	0	128
Medical Technologist 2	0	9	32	3.56	0	0	0	32
Medical Technologist 3	0	80	293	3.67	0	0	0	293
Average of Medical Technologist's time	10	327	443	1.35	0	0	0	151
Other (TLCA)	60	11	55	5	0	0	0	115
Average of Other's time	60	11	55	5	0	0	0	115

TableA3.1.10.2. Amount of time spent by providers and staffs per patient obtained through Time Motion Observations

Designation of persons	Out-patients			
	Disease/condition	Number of patients	Total amount of time	Amount of time/patient
Consultant 1	Intric Fever, RTI, Amoebiasis, Diabetes Melitus, Musculoskeleton Pain Chest, Trooma Right fest with Respiratory Infection	5	16	3.2
Consultant 2	Scabies, Fever, Eczima	5	15	3
Overall of consultant time		10	31	3.1
M. O. 1	Bronchuolitis, PUD, Arthritis, ARI, Dysentry, AGE	5	15	3
M. O. 2	Assault, B-Asthma, AWD, COPD, RTI	5	48	9.6
M. O. 3	RTI, AGE, UTI, COPD	5	20	4
M. O. 4	Soft Tissue Swelling, RTI, ATI, LBP	5	12	2.4
M. O. 5	Post menopausal symptom, Leucorrhoea, Body ache leucorr, Loose motion, Cherone cough	5	13	2.6
M. O. 6	AFI, Oral landicliasis, LBP, A. tonsilitis	5	14	2.8
M. O. 7	Dx-PUD, UTI, ANC, RTI, Anamix, PNC	5	14	2.8
M. O. 8	Assault, B Asthma, AWD2, COPD, RTI	5	50	10
M. O. 9	PUD, B Asthma, Bronchulitis, AWD, AFI	5	8	1.6
Overall of M. O.'s time		45	194	4.31
Nurse 1	Acute Abdomen, B	5	10	2

	Asthma, AWD			
Nurse 2	COPD, AWD, A Abdomen, Fever	5	26	5.2
Nurse 3	Asthma, A Abdomen, AWD	5	18	3.6
Nurse 4	Asthma, PUD, AWD, A Abdomen	5	20	4
Nurse 5	AWD, A Abdomen	5	16	3.2
Average of Nurse's time		25	90	3.6
Paramedic 1	AWD, Fever, Assault	5	52	10.4
Paramedic 2	ARI, Fever, AWD, Cutting injury, A Dysentery	5	28	5.6
Average of Paramedic's time		10	80	8
Technician 1	Plural fusion, Tuberculosis, Fracture	5	41	8.2
Technician 2	TB	5	18	3.6
Technician 3	MP, Fever, Cough, AFB, Urine R/E	5	268	53.6
Technician 4	Urine for PT, AFB	5	271	54.2
Average of Technician's time		20	598	29.9

Table A3.1.10.3. Use of time for laboratory testing (Time motion observations)

Name of test (with name of patient)	Person 1		Person 2		Person 3		Equipment	
	Designation	Time spent	Designation	Time spent	Designation	Time spent	Name of equipment	Time spent
Urine R/E	Lab Technologist	7		12		15	Test Tube, Glass slide, Spirit lamp, Microscope, Benedict's solution, 5% Acetic acid, dropper	32
Urine for PT	Lab Technologist	10		10		2	Test tube and its holder, marker pen,	12
Widal test	Lab Technologist	6		15			Test tube, test rack, marker pen, Syring, Cotton, Spirit, Dropper, Torniquet, Micropipet	21
MP	Lab Technologist	5		60		5	Spirit, Cotton, Blood landset, Glass light	80
HBs Ag	Lab Technologist	5		20		5	Centrifuge machine, Haemocyto meter, Haemoglobin meter, Microscope	30
VDRL	Lab Technologist	5		25		3		38
Blood group	Lab Technologist	5		10				15
Blood R/E	Lab	5		55		5		60

	Technologist						
Stool R/E		6		13		16	35

Table A3.1.10.4. Amount of time spent by providers for one patient by disease obtained through group interview

Name of disease/ condition	First visit	Second visit
a) Maternal Health - ANC 1	10	8
- ANC 2	15	10
- ANC 3	15	10
- ANC 4	15	10
- Delivery care	60	
- EmOC		
- Abortion	30	
- Post abortion care	10	
- PNC	10	
c) STI/RTI - Prevention and management of STI/RTI	10	
- Prevention of HIV/AIDS		
ARI		
Diarrohea	5	3
eye infection		
Scabies	2	1
Helminthiasis	2	1
cold-cough	4	2
Tuberculosis	10	5
Malaria	10	5
Leprosy	10	5
Kala-azar	10	5
Family planning for male	10	5
Family planning for female	30	10

Table A3.1.11. Number of patients who visited the UHC by disease and year at UHC, Rangunia

Name of disease/ condition/service	2009			2010			2011		
	Out-patient	In-patient	Total	Out-patient	In-patient	Total	Out-patient	In-patient	Total
a) Maternal Health - ANC 1	0	0	0	0	0	0	11240	0	11240
- Delivery care	0	0	0	0	140	140	0	501	501
- EmOC (Obstructed labor)	0	0	0	0	0	0	0	0	0
- Abortion	0	0	0	0	0	0	0	43	43
Gynecological problems	0	0	0	0	0	0	0	97	97
- PNC	0	0	0	0	0	0	2476	0	2476
c) Pelvic infection, STI/RTI - Prevention & management of STI/RTI, UTI, PID	0	18	18	0	0	0	0	120	120
- Prevention of HIV/AIDS	1419	0	1419	0	0	0	0	0	0
ARI	0	739	739	0	0	0	4702	0	4702
Bronchial asthma	672	7	679	1189	0	1189	913	144	1057
Diarrohea	6181	1540	7721	4692	1864	6556	4122	1131	5253
Dysentery	739	0	739	1117	48	1165	146	0	146
Peptic Ulcer	0	621	621	0	0	0	1355	0	1355
PUO	0	138	138	0	0	0	0	0	0
Eye infection	0	0	0	0	0	0	166	0	166
Ear infection	0	0	0	0	0	0	894	0	894
Dental infection	0	0	0	0	0	0	361	0	361
Scabies	0	2	2	0	0	0	1051	0	1051
Fungal infections	2123	188	2311	2747	0	2747	0	0	0
Helminthiasis,	0	37	37	0	0	0	2500	0	2500
cold-cough	0	0	0	0	0	0	0	0	0
Tuberculosis	0	2	2	0	0	0	263	0	263
Malaria	0	40	40	0	0	0	0	0	0
Leprosy	0	0	0	0	0	0	0	0	0
Kala-azar	0	0	0	0	0	0	0	0	0
Family planning for male	241	0	241	0	0	0	249	0	249

Family planning for female	1191	0	1191	0	0	0	1434	0	1434
Permanent sterilization	0	0	0	0	0	0	0	137	137
Non-Communicable Disease Diabetes	124	11	135	686	6	692	357	0	357
CHD, Hypertension	555	56	611	828	70	898	0	138	138
Cancer	0	0	0	0	0	0	0	0	0
Arthritis	2425	12	2437	3171	0	3171	46	0	46
Assault/Injury	1389	72	1461	1744	184	1928	1774	271	2045
Road traffic accident (RTA)	0	3	3	0	0	0	0	215	215
Anemia	0	0	0	2542	2	2544	2250	137	2481
PUO (pyrexia of unknown origin)	0	0	0	0	0	0	58	0	58
Rheumatic fever	0	133	133	0	0	0	165	0	165
Enteric fever	1775	48	1823	2093	58	2151	0	0	0
Abdominal pain, Appendicitis, Acute abdomen	0	0	0	0	236	236	258	51	309
Poisoning	0	31	31	0	0	0	0	322	322
Asthma COPD	1911	484	2395	0	556	556	0	0	0
Burn	18	4	22	47	7	54	0	0	0
Corneal Ulcer	36	0	36	0	0	0	0	0	0
Heart failure	28	0	28	0	4	4	0	0	0
Hepatitis	140	4	144	163	13	176	544	0	0
Anxiety and Depressive disorder	0	23	23	0	0	0	1710	0	0
Drowning/near drowning	0	3	3	17	0	17	14	0	0
Gonorrhoea	0	10	10	0	44	44	0	0	0
Meningitis	0	2	2	0	0	0	0	0	0
Nephrotic Syndrome	0	8	8	0	0	0	0	0	0

Valvular Congenital Heart Disease	0	32	32	0	0	0	0	0	0
CVA	0	0	0	9	1	10	0	0	0
Angina Pectoris	0	0	0	0	0	0	0	0	0
Cirrhoea of liver	0	0	0	0	0	0	0	0	0
Corneal Ulser	0	0	0	0	0	0	0	0	0
Glomerulonephnus	0	0	0	0	0	0	0	0	0
Others (Thalassemia, hernia, RF)	0	493	493	0	0	0	0	144	144
Total	20967	4761	25728	21045	3233	24278	36780	3451	40231

Table A3.1.12. Number of referrals from UHC in 2011

Name of disease/ condition/service	To District Hospitals	To others	Total
a) Maternal Health			
- ANC 1	14	0	14
- ANC 2	0	0	0
- ANC 3	0	0	0
- ANC 4	21	0	21
- Delivery care	36	0	36
- EmOC	24	0	24
- Abortion	42	0	42
- Post abortion care	1	0	1
- PNC	3	0	3
c) STI/RTI			
- Prevention and management of STI/RTI	29	0	29
- Prevention of HIV/AIDS	0	0	0
ARI	118	0	118
Diarrohea	38	0	38
eye infection	15	0	15
Scabies	0	0	0
helminthiasis,	0	0	0
cold-cough	0	0	0
Tuberculosis	3	0	3
Malaria	2	0	2
Leprosy	3	0	3
Kala-azar	0	0	0
Family planning for male	0	0	0
Family planning for female	0	0	0
Asthma	55	0	55
PUD	66	0	66
HTN	17	0	17
EPTB	3	0	3
AC Apendicitis	15	0	15
AC Pancretitis	13	0	13
CVD	19	0	19
Unknown poisoning	34	0	34
Shock	19	0	19
Dog bite	6	0	6
CKD	1	0	1
Rectal Prolapse	1	0	1
Incontinence of urine	1	0	1
Renal failure	1	0	1
AGN	4	0	4

Piles	3	0	3
Meningitis	3	0	3
PV Bleeding	23	0	23
Cerosis of liver	3	0	3
Psychiatric disorder	7	0	7
Alcohol Poisoning	1	0	1
Foreign body in throat	1	0	1
Tonsilitis	1	0	1
Typhoid	1	0	1
Hypertension	4	0	4
Foreign body in air	5	0	5
Haemoptysis	3	0	3
Renal stone	1	0	1
Diabetic coma	5	0	5
CuSO ₄ Poisoning	1	0	1
Foreign body in genitalia	1	0	1
CA Lung	1	0	1
GBS	1	0	1
Foreign body in eye	1	0	1
PUO	4	0	4
Foreign body in nose	2	0	2
PIID	2	0	2
Acute Abdomen	17	0	17
Chest Pain	1	0	1
Drawning	3	0	3
OPC Poisoning	56	0	56
MI	92	0	92
Burn	3	0	3
Stroke	80	0	80
Assault	21	0	21
Accident	196	0	196
Head Injury	3	0	3
Snake bite	58	0	58
Retention of urine	9	0	9
Convulsion	15	0	15
Kerosine Poisoning	6	0	6
Fibroid Ulliras	1	0	1
Abuse of drugs	3	0	3
Cellulitis	1	0	1
Rat killer poisoning	3	0	3
Derianal abcess	3	0	3
Colon cancer	3	0	3
Foreign body in genetation	1	0	1
Foreign body in joint	1	0	1
Electrocution	1	0	1
Anaphylaxis	2	0	2
Cauda equina syndrome	1	0	1
Owned infection	1	0	1
Nasal bleeding	1	0	1
ENT Problem	11	0	11
RTA	1	0	1
Dental Disease	3	0	3
Endocrine disorder	1	0	1
Neurological disorder	1	0	1
VSD	1	0	1
Other	90	0	90

A3.1.13. Number of diagnostic tests performed in 2011 in UHC, Rangunia

Name of Diagnostic tests	Out door	In-door	Total
Blood <i>Hematological tests</i> CBC – TC, DC, ESR, Hb <i>Biochemical tests</i> FBS, OGTT, Renal function test, liver function test, lipid profile <i>Microbiological tests</i> Culture and sensitivity <i>Immunological tests</i> HBSAg Widal test ASO titre VDRL ELISA for HIV	TC - 31 DC - 32 ESR – 279 Hb – 62 HBSAg – 5 Widal test – 83 VDRL - 13	44	549
Urine R/M/E Total urinary protein	258	0	258
Stool R/M/E Occult blood test (OBT)	7	0	7
Radiology CXR Plain X-Ray of abdomen ECG USG USG of abdomen Echocardiography	0	0	0
Other Sputum for AFB Throat swab Eye – refraction ophthalmoscope	3205	0	3205
TPHA	2	0	2
RA	1	0	1
Blood group	20	0	20
MP	320	0	320
Total	4318	44	4362

Table A3.2.1. Cost of human resources in FWCs of Rangunia

Name of FWC	Number of employed Persons	Monthly salary and allowances (BDT)	Annual Salary and allowances (BDT)	Number of persons employed	No. of posts to be required after SBP	Annual Salary and allowances (BDT)
FWC-1 Hosnabad	Medical Officer			0	3	
	SACMO	21500	258000	1	3	
	FWV	14255	171060	1	3	
	Pharmacist		0	0	2	
	Office Assistant		0		2	
	MLSS		0			
	Sweeper/Cleaner		0			
	Aya	11015	132180	1	2	

	Guard	11015	132180	1	2
Sub-Total.			693420		
FWC-2 Swarupbhata	Medical Officer		0	0	2
	SACMO	21850	262200	1	2
	FWV	17055	204660	1	2
	Pharmacist		0	0	
	Office Assistant		0		
	MLSS		0	0	
	Sweeper/Cleaner		0		
	Aya	9095	109140	1	1
Guard		0	0		
Sub-Total.			576000		
FWC-3 Razanagar	Medical Officer		0	0	0
	SACMO	22000	264000	1	0
	FWV	14065	168780	1	0
	Pharmacist		0	0	1
	Office Assistant		0		
	MLSS		0	0	
	Sweeper/Cleaner		0	0	2
	Aya	10600	127200	1	
Guard	10300	123600	1		
Sub-Total.			683580		
FWC-4 Padua	Medical Officer		0		
	SACMO		0		
	FWV	13388	160656	1	
	Pharmacist		0		
	Office Assistant		0		
	MLSS	7159	85908	1	1
	Sweeper/Cleaner		0		
	Aya	9095	109140	1	1
Guard		0			
Sub-Total.			355704		
FWC-5 Chandraghona	Medical Officer	18152	217824		2
	SACMO		0	1	2
	FWV	17000	204000	1	1
	Pharmacist		0		
	Office Assistant		0		1
	MLSS	7159	85908	1	
	Sweeper/Cleaner		0		1
	Aya	7159	85908	1	2
	Guard		0		2
	Dai Nurse	8200	98400		
MA		0		1	
Sub-Total.			692040		
FWC-6 Shilok	Medical Officer		0		1
	SACMO		0		1
	FWV	8200	98400	1	1
	Pharmacist		0		1
	Office Assistant		0		2
	MLSS	10345	124140	1	1
	Sweeper/Cleaner		0		1
	Aya	11039	132468	1	2

	Guard					1
	Office clerk					1
	Nurse					1
Sub-Total.						355008

Table. A3.2.2 Cost of important equipments at FWCs Rangunia Upazila

FWC	Name of the equipment	Year of procurement	Total number	Price at procurement (BDT)	Total expected life years	Total Value	Annulized Value
	1	2	3	4	5	7	8
FWC-1	Hosnabad						
Hosnabad	Air way (different sizes)	1988	1	1500	2	1500	750
	Ambu bag	1988	1	2500	0.5	2500	5000
	Artery forceps (different size)	1988	1	120	4	120	30
	B.P. handle	1988	2	150	2	300	150
	B.P. machine Aneroid	2005	2	1000	1	2000	2000
	Bandage cutting scissors	1988	2	200	3	400	133
	Bucket, plastic (large, medium, small)	2006	3	250	2	750	375
	Cuscors vaginal speculam	1988	6	350	5	2100	420
	Delivery Kit	2006	2	3000	3	6000	2000
	Dissecting forcep (plain/toothed)	1988	2	200	5	400	80
	Dressing bowl	1988	2	100	6	200	33
	Dressing forceps	2006	2	200	5	400	80
	Dressing tray (shallow) SS	1988	1	250	8	250	31
	Examination table	1988	1	3000	3	3000	1000
	Haemostat forceps	1988	2	120	5	240	48
	Hammer percussion	1988	1	75	2	75	38
	Hanging weighing scale	2006	3	2400	3	7200	2400
	Instrument tray	1988	1	250	7	250	36
	IUD kit	2006	5	3000	7	15000	2143
	M.R set with canula	2007	2	2500	1	5000	5000
	Nasal Speculum	1988	1	350	7	350	50
	Patient stretcher	1988	2	1700	3	3400	1133
	Stethoscope	2006	2	1000	3	2000	667
Suction unit portable (manual)	1988	1	8500	3	8500	2833	
Tourniquet	1988	2	15	1	30	30	
Weight machine	2006	2	7500	1	15000	15000	
Fan	2007	3	2000	8	6000	750	
Light			3	350	0.4	1050	2625
Generator	2006	1	24500	4	24500	6125	
	Total.		59	67080	104.9	108515	50960
FWC-2	Swarupbhata						
Swarupbhata	Air way (different sizes)	2000	1	100	2	100	50
	Artery forceps (different size)	2000	6	120	3	720	240
	B.P. handle	2000	3	150	3	450	150
	B.P. machine Aneroid	2000	2	1000	2	2000	1000
	Bandage cutting scissors	2000	1	200	2	200	100

	Boiling water sterilizer	2000	1	250	2	250	125
	Buckect, plastic (large, medium, small)	2000	5	250	0.5	1250	2500
	Cuscors vaginal speculam	2000	6	350	2	2100	1050
	Dressing bowl	2000	6	100	10	600	60
	Dressing tray (shallow) SS	2000	5	250	20	1250	63
	Drum sterilizer (shallow) SS	2000	2	1250	10	2500	250
	Examination table	1994	1	3000	10	3000	300
	Foley's catheter different size	2000	1	300	5	300	60
	Gauge cutting scissors	2000	1	350	8	350	44
	Hanging weighing scale	2000	1	2400	5	2400	480
	Instrument tray	2000	1	250	10	250	25
	IUD kit	2000	1	3000	0.5	3000	6000
	Mouth gag	2000	1	250	2	250	125
	Tongue depressor	2000	2	120	4	240	60
	Weight machine	2000	1	7500	5	7500	1500
	Fan	1995	6	2000	5	12000	2400
	Light		6	350	0.5	2100	4200
	Total.		60	23540	111.5	42810	20781
FWC-3	Razanagar						
	Ambu bag	2005	2	2500	5	5000	1000
	Artery forceps (different size)	1988	2	120	2	240	120
	B.P. handle	1988	7	150	5	1050	210
	B.P. machine	2009	2	1000	2	2000	1000
	Aneroid						
	Bandage cutting scissors	1988	4	200	4	800	200
	Boiling water sterilizer	1988	1	500	2	500	250
	Bowl SS 10"	1988	4	1000	20	4000	200
	Buckect, plastic (large, medium, small)	2004	3	250	2	750	375
	Cuscors vaginal speculam	1988	4	350	2	1400	700
	Delivery Kit	2007	1	3000	5	3000	600
	Dissecting forcep (plain/toothed)	1988	6	200	2	1200	600
	Dressing forceps	1988	5	200	2	1000	500
	Drum sterilizer (shallow) SS	1988, 2005	4	1250	10	5000	500
	Foley's catheter different size	2005	1	300	5	300	60
	Forcep tissue 2x3 teeth 191 mm	1988	1	120	5	120	24
	Haemostat forceps	1988	2	120	5	240	48
	Hanging weighing scale	2005	1	2400	4	2400	600
	Instrument tray	1988	1	250	20	250	13
	IUD kit	1988, 2012	2	3000	7	6000	857
	Kidney tray	1988	2	180	7	360	51
	M.R set with canula	2005	4	2500	1	10000	10000
	Mouth gag	1988	1	250	5	250	50
	Nasal Speculum	1988	1	350	7	350	50
	Patient stretcher	1988, 2012	4	1700	2	6800	3400

	Sims Vaginal Speculum	1988	2	350	5	700	140
	Stethoscope	1989	1	1000	4	1000	250
	Tongue depressor	1983	1	120	4	120	30
	Tubectomy kit	1988	1	150	7	150	21
	Weight machine	1988, 2002	3	7500	4	22500	5625
	Light		6	350	1	2100	2100
	Implantation Set		10	250	5	2500	500
	Total.		89	31610	161	82080	30075
FWC-4	Padua						0
Padua	Ambu bag		2	2500	0.5	5000	10000
	Artery forceps (different size)		7	120	1	840	840
	B.P. machine Aneroid		1	1000	1	1000	1000
	Boiling water sterilizer		1	250	2	250	125
	Cuscors vaginal speculam		1	350	3	350	117
	Delivery Kit	1988	1	3000	3	3000	1000
	Dissecting forcep (plain/toothed)	1988	4	200	3	800	267
	Dressing tray (shallow) SS	1988	6	250	3	1500	500
	Drum sterilizer (shallow) SS		1	1250	10	1250	125
	Examination table		1	3000	3	3000	1000
	Forcep sponge holding plan		1	120	0.5	120	240
	Gauge cutting scissors	1988	2	350	8	700	88
	Hammer percussion	1988	1	75	1	75	75
	Hanging weighing scale	1988	1	2400	5	2400	480
	Instrument tray		4	250	10	1000	100
	IUD kit	2012	1	350	3	350	117
	Kidney tray	1988	8	180	11	1440	131
	Nasal Speculum		4	350	5	1400	280
	Patient stretcher	1988	3	1700	3	5100	1700
	Sims Vaginal Speculum	1988	10	350	10	3500	350
Stethoscope	2008	1	1000	3	1000	333	
Tubectomy kit	1988	2	150	7	300	43	
Fan	1988	2	2000	5	4000	800	
Light		4	350	1	1400	1400	
	Total.		69	21545	102	39775	21110
FWC-5	Chandraghona						0
Chandraghona	B.P. machine Aneroid	1995, 05, 08	5	1000	2	5000	2500
	Boiling water sterilizer	1999	1	500	10	500	50
	Buckect, plastic (large, medium, small)	2007	4	250	3	1000	333
	Delivery Kit	2006	2	3000	20	6000	300
	Drum sterilizer (shallow) SS	2007	2	1250	20	2500	125
	Examination table	1985, 07	11	3000	20	33000	1650
	Hanging weighing scale	1985	4	2400	10	9600	960
	IUD kit	99, 07, 12	6	3000	20	18000	900
	Patient stretcher	2007, 12	2	1700	20	3400	170
	Stethoscope	95, 05, 08	3	1000	2	3000	1500
	Tubectomy kit	2005	4	150	30	600	20
	Weight machine	1985, 07, 12	4	7500	7	30000	4286
	Fan	2007	4	2000	10	8000	800
	Light	2011	11	350	1	3850	3850

	Water Filter	2007	1	3000	3	3000	1000
	Total.		64	30100	178	127450	18444
FWC-6	Shilok						0
Shilok	Air way (different sizes)		2	1500	3	3000	1000
	B.P. machine Aneroid		2	1000	2	2000	1000
	Bandage cutting scissors		1	200	1	200	200
	Boiling water sterilizer		1	500	2	500	250
	Bowl SS 10"		2	1000	2	2000	1000
	Bucket, plastic (large, medium, small)		2	250	1	500	500
	Delivery Kit		1	3000	3	3000	1000
	Dressing forceps		2	200	5	400	80
	Dressing tray (shallow) SS		1	250	3	250	83
	Examination table		2	3000	3	6000	2000
	Foley's catheter different size		1	300	5	300	60
	Hanging weighing scale		1	2400	5	2400	480
	Instrument tray		1	250	10	250	25
	IUD kit		9	3000	10	27000	2700
	Kidney tray		9	180	11	1620	147
	M.R set with canula		1	2500	5	2500	500
	Mouth gag		1	250	7	250	36
	Stethoscope		3	1000	4	3000	750
	Tongue depressor		1	120	2	120	60
	Weight machine		2	7500	5	15000	3000
Fan		6	2000	5	12000	2400	
Light		4	350	1	1400	1400	
Water Motor		1	9500	5	9500	1900	
	Total.		56	40250	100	93190	20571

Table A3.2.3.. Cost of furnitures and fixtures of FWCs of Rangunia upazila

FWC	Name of the furniture	Total number	Price per unit	Total value (BDT)	Total expected life years	Annualized value (BDT)
FWC-1	Hosnabad					
1	Almirah steel	1	18000	18000	15	1200.00
1	Secretary Table	4	15000	60000	7	8571.43
1	Chiar Wood	4	1500	6000	7	857.14
1	Chair Plastic	4	500	2000	2	1000.00
1	Long Bench	3	800	2400	3	800.00
1	Peon Tool	2	300	600	4	150.00
1	Chair Steel	6	2500	15000	2	7500.00
1	Iron Cot	2	5500	11000	5	2200.00
1	Patient Table	1	5000	5000	3	1666.67
	Total.					23945.24
FWC-2	Swarupbhata			0		
2	Almirah (Steel)	2	18000	36000	5	7200.00
2	Almirah (Wood)	1	15000	15000	10	1500.00
2	Chair (Wood)	6	1500	9000	0.5	18000.00
2	Table	4	1500	6000	1	6000.00
2	Filter Machine	1	3000	3000	2	1500.00
2	Tool	3	200	600	2	300.00
	Total.					34500.00
FWC-3	Razanagar			0		
3	Almirah (Steel)	2	18000	36000	10	3600.00

3	Almirah (Wood)	2	15000	30000	2	15000.00
3	Chair (Wood)	9	1500	13500	3	4500.00
3	Chair (Plastic)	4	500	2000	2	1000.00
3	Low Bench (Wood)	2	800	1600	1	1600.00
3	Table (Secretariate)	8	15000	120000	0.4	300000.00
3	Table (OT)	2	5000	10000	10	1000.00
3	Table (Labor)	2	4500	9000	0.6	15000.00
3	IUD Table	2	6500	13000	5	2600.00
3	Patient Table	2	5000	10000	3	3333.33
3	Site Locker	2	4000	8000	10	800.00
3	Tool (Plastic)	2	300	600	4	150.00
3	Tool (Wood)	1	300	300	1	300.00
3	Steel Rack (Big)	1	6000	6000	2	3000.00
3	Iron Cot	3	5500	16500	10	1650.00
3	Foam Chair	5	2500	12500	2	6250.00
3	Filter Machine	1	3000	3000	3	1000.00
3	Fan	7	2000	14000	10	1400.00
	Total.					362183.33
FWC-4	Padua					
4	Armless Chair (Wood)	8	1500	12000	1	12000.00
4	Half Sec Table	4	3500	14000	3	4666.67
4	Kushon Chair with arm	4	2500	10000	3	3333.33
4	Steel Almirah	2	18000	36000	15	2400.00
4	Wooden Almirah	2	15000	30000	10	3000.00
4	Long bench (wood)	4	800	3200	3	1066.67
4	Long Tool (Wood)	2	300	600	5	120.00
4	Wooden Cot	1	9500	9500	5	1900.00
4	Operation Table	2	5000	10000	5	2000.00
4	Notice Board	1	2000	2000	5	400.00
4	Water Motor	1	9500	9500	5	1900.00
4	Water Tank	1	7000	7000	5	1400.00
	Total.					34186.67
FWC-5	Chandraghona			0		
5	Almirah Steel	1	18000	18000	20	900.00
5	Almirah wood	2	15000	30000	5	6000.00
5	Table	9	3500	31500	10	3150.00
5	Chair	12	1500	18000	2	9000.00
5	Bench	5	800	4000	5	800.00
5	Tool	4	300	1200	5	240.00
5	Kushon Chair	6	2500	15000	5	3000.00
	Total.					23090.00
FWC-6	Shilok			0		
6	Almirah	1	15000	15000	7	2142.86
6	Chair	9	1500	13500	7	1928.57
6	Labor Table	1	4500	4500	2	2250.00
6	Patient Table	1	5000	5000	3	1666.67
6	Table	3	3000	9000	5	1800.00
6	Tool	5	300	1500	5	300.00
6	White board	1	1200	1200	6	200.00
	Total.					10288.10

Table A3.2.4. Cost of land and space of FWCs of Rangunia upazila

FWC	Item	Room Name	Existing quantity/amount	Year of purchase /construction	Unit Cost of purchase /construction	Expected life years	Current market value	Annualized Value (BDT)
FWC-1	Hosnabad							
	Unused Land		74.5 Decimal		75000/Decimal	99	5587500	56439.39
1	Building		2400		80/sqft/year	25	4800000	192000.00
1	Room 1	FWV	160					
1	Room 2	FPI	110					
1	Room 3	SACMO	110					
1	Room 4	Sub Centre	120					
1	Room 5	Store	110					
1	Room 6	OT	130					
1	Room 7	MO	160					
1	Room 8	Toilet	24					
	Total.							248439.39
FWC-2	Swarupbhata							
	Unused Land		2.95 Decimal		75000/Decimal	99	221250	2234.8485
2	Building		2200		80/sqft/year	25	4400000	176000.00
2	Room 1	SACMO & FPI	120					
2	Room 2	FW check up	150					
2	Room 3	FWV	126					
2	Room 4	Varanda	476.05					
2	Room 5	Store	150					
2	Room 6	Toilet	30.5					
	Total.							178234.85
FWC-3	Razanagar							
	Unused Land		55.4 Decimal		80000/Decimal	99	4432000	44767.68
3	Building		2000		85/sqft/year	25	4250000	170000.00
3	Room 1	MO	180					
3	Room 2	SACMO	100					
3	Room 3	FWV	100					
3	Room 4	FPI	100					
3	Room 5	Labor	100					
3	Room 6	OT	150					
3	Room 7	Store	100					
3	Room 8	Varanda	300					
3	Room 9	Toilet	29.25					
	Total.							214767.68
FWC-4	Padua							
	Unused Land		4.58 Decimal		75000/Decimal	99	343500	3469.70
4	Building		1492.3		80/sqft/year	25	2984600	119384.00
4	Room 1	HA	110					
4	Room 2	FWV	110					
4	Room 3							
4	Room 4							
4	Room 5							
	Total.							122853.70
FWC-5	Chandraghona							
	Unused Land		4.58 Decimal		75000/Decimal	99	343500	3469.70

5	Building		1492.3	80/sqft/year	25	2984600	119384.00
5	Room 1		110				
5	Room 2		110				
5	Room 3		110				
5	Room 4		168				
5	Room 5	Toilet	25				
5	Room 6		125.8				
5	Room 7		140				
5	Room 8		220				
5	Room 9	Toilet	27.98				
	Total.						122853.70
FWC-6	Shilok						
	Unused Land		60.58	75000/Decimal	99	4543500	45893.94
6	Building		1492.3	80/sqft/year	25	2984600	119384.00
6	Room 1	FWV	110				
6	Room 2	SACMO	110				
6	Room 3	Store	110				
6	Room 4		168				
6	Room 5	Toilet	25				
6	Room 6		125.8				
6	Room 7		220				
6	Room 8	Toilet	27.98				
	Total.						165277.94

Table A3.2.5. Cost of Utility of FWCs of Rangunia upazila

Name of FWC	Item	Monthly Bill	Annual Bill
1	Electricity use	400	4800
Hosnabad	Gas use		0
	Water use		0
	Cost of maintenance	400	4800
			9600
2	Electricity use		
Swarupbhata	Gas use		
	Water use		
	Cost of maintenance	300	3600
			3600
3	Electricity use		
Razanagar	Gas use		
	Water use		
	Cost of maintenance	600	7200
	FWC Managing cost	500	6000
			13200
4	Electricity use		
Padua	Gas use		
	Water use		
	Cost of maintenance	1000	12000
5	Electricity use		

Chandraghona	Gas use		
	Water use		
	Cost of maintenance	500	6000
			6000

Table A3.2.6. Cost of supplies and logistics of FWCs of Rangunia in 2011

FWC	Item of supplies/logistics	Quantity (to be written in appropriate units)	Current market price (in BDT)	Value (BDT)	Value (BDT)
FWC-1	Hosnabad				
1	Delivery kit	2	3000	6000	6000
1	IUD kit	4	350	1400	1750
1	M.R. set with canula	2	2500	5000	0
FWC-2	Swarupbhata				
2	Gauze	1	25	25	50
2	Cotton	120	45	5400	6750
FWC-3	Razanagar				
FWC-4	Padua				
4	Test tube 6"	8	20	160	0
4	Gauze	1	25	25	0
4	Cotton	4	45	180	0
4	M.R. set with canula	1	2500	2500	2500
4	Needle Holder	1	120	120	120
FWC-5	Chandraghona				
5	Cotton	4	45	180	180
5	Delivery kit	2	3000	6000	0
5	IUD kit	6	350	2100	0
FWC-6	Shilok				
6	Rubber tourniquet	3	15	45	0
6	Cotton	4	45	180	0
6	IUD kit	9	350	3150	0

Tab A3.2.7. Cost of drugs in 2011 by FWCs of Rangunia

FWCs	Name of Drugs	Quantity received in 2011 (to be written in appropriate units)	Current market price (in BDT per unit)	Value quantity received in 2011
FWC-1	Tab Riboflavin			
Hosnabad	Tab Metronidazole	10808	1	10808
1	Tab Vitamin B-1	18923	0.8	15138.4
1	Tablet Hyoscine			0
1	Tab Ranitidin 150mg	4690	2	9380
1	Tab Entacyd	9467	1	9467
1	Tab Cotrim 400mg			0
1	Tab Ibuprofen 400mg	2600	1.5	3900
1	Cap Tetracycline 200			0
1	Cap Indomethacin			0
1	Cap Cefradin 500			0
1	Cap Flucloxin 500			0
1	Cap Amoxycilin 250	10025	3.5	35087.5
1	Cap Doxycycline 100	1966	6.6	12975.6
1	Syp Metronidazole 60			0
1	Syp Histacin 450			0
1	Syp Penicillin			0
1	Syp Amoxycillin	389	47	18283
1	Syp Flucloxacilin			0
1	Syp Mebendazole			0
1	Dorby Lotion	37	25	925
1	Whitfield Ointment			0
1	Inj Dexamethacin			0
1	Surgical gloves (Sterile)			0
1	IV Canula			0
1	Micropore3"			0
1	Micropore2"			0
1	Disposable syringe			0
1	ORS			0
1	Bleaching Powder			0
1	Inj Cephtriaxone			0
1	Inj Stemetil			0
1	Salbutamol Solution			0
1	Syp Cotrim			0
1	Syp Paracetamol	321	20	6420
1	Syp Erythromycin			0
1	Tab Zinc Sulphate			0
1	Tab Ciprofloxacin	4749	14	66486
1	Tab Paracetamol	36330	1	36330
1	Ferus Fumaret	37720	0.25	9430
1	Albendazol	7408	4	29632

1	Chlorofeniramin	3500	0.5	1750
1	Diagipum	1205	0.7	843.5
1	B Acid	18		0
1	Tab Salbutamol	2077	0.4	830.8
Sub_total		152233		267686.8
FWC-2	Tab Riboflavin	6000	0.2	1200
Swarupbhata	Tab Metronidazole	3000	1	3000
2	Tab Vitamin B-1			0
2	Tablet Hyoscine	300	3.45	1035
2	Tab Ranitidin 150mg	800	2	1600
2	Tab Entacyd	2000	1	2000
2	Tab Cotrim 400mg	1500	1.5	2250
2	Tab Ibuprofen 400mg	250	1.5	375
2	Cap Tetracycline 200			0
2	Cap Indomethacin			0
2	Cap Cefradin 500			0
2	Cap Flucloxin 500			0
2	Cap Amoxycilin 250	1500	3.5	5250
2	Cap Doxycycline 100	250	6.6	1650
2	Cap Amoxycilin 500			0
2	Syp Metronidazole 60			0
2	Syp Histacin 450			0
2	Syp Penicillin			0
2	Syp Amoxycillin	60	47	2820
2	Syp Flucloxacilin			0
2	Syp Mebendazole			0
2	Dorby Lotion			0
2	Whitfield Ointment	6000	10	60000
2	Inj Dexamethacin			0
2	Surgical gloves (Sterile)	120	26	3120
2	IV Canula			0
2	Micropore3"			0
2	Micropore2"			0
2	Disposable syringe	668	5	3340
2	ORS			0
2	Bleaching Powder			0
2	Inj Cephtriaxone			0
2	Inj Stemetil			0
2	Salbutamol Solution			0
2	Syp Cotrim			0
2	Syp Paracetamol	112	20	2240
2	Syp Erythromycin			0
2	Tab Zinc Sulphate			0
Sub_total		22560		89880
FWC-3	Tab Riboflavin			0
Razanagar	Tab Metronidazole	9000	1	9000
3	Tab Vitamin B-1			0
3	Tablet Hyoscine			0
3	Tab Ranitidin 150mg	3600	2	7200
3	Tab Entacyd	9000	1	9000
3	Tab Cotrim 400mg	9000	1.5	13500
3	Tab Ibuprofen 400mg	1800	1.5	2700

3	Cap Tetracycline 200			0
3	Cap Indomethacin			0
3	Cap Cefradin 500			0
3	Cap Flucloxin 500			0
3	Cap Amoxycilin 250	9000	3.5	31500
3	Cap Doxycycline 100	1800	6.6	11880
3	Cap Amoxycilin 500			0
3	Syp Metronidazole 60			0
3	Syp Histacin 450			0
3	Syp Penicillin			0
3	Syp Amoxycillin	360	47	16920
3	Syp Flucloxacilin			0
3	Syp Mebendazole			0
3	Dorby Lotion			0
3	Whitfield Ointment			0
3	Inj Dexamethacin			0
3	Surgical gloves (Sterile)			0
3	IV Canula			0
3	Micropore3"			0
3	Micropore2"			0
3	Disposable syringe			0
3	ORS			0
3	Bleaching Powder	3	150	450
3	Inj Cephtriaxone			0
3	Inj Stemetil			0
3	Salbutamol Solution			0
3	Syp Cotrim	360	21.5	7740
3	Syp Paracetamol	270	20	5400
3	Syp Erythromycin			0
3	Tab Zinc Sulphate			0
3	Tab Zinc Sulphate			0
3	Tab Ferrus Fumaret	36000	2	72000
3	Benzym Benjoit Lotion	18		0
	Sub_total	80211		187290
FWC-4	Iron and Folic acid	6500		0
Padua	Vitamin B complex	4000	1	4000
4	Albendazole	600	4	2400
4	Paracetamol	3200	1	3200
4	Tab Antacid	1500	1	1500
4	Tab Drotavarine Hydrochloride	300		0
4	Renitidin	600	2	1200
4	Metronidazole	2500	1	2500
4	Cholorpheniramine	600	0.5	300
4	Salbutamol	300	0.4	120
4	Ibuprofen	300	1.5	450
4	Diazepum	150	0.7	105
4	Co trimaazole 120	900	2	1800
4	Co trimaazole 480	1500	4	6000
4	Cap Amoxicilin	1500	3.5	5250
4	Tab Ciprofloxacin	500	14	7000
4	Cap doxycycline	1800	6.6	11880

4	Amoxicilin powder for suspension	60		0
4	Amoxicilin powder paediatric suspension	30		0
4	Co-trimazole suspension	60		0
4	Paracetamol suspension	60	20	1200
4	Chloromphenical eye ointment	30	30	900
4	Neomycin+Bacitracin Skin ointment	25		0
4	Benzyl Benzoate	2000		0
4	Benzoic Acid	3000		0
Sub_total		32015		49805
FWC-5	Tab Riboflavin			0
Chandraghona	Tab Metronidazole	27700	1	27700
5	Tab Vitamin B-1			0
5	Tablet Hyoscine	100	3.45	345
5	Tab Ranitidin 150mg	6900	2	13800
5	Tab Entacyd	11600	1	11600
5	Tab Cotrim 400mg	11500	1.5	17250
5	Tab Ibuprofen 400mg	2300	1.5	3450
5	Cap Tetracycline 200			0
5	Cap Indomethacin			0
5	Cap Cefradin 500			0
5	Cap Flucloxin 500			0
5	Cap Amoxycilin 250	11500	3.5	40250
5	Cap Doxycycline 100	4800	6.6	31680
5	Cap Amoxycilin 500			0
5	Syp Metronidazole 60			0
5	Syp Histacin 450			0
5	Syp Penicillin			0
5	Syp Amoxycillin	460	47	21620
5	Syp Flucloxacilin			0
5	Syp Mebendazole			0
5	Dorby Lotion			0
5	Whitfield Ointment	23	10	230
5	Inj Dexamethacin			0
5	Surgical gloves (Sterile)			0
5	IV Canula			0
5	Micropore3"			0
5	Micropore2"			0
5	Disposable syringe			0
5	ORS			0
5	Bleaching Powder	3	150	450
5	Inj Cephtriaxone			0
5	Inj Stemetil			0
5	Salbutamol Solution			0
5	Syp Cotrim	460	21.5	9890
5	Syp Paracetamol	345	20	6900
5	Syp Erythromycin			0
5	Tab Zinc Sulphate			0
Sub_total		77691		185165
FWC-6	Iron and Folic acid	12000		0

Shilok	Vitamin B complex	6000	1	6000
6	Albendazole	1200	4	4800
6	Paracetamol	6000	1	6000
6	Tab Antacid	3000	1	3000
6	Tab Drotavarine Hydrochloride	600		0
6	Renitidin	1800	2	3600
6	Metronidazole	3000	1	3000
6	Cholorpheniramine	1200	0.5	600
6	Salbutamol	600	0.4	240
6	Ibuprofen	600	1.5	900
6	Diazepum	300	0.7	210
6	Co trimaazole 120	1800	2	3600
6	Co trimaazole 480	3000	4	12000
6	Cap Amoxicilin	3000	30	90000
6	Tab Ciprofloxacin	1200	14	16800
6	Cap doxycycline	600	6.6	3960
6	Amoxicilin powder for suspension	120		0
6	Amoxicilin powder paediatric suspension	60		0
6	Co-trimazole suspension	120	2	240
6	Paracetamol suspension	90	20	1800
6	Chloromphenical eye ointment	120	30	3600
6	Neomycin+Bacitracin Skin ointment	30	15	450
6	Benzyl Benzoate	12		0
6	Benzoic Acid	6		0
6	Dyspensing Envelope	1200		0
Sub_total		47658		160800

TableA3.2.8. Number of patients who visited the FWCs of Rangunia by disease and year

	2009	2010	2011	Total
FWC-1	Hosnabad			
a) Maternal Health				
- ANC 1	184	185	201	570
- ANC 2	107	111	86	304
- ANC 3	49	57	52	158
- ANC4	0	0	0	0
- Delivery care	20	16	22	58
- EmOC	0	0	0	0
- Abortion	69	0	78	147
- Post abortion care	0	0	0	0
- PNC	0	0	0	0
c) STI/RTI	0	0	0	0
- Prevention and management of STI/RTI	115	100	220	435
- Prevention of HIV/AIDS	186	246	440	872
ARI	176	154	414	744
Diarrohea	0	57	70	127

eye infection	0	0	0	0
Scabies	0	0	0	0
helminthiasis,	0	0	0	0
cold-cough	0	0	0	0
Tuberculosis	0	0	0	0
Malaria	0	0	0	0
Leprosy	0	0	0	0
Kala-azar	0	0	0	0
Family planning for male	0	0	0	0
Family planning for female	0	0	0	0
Pill	93	116	116	325
Condom	24	29	29	82
Injection	1356	1635	1635	4626
IUD	198	253	253	704
Implant	119	170	170	459
Permanent Method Female	120	136	136	392
Malnutrition	285	237	249	771
Others	1009	1337	1337	3683
FWC-2	Swarupbhata			
a) Maternal Health				
- ANC 1	203	277	188	668
- ANC 2	137	120	120	377
- ANC 3	74	23	73	170
- ANC4	0	0	0	0
- Delivery care	15	30	16	61
- EmOC	0	0	0	0
- Abortion	24	34	23	81
- Post abortion care	0	0	0	0
- PNC	115	74	116	305
c) STI/RTI	0	0	0	0
- Prevention and management of STI/RTI	111	35	250	396
- Prevention of HIV/AIDS	54	12	145	211
ARI	309	337	427	1073
Diarrohea	77	81	205	363
eye infection	0	0	0	0
Scabies	0	0	0	0
helminthiasis,	0	0	0	0
cold-cough	0	0	0	0
Tuberculosis	0	0	0	0
Malaria	0	0	0	0
Leprosy	0	0	0	0
Kala-azar	0	0	0	0
Family planning for male	148	53	4656	4857
Family planning for female	1571	1448	33249	36268
Anemia	228	34	848	1110
Dysmenorrhoea	52	11	102	165

Malnutrition	132	17	141	290
Others	2841	2252	0	5093
FWC-3	Razanagar			
a) Maternal Health				
- ANC 1	491	397	353	1241
- ANC 2	304	414	433	1151
- ANC 3		150	228	378
- ANC4				0
- Delivery care	67	119	86	272
- EmOC				0
- Abortion				0
- Post abortion care				0
- PNC	146	195	211	552
c) STI/RTI				0
- Prevention and management of STI/RTI			229	229
- Prevention of HIV/AIDS	220	1180	1056	2456
ARI	15	30	404	449
Diarrohea	2	15	62	79
eye infection				0
Scabies				0
helminthiasis,				0
cold-cough				0
Tuberculosis				0
Malaria				0
Leprosy				0
Kala-azar				0
Family planning for male		59	35	94
Family planning for female		4023	4031	8054
Malnutrition	7	23	174	204
Pill	447			447
Condom	28			28
Injectable	2415			2415
IUD	499			499
Implant	355			355
Permanent process for male	28			28
Permanent process for female	532			532
FWC-4	Padua			
a) Maternal Health				
- ANC 1	83	74	78	235
- ANC 2	3	17	27	47
- ANC 3		2	8	10
- ANC4				0
- Delivery care		1		1
- EmOC				0
- Abortion		9	3	12
- Post abortion care				0

- PNC	2	1		3
c) STI/RTI				0
- Prevention and management of STI/RTI	952	116	156	1224
- Prevention of HIV/AIDS				0
ARI	51	16		67
Diarrohea	12	4		16
eye infection				0
Scabies				0
helminthiasis,				0
cold-cough				0
Tuberculosis				0
Malaria				0
Leprosy				0
Kala-azar				0
Family planning for male				0
Family planning for female	1464	1464	1861	4789
Pill	25850	22602	22040	70492
Injectable	6697	6071	6668	19436
IUD	1171	918	1067	3156
Implant	1416	1143	1395	3954
Permanent Method-male	220	297	342	859
Permanent Method-female	9088	7630	7660	24378
Anemia	496	514	383	1393
Malnutrition	8	5		13
Dysmenorrhea		2	30	32
FWC-5	Chandraghona			
a) Maternal Health				
- ANC 1	176	215	162	553
- ANC 2	77	102	79	258
- ANC 3	7	23	36	66
- ANC4	0	0	0	0
- Delivery care	0	24	34	58
- EmOC	0	0	0	0
- Abortion	51	51	38	140
- Post abortion care	0	0	0	0
- PNC	68	68	147	283
c) STI/RTI	0	0	0	0
- Prevention and management of STI/RTI	29	29	213	271
- Prevention of HIV/AIDS	0	0	0	0
ARI	544	720	750	2014
Diarrohea	254	354	298	906
eye infection	0	0	0	0
Scabies	0	0	0	0
helminthiasis,	0	0	0	0
cold-cough	0	0	0	0
Tuberculosis	0	0	0	0

Malaria	0	0	0	0
Leprosy	0	0	0	0
Kala-azar	0	0	0	0
Family planning for male	50	56	54	160
Family planning for female	0	0	0	0
Pill	505	599	598	1702
Injection	919	872	810	2601
IUD	59	35	55	149
FWC-6	Shilok			
a) Maternal Health				
- ANC 1	161	187	188	536
- ANC 2	84	88	92	264
- ANC 3	26	33	38	97
- ANC4				0
- Delivery care	21	28	6	55
- EmOC				0
- Abortion				0
- Post abortion care				0
- PNC	123	167	141	431
c) STI/RTI				0
- Prevention and management of STI/RTI	172	177	357	706
- Prevention of HIV/AIDS				0
ARI	431	492	535	1458
Diarrohea	75	130	103	308
eye infection				0
Scabies				0
helminthiasis,				0
cold-cough				0
Tuberculosis				0
Malaria				0
Leprosy				0
Kala-azar				0
Family planning for male	2693	1828	1920	6441
Family planning for female	26673			26673
Anemia	194	430	291	915
Malnutrition	66	92	62	220
Dysmenorrhoea	10	9	11	30
Pill		14343	15184	29527
Injectable		3920	4042	7962
IUD		1370	1551	2921
Implant		565	731	1296
Permanent Method		3936	4130	8066

Table A3.2.9. Amount of time spent by providers and staffs on a day in FWCs in Rangunia obtained through diary method

Designation of persons	For non-clinical activities	Outpatients		Total amount of time (Min)	Amount of time/ Patient	Inpatient	Total Amount of time spent
		Number					
FWC-1		Hosnabad					
SACMO		30	24	72	3		102
FWV		35	33	67	2.03		102
FWC-2		Swarupbhata					
SACMO			36	172	4.78		172
FWV			17	116	6.82		116
FWC-3		Razanagar					
SACMO		30	21	49	2.33		79
FWV		50	22	300	13.64		350
FWC-4		Padua					
FWV			16	100	6.25		100
Medical Assistant			43	275	6.40		275
FWC-5		Chandraghona					
SACMO			5	53	10.60		53
FWV		22	6	47	7.83		69
Medical Assistant			4	70	17.50		70
FWC-6		Shilok					
FWV			39	170	4.36		170

Table A3.2.10. Amount of time spent by providers and staffs per patient in FWCs in Rangunia obtained through time motion observations

Designation of persons	Number of patients	Total amount of time	Amount of time/patient
FWC-1		Hosnabad	
SACMO	5	16	3.20
FWV	5	22	4.40
FWC-2		Swarupbhata	
SACMO	5	14	2.80
FWV	5	29	5.80
FWC-3		Razanagar	
SACMO	5	14	2.80
FWV	5	51	10.20
FWC-4		Padua	
FWV	5	17	3.40

Medical Assistant	5	30	6.00
FWC-5	Chandraghona		
SACMO	5	53	10.60
FWV	5	39	7.80
Medical Assistant	5	80	16.00
FWC-6	Shilok		
FWV	5	33	6.60

Table A3.2.11. Amount of time spent by providers for one patient by disease in FWCs of Rangunia upazila

Name of Disease/ Condition	First Visit	Second Visit
FWC-1	Hosnabad	
a) Maternal Health		
- ANC 1	20	14
- ANC 2	15	11
- ANC 3	15	10
- ANC4	15	10
- Prevention and management of STI/RTI	10	6
- Prevention of HIV/AIDS		
ARI	10	6
Diarrohea	3	1
eye infection	4	3
Scabies	3	2
helminthiasis,	3	1
cold-cough	4	3
Tuberculosis	3	
Malaria	4	3
Family planning for male	4	4
FWC-2	Swarupbhata	
a) Maternal Health		
- ANC 1	10	7
- ANC 2	8	6
- ANC 3	8	6
- ANC4	10	7
- Delivery care	60	30
- Abortion	15	3
- Post abortion care	15	10
- PNC	10	8
c) STI/RTI		
- Prevention and management of STI/RTI	7	5
- Prevention of HIV/AIDS		
ARI	5	4
Diarrohea	5	4
eye infection	5	4
Scabies	5	4
helminthiasis,	5	4
cold-cough	5	4
Family planning for male	5	4
Family planning for female	5	4

FWC-3	Razanagar	
a) Maternal Health		
- ANC 1	3	3
- ANC 2	2	2
- ANC 3	2	2
- ANC4	2	2
- Delivery care	30	20
- EmOC	60	30
- Post abortion care	30	20
- PNC	3	3
c) STI/RTI		
- Prevention and management of STI/RTI	5	4
- Prevention of HIV/AIDS	7	6
ARI	3	3
Diarrohea	4	4
eye infection	2	2
Scabies	3	3
helminthiasis,	2	2
cold-cough	3	2
Tuberculosis	2	2
Malaria	3	2
Leprosy	2	2
Family planning for male	5	4
Family planning for female	5	4
FWC-4	Padua	
a) Maternal Health		
- ANC 1	10	5
- ANC 2	5	5
- ANC 3	5	5
- ANC4	5	5
- PNC	5	5
c) STI/RTI		
- Prevention and management of STI/RTI	5	5
- Prevention of HIV/AIDS		
ARI	5	3
Diarrohea	3	3
eye infection	5	5
Scabies	3	3
helminthiasis,	5	3
cold-cough	5	3
Tuberculosis	10	5
Malaria	5	5
Family planning for male	10	5
Family planning for female	10	5
FWC-5	Chandraghona	
a) Maternal Health		
- ANC 1	30	20
- ANC 2	20	20
- ANC 3	15	15
- Delivery care	60	30

- Abortion	30	20
- Post abortion care		
- PNC	30	20
c) STI/RTI		
- Prevention and management of STI/RTI	30	20
- Prevention of HIV/AIDS	20	15
ARI	30	20
Diarrohea	20	15
eye infection	5	5
Scabies	3	1
helminthiasis,	4	2
cold-cough	4	2
Family planning for male	60	10
Family planning for female	30	15
FWC-6	Shilok	
a) Maternal Health		
- ANC 1	10	7
- ANC 2	7	5
- ANC 3	10	6
- ANC4	8	5
- PNC	10	5
c) STI/RTI		
- Prevention and management of STI/RTI	10	8
- Prevention of HIV/AIDS	5	4
ARI	6	4
Diarrohea	6	4
eye infection	4	3
Scabies	5	3
helminthiasis,	5	2
cold-cough	5	3
Family planning for male	10	8
Family planning for female	10	8

Table A3.3.1. Cost of human resources in Private Clinic of Rangunia

	Designation of employed Persons	Monthly salary and allowances (BDT)	Annual Salary and allowances (BDT)
Private Clinic			
Clinic-1	Medical Officer 1	32500	390000
	Medical Officer 2	17500	210000
	Medical Assistant	11500	138000
	Medical Assistant	9500	114000
	Nurse	5500	66000
	Nurse	4200	50400
	Nurse	4000	48000
	Nurse	4000	48000
	Nurse	4000	48000
	Pharmacist	5000	60000
	Sweeper/Cleaner	3300	39600

	Ward boy	3500	42000
	Ward boy	3500	42000
	Ward boy	3000	36000
	Ward boy	3000	36000
	Ward boy	3000	36000
	Guard	4200	50400
	Guard	3500	42000
	Guard	3500	42000
	Sub-Total.		1538400
Clinic-2	Medical Officer 1	8000	96000
	Medical Officer 2	8000	96000
	Medical Officer 3	8000	96000
	Medical Officer 4	8000	96000
	Medical Officer 5	8000	96000
	Medical Officer 6	8000	96000
	Medical Officer 7	8000	96000
	Medical Officer 8		0
	Medical Officer 9		0
	Manager	5500	66000
	Cashier	5800	69600
	Guard	3000	36000
	Guard	2300	27600
	Guard	2100	25200
	WardBoy	3000	36000
	WardBoy	3000	36000
	WardBoy	3000	36000
	Aya	3000	36000
	Aya	3000	36000
	Aya	3000	36000
	Cleaner	2600	31200
	Cleaner	2600	31200
	Cleaner	2600	31200
	Cleaner	2175	26100
	Cleaner	2600	31200
	Cleaner	2400	28800
	Cleaner	2200	26400
	MLSS	2000	24000
	OT Assistant	7000	84000
	Sr. Nurse	6000	72000
	Sr. Nurse	6000	72000
	Sr. Nurse	6000	72000
	AID Nurse	4000	48000
	AID Nurse	3800	45600
	AID Nurse	3700	44400
	AID Nurse	3300	39600
	AID Nurse	3300	39600
	AID Nurse	3000	36000

	AID Nurse	3000	36000
	AID Nurse	3000	36000
	AID Nurse	3000	36000
	AID Nurse	3000	36000
	AID Nurse	2500	30000
	AID Nurse	2500	30000
	AID Nurse	2500	30000
	AID Nurse	2500	30000
	AID Nurse	2500	30000
	AID Nurse	2500	30000
	AID Nurse	2500	30000
	AID Nurse	2000	24000
	AID Nurse	1800	21600
	AID Nurse	1800	21600
	AID Nurse	1800	21600
	AID Nurse	1800	21600
	AID Nurse	1800	21600
Sub-Total.			2381700

Table A3.3.2. Cost of important equipments at private clinics of Rangunia Upazila

	Name of the equipment	Year of procurement	Total number	Price at procurement (BDT)	Total expected life years	Total Value	Annulized Value
Private Clinic	1	2	3	4	5	6	7
Private Clinic-1							
	Air way (different sizes)					0	
	Ambu bag					0	
	Artery forceps (different size)	2009	10	80	1	800	800
	Aural Syringe					0	
	B.P. handle	2011	3	100	2	300	150
	B.P. machine Aneroid	2012	2	1400	2	2800	1400
	Bandage cutting scissors	2011	6	100	3	600	200
	Boiling water sterilizer					0	
	Bowl SS 10"					0	
	Bowl stand 10"					0	
	Bucket, plastic (large, medium, small)					0	
	Cloth, duster					0	
	Cuscors vaginal speculam					0	
	D&C set					0	
	Delivery Kit					0	
	Dissecting forcep (plain/toothed)	2011	6	90	1	540	540
	Dressing bowl	2011	2	50	2	100	50
	Dressing forceps	2011	2	90	2	180	90
	Dressing tray (shallow) SS	2011	4	60	29	240	8.27586
	Drum sterilizer (shallow) SS					0	

	Examination table	2011	4	4000		16000	
	Foley's catheter different size					0	
	Forcep sponge holding plan					0	
	Forcep tissue 2x3 teeth 191 mm	2011	2	120	1	240	240
	Gauge cutting scissors	2011	4	350	1	1400	1400
	Haemostat forceps					0	
	Hammer percussion					0	
	Hanging weighing scale					0	
	Implantation set					0	
	Instrument cabinet					0	
	Instrument tray	2011	2	300	4	600	150
	IUD kit					0	
	Kidney tray	2011	3	150	3	450	150
	M.R set with canula					0	
	Mouth gag					0	
	Nasal Speculum	2010	2	300	1	600	600
	Naso gastric Ryle's tube (adult, child, infant)					0	
	Needle of different size and shape					0	
	NSV set					0	
	Patient stretcher	2000	2	4000	2	8000	4000
	Resuscitator					0	
	Rubber catheter different size					0	
	Sims Vaginal Speculum					0	
	Stethoscope	2008	4	500	1	2000	2000
	Stomach wash tube	2010	2	300	1	600	600
	Suction unit portable (manual)	2002	1	8000	2	8000	4000
	Tongue depressor	2011	3	50	0.25	150	
	Tourniquet	2011	3	20	0.08	60	
	Tubectomy kit					0	
	Weight machine	2010	2	1200	1	2400	2400
	Fan	2008	20	2000	5	40000	8000
	Light	2011	50	250	1	12500	12500
	Total of Private Clinic-1		139				39278.3
Private Clinic-2							
	Air way (different sizes)	2011	12	120	0.5	1440	2880
	Ambu bag	2011	2	500	4	1000	250
	Artery forceps (different size)	2011	36	120	0.5	4320	8640
	Aural Syringe	2004	2	200	10	400	40
	B.P. handle	2004	2	95	5	190	38
	B.P. machine Aneroid	2011	5	1300	0.5	6500	13000
	Bandage cutting scissors	2009	4	150	3	600	200
	Boiling water sterilizer	2004	2	2700	12	5400	450
	Bowl SS 10"					0	
	Bowl stand 10"					0	

Bucket, plastic (large, medium, small)	2011	5	70	1	350	350
Cloth, duster	2011	3	120	0.4	360	900
Cuscors vaginal speculam	2009	2	350	2	700	350
D&C set	2004	2	2200	15	4400	293.333
Delivery Kit	2010	2	3000	2	6000	3000
Dissecting forcep (plain/toothed)	2011	4	90	0.5	360	720
Dressing bowl	2010	2	120	1	240	240
Dressing forceps					0	
Dressing tray (shallow) SS	2008	1	2500	3	2500	833.333
Drum sterilizer (shallow) SS	2006	5	550	5	2750	550
Examination table	2004	1	35000	15	35000	2333.33
Foley's catheter different size					0	
Forcep sponge holding plan	2010	12	120	1	1440	1440
Forcep tissue 2x3 teeth 191 mm	2010	36	120	1	4320	4320
Gauge cutting scissors	2011	2	350	1	700	700
Haemostat forceps					0	
Hammer percussion					0	
Hanging weighing scale					0	
Implantation set					0	
Instrument cabinet					0	
Instrument tray	2008	3	300	4	900	225
IUD kit					0	
Kidney tray	2010	4	150	3	600	200
M.R set with canula					0	
Mouth gag	2010	1	150	1	150	150
Nasal Speculum		1	300	1	300	300
Naso gastric Ryle's tube (adult, child, infant)					0	
Needle of different size and shape					0	
NSV set					0	
Patient stretcher	2010	2	4000	2	8000	4000
Resuscitator					0	
Rubber catheter different size					0	
Sims Vaginal Speculum	2008	2	250	3	500	166.667
Stethoscope	2010	5	500	1	2500	2500
Stomach wash tube	2006	1	300	1	300	300
Suction unit portable (manual)	2008	2	8000	2	16000	8000
Tongue depressor	2011	5	50	0.4	250	625
Tourniquet	2012	7	20	0.08	140	1680
Tubectomy kit					0	
Weight machine	2011	5	1200	1	6000	6000
Fan	2006	55	2000	5	110000	22000
Light		200	250		50000	
Total of Private Clinic-2		435				87674.7

Table A3.3.3. Cost of furnitures and fixtures of private clinics of Rangunia Upazila

Private Clinics	Name of the furniture	Total number	Price per unit	Total value (BDT)	Total expected life years	Annualized value (BDT)
P-2	Almirah (Steel)	5	10000	50000	15	3333.33
	Wooden Almirah	3	6000	18000	10	1800.00
	Wooden Table (Big)	1	10000	10000	15	666.67
	Wooden Table (Small)	6	2000	12000	12	1000.00
	Wooden Chair	8	1000	8000	12	666.67
	Chair Steel	12	3000	36000	8	4500.00
	Plastic Chair	12	400	4800	5	960.00
	Iron Cot	39	5000	195000	25	7800.00
	Wooden Rack	5	1000	5000	15	333.33
	Wooden Tool	40	500	20000	15	1333.33
	Medicine Box	40	1000	40000	15	2666.67
	Total.	171				25060

Table A3.3.4. Cost of land and space of private clinics of Rangunia Upazila

Private Clinics	Item	Existing quantity/amount	Year of purchase/construction	Unit Cost of purchase /construction	Expected life years	Current market value	Annualized Value
P-2							
	Unused Land	16.96		90000	99	1526400	15418.182
	Building	7000	2004	80	50	28000000	560000
	Room 1						
	Room 2						
	Room 3						
	Room 4						
	Room 5						
	Total.						575418.18

Table A3.3.5. Utility service and miscellaneous of private clinics of Rangunia Upazila

Private Clinics	Item	Monthly bill (in BDT)	Annual Bill
P-1	Electricity use	5000	60000
	Gas use		0
	Water use		0
	Cost of maintenance		0
Sub Total			60000
P-2	Electricity use	20000	240000
	Gas use	900	10800
	Water use		0
	Cost of maintenance	5000	60000
Sub Total			310800

Table.	Patient Record			
P-2				
		2009	2010	2011
	January	257	276	304
	February	276	279	315
	March	313	402	329
	April	319	372	357
	May	352	425	323
	June	305	301	306
	July	271	251	349
	August	287	239	308
	September	256	264	338
	October	304	314	320
	November	228	331	253
	December	271	324	248
	Total.			3750

Annexure 4

Table A4.1 Imputed cost of minimum necessary drugs for a patient by disease

	Disease/Condition	Drug 1	Number of medicine (dose)	Unit Price (BDT)	Drug 2	Number of drugs per Client	Unit Price (BDT)	Drug 3	Number of drugs per Client	Unit Price (BDT)	Drug 4	Number of drugs per Client	Unit Price (BDT)	Total Medicinal Cost (BDT)
	Diarrhoea	ORS	5	5	Metronidazole	3	1	Nitazoxanide 500mg	14	10	Zinc	30	1	198
	Dysentery	Metronidazole	6	1	Ciproflaxacin	14	10				Vit. B Complex	30	1	176
Malaria	Acute	Chloroquine	10	10	Paracetamol	8	0.7	Antacid	8	0.5	Vit. B Complex	30	1	139.6
	L. Treatment Failure	Coartem	20	100	Paracetamol	14	0.7	Antacid	14	0.5	Vit. B Complex	30	1	2046.8
	Chronic	Coartem	20	100	Voltaren Suppository	7	22	Antacid	14	0.5	Vit. Supplement	30	1	2191
	Halminthiasis	Albendazole	1	4							Multivit-M	30	1	34
	Abdominal pain	Omeprazole	12	3	Butapen	4	1	Domperidon	6	5	Multivit-M	30	1	100
	Tuberculosis	Rifampicin	720	10	Ethambutol	120	8	Pyrazidin	120	2.5	Isoniazide	360	2.5	9360
ARI	Cold-cough	Histacin	6	0.2	Paracetamol	6	0.7	Amoxacilin	28	4	Multivit-M	30	1	147.4
	Pneumonia	Gentamycin inj.	14	15	Subutamol	10	2	Dexamethoson	5	1	Multivit-M	30	1	265
	Chronic Pneumonia	Ceftriaxon inj.	14	190	Tusca	1	35				Multivit-M	30	1	2725
	Chronic ARI	Fimoxylav	21	14	Paracetamol	28	0.7	Histacin	14	0.2	Multivit-M	30	1	346.4
	Diphtheria	Azithromycin	14	30	Paracetamol	28	0.7	Histacin	14	0.2	Multivit-M	30	1	472.4
	Hooping Cough	Histacin	7	0.2	BBL Lotion	1	50	Hydrocortison ointment	1	25	Multivit-M	30	1	106.4
	Skin Disease	DNS Saline	7	120	Lactulose	1	145							985
	Jaundice	ATS	1	75	Metronidazol	21	1	Ciproflouxacin	14		Multivit-M	30	1	126
	Tetanus	Inj Gentamycin	14	15	Ceftriaxone inj	7	190				Multivit-M	30	1	1570
	New-born Diseases													
	Night blindness	Vitamin A	30	10							Multivit-M	30	1	330
	Gotter	Carbimazole	100	1							Multivit-M	30	1	130
	Mal-nutrition	Multivitamin	365	1										365
	Anaemia	Iron + Folic Acid	360	0.2	Vitamin B Complex	180	1				Multivit-M	30	1	282
	Asthma	Subutamol	14	2	Hydrocortison	10	1	Inhaler	1	200	Multivit-M	30	1	268
	Small pox	Paracetamol	14	0.7				Ciproflouxacin	14	10	Multivit-M	30	1	179.8
	Ear disease	Paracetamol	14	0.7				Ciproflouxacin	14	10	Multivit-M	30	1	179.8
	Eye disease	Chloramphenical Eye Drop	1	25	Ceproflaxacin Eye Drop	1	35							60
	Teeth disease	Cotrim	14	1.5	Ketorolac	14	10	Omeprazole	10	3	Multivit-M	30	1	221
	AFP	Moxycyline	14	4	Diclofenac	6	8	Metronidazole	14	1	Omeprazole	12	3	154
	Poisoning	Atropin	40	3	Pralidoxine	2	100	Ceftriaxone inj.	14	190				2980
	Assault	Ketorolac	14	10	Cephradim	5	20	Omeprazole	30	3	Multivit-M	30	1	360
	Female disease	Cefexim	14	35				Pentroprazole	30	3	Multivit-M	30	1	610
	Leprosy	Tab warfarin	90	3	Refampicin			Ethambutol			Multivit-M	30	1	300
	Filleria	Sodium stibogluconate	1	400	Paracetamol			Histacine			Multivit-M	30	1	430
	Kala-azar	Azithromycin	7	30	Doxicyclin			Pentroprazole			Multivit-M	30	1	240
	RTI/STD	Cypro	28	12							Multivit-M	30	1	366
	Hypertension	Amdocol	30	4	Antinlol						Multivit-M	30	1	150
	Diabetes	Metformin	730	2	Insulin						Multivit-M	30	1	1490
	PUO	Paracetamol	14	0.7	Ciproflouxacin							30	1	39.8

Table A4.2.. Imputed cost of surgery

Disease/Condition	Drug 1	Number of medicine (dose)	Unit Price (BDT)	Drug 2	Number of drugs per Client	Unit Price (BDT)	Drug 3	Number of drugs per Client	Unit Price (BDT)	Drug 4	Number of drugs per Client	Unit Price (BDT)	Total Medicinal Cost (BDT)
Appendectomy	DNS Saline	3	60	Inj Ceftriaxone	7	350	Inj Gentamycin	21	9.47	Inj Pathedine	1	100	2843.97
Thyroidectomy	DNS Saline	3	60	Inj Flayyl	21	100	Inj Gentamycin	21	9.47	Inj Pathedine	1	100	3430
Cholecystectomy	DNS Saline	3	60	Inj Ceftriaxone	7	350	Inj Gentamycin	21	9.47	Inj Pathedine	1	100	2843.97
Hernia repair	DNS Saline	3	60	Inj Flayyl	21	100	Inj Gentamycin	21	9.47	Inj Pathedine	1	100	1188.97
Caesarean section	Hartman's solution	3	60	Inj Flayyl	15	100	Inj Gentamycin	15	9.47	Inj Oxytocin	1	100	1125
D&C	Hartman's solution	3	60	Inj Flayyl	15	50	Inj Gentamycin	15	9.47	Inj Oxytocin	1	100	1125
Assault /Road Traffic Accident	DNS Saline	3	60	Inj Flayyl	21	100	Inj Gentamycin	21	9.47	Inj Pathedine	1	100	3430
Gynecological condition	DNS Saline	3	60	Inj Flayyl	15	50	Inj Gentamycin	15	9.47	Inj Pathedine	1	100	1080
Sterilization													1500

Table A4.3. Imputed cost of minimum necessary diagnostic tests for a patient by disease

Disease	Name of the required tests with costs								Costs	Num er of tients	Total Cost
	Item	Rate	Item	Rate	Item	Rate	Item	Rate			
Diarrhoea	Stool R/E	150							150	1040	156000
Dysentery	Stool R/E	150	Stool C/S	250					400	7519	3007600
Acute Malaria	CBC	250	MP	300					550		
Malaria (Treatment Failure)	CBC	250	MP	300					550		
Chronic	CBC	250	MP	300					550		
Halminthisis	Stool R/E	150							150	9060	1359000
Abdominal pain	Stool R/E	150	CBC	250					400	1562	
Cold-cough									0	6103	
Pneumonia	CxR (Chest X-ray)	180							180	0	
Chronic Pneumonia	CxR	180							180	0	
Chronic ARI	CxR	180							180	0	
Diphtheria	Blood C/S	300							300	0	
Whooping Cough									0	0	
Skin Disease									0	1555	
Jaundice	Liver Function Test	1000							1000	0	
Tetanus									0	0	
New-born Diseases									0	0	
Night blindness									0	0	
Goiter	T3, T4, TSH	1500							1500	0	
Malnutrition									0	0	
Anemia	CBC	250							250	0	
Asthma	CxR (Chest X-Ray)	180							180	2052	369360
Chicken pox									0	0	
Ear disease									0	1816	
Eye disease	Refraction	50	Conjunctival Swab	200					250	0	
Dental disease	X ray	250							250	894	223500

AFP									0	0	
Poisoning									0	0	
Assult									0	0	
Female disease	CBC	250							250	0	
Leprosy	C/S	300	AFB	350					650	0	
Filaria	CFT	350							350	0	
Kala-azar									0	0	
RTI/STD - Prevention and management of STI/RTI/UTI	VDRL	500							500	630	3150 00
Hypertension	ECG	450							450	664	2988 00
Diabetes	OGTT	200							200	5236	1047 200
PUO	CBC	150							150	0	
Maternal ANC1	CBC	150	USG Abdomen	500	Pt. Test	100.00			750	7272	5454 000
ANC2	CBC	150							150	0	
- ANC 3	CBC	150							150	0	
- ANC4	CBC	150	USG Abdomen	500		100.00			750	0	
- Delivery care	CBC	150	Blood Grouping	50	Cross Matching	200.00			400	0	
- EmOC	CBC	150	USG Abdomen	500	Blood Grouping	50	Cross Matching	200.00	900	0	
- Abortion	CBC	150	USG Abdomen	500	Blood Grouping	50	Cross Matching	200.00	900	0	
- Post abortion care	CBC	150	USG Abdomen	500	Blood Grouping	50	Cross Matching	200.00	900	0	
- Prevention of HIV/AIDS	ELISA	500							500	0	
Scabies									0		
helminthiasis									0		
cold-cough									0		
Tuberculosis	Sputum for AFB	350	CBC	150	C X ray	180.00			680		
Kala-azar									0		
Family planning for male									0	101	
Family planning for female									0	420	
Obstructed Labour	CBC	150	USG Abdomen	500	Blood Grouping	50	Cross Matching	200.00	900	0	
Appendicitis	CBC	150	USG Abdomen	500					650	0	
Anemia	CBC	150							150	0	
Bronchial Asthma	C X ray	180.00							180	0	
Dysentry									0	0	
Viral Fever									0	0	
Hernia	USG Abdomen	500							500	0	
Hypertension									0	0	
Pelvic Infection									0	0	

Rheumatic Fever	ASO Titre	500							500	0	
Poisoning									0		
Urinary Infection	Urine C/S	250							250		
Arthritis	Rosewaler								0		
Assult	X ray	250							250		
Road Traffic	X ray	250							250		
Total											1223 0460

Table A4.4. Diagnostic tests usually performed for diseases (Source. DCI 6.2 of Set 2)

Name of disease/ condition	Diagnostic tests conducted			
	Blood	Urine	Stool	Other (Specify)
a) Maternal Health	Grouping			VDRL, HBsAg, TPHA
- ANC 1	Hb%	R/E		
- ANC 2	R/E	R/E		USG
- ANC 3	R/E	R/E		
- ANC4	R/E	R/E, Albumin		USG
- Delivery care				
- EmOC		Albumin		USG
- Abortion				USG
- Post abortion care				USG
- PNC				
c) STI/RTI				
- Prevention and management of STI/RTI	ESR, R/E	Urine R/E, C/S		VDRL, ELISA, Urine R/E, PCR
- Prevention of HIV/AIDS	CBC	Urine R/E		ELISA, PCR, Western Blot, CD ₄ Count
ARI	R/E			CXR, P/A, Sgntm AFB
Diarrohea			R/E	
Scabies	CBC			Microscopic examination
Helminthiasis,	CBC (Rosin Count)		R/E	
cold-cough	R/E			CXR, P/A
Tuberculosis	ESR			CXR, P/A, Srptum AFB, MT, PCR
Malaria	MP			ICT
Leprosy	R/E			Slit skin Imearfor, APB, Skin Biopsy, PCR
Kala-azar	R/E			ICT, CFT, DAT
Family planning for male				
Family planning for female				
Others (Head Injury)				CT Scan, MRI
Total				

Table A4.5. Imputed cost of diagnostic procedure by disease

Disease	Name of the required tests with costs								Costs	Number of Patients	Total Cost
	Item	Rate	Item	Rate	Item	Rate	Item	Rate			
Diarrohea	Stool R/E	150							150	1040	156000
Dysentery	Stool R/E	150	Stool C/S	250					400	7519	3007600
Acute Malaria	CBC	250	MP	300					550		
Malaria (Treatment Failure)	CBC	250	MP	300					550		
Chronic	CBC	250	MP	300					550		
Halminthiasis	Stool R/E	150							150	9060	1359000
Abdominal pain	Stool R/E	150	CBC	250					400	1562	
Cold-cough									0	6103	
Pneumonia	CxR (Chest X-ray)	180							180	0	
Chronic Pneumonia	CxR	180							180	0	
Chronic ARI	CxR	180							180	0	
Diphtheria	Blood C/S	300							300	0	
Whooping Cough									0	0	
Skin Disease									0	1555	
Jaundice	Liver Function Test	1000							1000	0	
Tetanus									0	0	
New-born Diseases									0	0	
Night blindness									0	0	
Goiter	T3, T4, TSH	1500							1500	0	
Malnutrition									0	0	
Anemia	CBC	250							250	0	
Asthma	CxR (Chest X-Ray)	180							180	2052	369360
Chicken pox									0	0	
Ear disease									0	1816	
Eye disease	Refraction	50	Conjunctival Swab	200					250	0	
Dental disease	X ray	250							250	894	223500
AFP									0	0	
Poisoning									0	0	
Assult									0	0	
Female disease	CBC	250							250	0	
Leprosy	C/S	300	AFB	350					650	0	
Filaria	CFT	350							350	0	
Kala-azar									0	0	
RTI/STD - Prevention and management of STI/RTI/UTI	VDRL	500							500	630	315000
Hypertension	ECG	450							450	664	298800

Diabetes	OGTT	200							200	5236	1047200
PUO	CBC	150							150	0	
Maternal ANC1	CBC	150	USG Abdomen	500	Pt. Test	100			750	7272	5454000
ANC2	CBC	150							150	0	
- ANC 3	CBC	150							150	0	
- ANC4	CBC	150	USG Abdomen	500		100			750	0	
- Delivery care	CBC	150	Blood Grouping	50	Cross Matching	200			400	0	
- EmOC	CBC	150	USG Abdomen	500	Blood Grouping	50	Cross Matching	200	900	0	
- Abortion	CBC	150	USG Abdomen	500	Blood Grouping	50	Cross Matching	200	900	0	
- Post abortion care	CBC	150	USG Abdomen	500	Blood Grouping	50	Cross Matching	200	900	0	
- Prevention of HIV/AIDS	ELISA	500							500	0	
Scabies									0		
helminthiasis									0		
cold-cough									0		
Tuberculosis	Sputum for AFB	350	CBC	150	C X ray	180			680		
Kala-azar									0		
Family planning for male									0	101	
Family planning for female									0	420	
Obstructed Labour	CBC	150	USG Abdomen	500	Blood Grouping	50	Cross Matching	200	900	0	
Appendicitis	CBC	150	USG Abdomen	500					650	0	
Anemia	CBC	150							150	0	
Bronchial Asthma	C X ray	180							180	0	
Dysentery									0	0	
Viral Fever									0	0	
Hernia	USG Abdomen	500							500	0	
Hypertension									0	0	
Pelvic Infection									0	0	
Rheumatic Fever	ASO Titre	500							500	0	
Poisoning									0		
Urinary Infection	Urine C/S	250							250		
Arthritis	Rosewaler								0		
Assult	X ray	250							250		
Road Traffic	X ray	250							250		
Total											12230460