# Report

# Identification of scaling up strategies for free health services leading to universal health care"
# Kathmandu, 2009

Case study of Selected District Hospitals on Service Availability, Affordability and Analysis on Use of Free Medicine

Strategies for Scaling up Free Health Services at District Hospitals

Situation Analysis of Free Health Care Policy at Public Referral Hospitals and Cooperative Hospitals

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# Acronyms

| | |
|---|---|
| BPKIHS | BP Koirala Institute Of Health Science |
| CS | Caesarian Section |
| DAG | Disadvantaged group |
| DoHS | Department of Health Service |
| ECG | Electrocardiogram |
| ENT, | Ear, Nose and Throat |
| ESR | Erythrocyte sedimentation rate |
| FCHV | Female Community Health Volunteer |
| GoN | Government of Nepal |
| Hb | Hemoglobin |
| HMIS | Health Management Information System |
| HP | Health Post |
| ID | Incision and Drainage |
| IP | In Patient |
| JAR | Joint Annual Review |
| LZH | Lumbini Zonal Hospital |
| MDGP | MD General Practice |
| MoHP | Ministry of Health and Population |
| MS | Medical Superintendents |
| N | Number |
| NA | Not available |
| NAMS | National Academy if Medical Sciences |
| NHEA | Nepal Health Economic Association |
| OOPE | Out of Pocket expenditure |
| OPD, | Out Patient Department |
| OP | Out Patient |
| PAC | Post abortion care |
| PH | Public Health |
| PHCC | Primary Health Care Centre. |
| RE/ME | Routine Examination/ Microscopic examination |
| RTI | Research Triangle Institute |
| SAS | Safe Abortion care |
| SBA | Skill Birth Attendant |
| SHP | Sub Health Post |
| USG | Ultra-sonography |
| VDC/NP | Village Development Committee/ Nagar Palika |

# Executive Summary

## 1. Introduction

*Health policy of social inclusion:* The Nepal Health Sector Programme (2004-2010)- Systems for priority access for poor and vulnerable groups. Three year interim plan regarding specifies the strategies for social inclusion to develop necessary policies and statuts to operationalize the concept of providing free Basic Health Service to all. Essential health services of SHP/HP/PHC for all citizens, Ama program and support for uterine prolapse for women, Available health services at district hospital for target group(Poor, ultra poor, destitute, elderly, disabled, FCHV ), Safety Net for referral and poor patients, Safety Net in Catastrophic Illnesses- Cash Support (Rs.50000), Safety Net in Catastrophic Illnesses- Treatment Support under Social security program at referral hospital, some package policy exists for remote and isolated zones, districts, and terai region.

*Rationale:* Access to district hospital level services for all citizen and secondary and tertiary levels of treatment is still related to the paying capacity of the service users resulting into a larger out of pocket expenses as the health service cost at these levels is considerably higher than primary health care. Because of this higher level of OOPE the poor and vulnerable people are not able to access the health services at this level. At district hospitals only targeted groups can access the free health care services. In this regard the study is aim to identify the strategies to scale up the free health care at district level hospital and situation analysis of referral hospital on free health care to see the possibilities to scale up free health.

*Objectives:* The overall objective of the proposed activity is to develop options and strategies for effective scaling up of the FHC program of the government at various levels of health service institutions.

*Specific Objectives: 1)*To identify the scaling up strategies of free health services in District Hospitals., 2) To explore the management process of free health care service in three selected referral hospitals (central and zonal hospital) and 3) Situation analysis on the cooperatives based health facilities/ hospitals and policy and mechanisms of free health service delivery.

**Methodology:** The study was conducted in three designs 1) Study of district hospital and cost analysis 2) study of referral hospital on free health care and 3) Study of cooperative based hospital on health finance policy and implementation. The study period is July to October 2009.

The study was conducted in District Hospitals: Rupandehi, Gorkha, Nuwakot, Bardiya, Sunsari, Baitadi, Referral hospitals: Central Hospital: NAMS Bir Hospital, Lumbini and Koshi Zonal Hospital and Cooperative Hospitals: Manamohan Memorial Community Hospital and STUPA Community Hospital in Katmandu.

The findings of study is limited to explore the situation of service provision at district hospital (primary data) cost analysis based on secondary data and at referral and cooperative hospital information are limited to describe the present situation on health financing and provision for free health care.

**2. In-depth study of Selected District Hospitals: Availability, Affordability of services and Cost Analysis**

The Objective of the district hospital study are 1) to assess the availability, and affordability of health services at District hospitals of different ecological regions 2) to find out the availability and usefulness of 40 items free medicine policy in study district.3) to find out the medicine purchasing practice and medicine cost shared out of pocket of patient 4) Identification of scaling up strategies 5) Estimate the cost of major scaling up alternatives 6) Estimation of revenue loss from user fee under partial free care strategies.

*The Plan for Cost analysis are*, 1) Costing of universal free care at DH 2) Costing of free care to children up to 5 years age at DH and 3) Costing of free care by ecological region (with focus on mountain region).

Data collection : Literature review, discussion with experts and health policy makers and managers at MoHP, DoHS and district level, observation of facilities and services, key informant interview with hospital mangers and service providers, exit interview with users and hospital record review are key techniques used for data collection.

**Findings of District Hospital study**

***2.1. Service facilities:*** Out of six study district hospitals three hospitals including, Runadehi, Sunsari and Bardiya is new building with more rooms and the rooms are not used. The rooms and spaces for OPD, Emergency and indoor of Nuwakot (Trisuli), Gorkha and Baitadi hospitals are not adequate. All five hospitals are 25-bed and Baitadi is 15-bed hospital. Medical officer and the SBA are key human resources to provide services in district hospitals. In all study five district hospitals at least 3 (only 1 in Baitadi) medical doctors are available.

***2. 2. Availability of services:*** *a. Medical services including: O*PD/Emergency/ Inpatient services, SAS*/PAC, minor surgical care, maternal health services (Delivery Care except* Caesarian section service. b. L*aboratory services:* Routine Blood, Stool, Urine test are available in all study hospital. Routine *Radiology services, USG* and ECG *service* is also available in all study hospital regularly except Baitadi and Bardiya.

***2. 3. Affordability of services in six study hospitals:*** a. User fees for services: The user fees for safe abortion service are Rs. 1000 decided by MoHP. This is not matching with reproductive right of women. Most expensive hospital service is available in Gorkha due to user fees policy in procedures and emergency however the utilization is increasing because the patients are very positive to quality of services. In Baitadi and Bardiya fewer services are available in comparison to others and in cheaper rates. b. User fees of diagnostic services: The rate of user for diagnostic services including lab test, X-ray, and USG are varying in six study hospitals. The rates for routine lab test are more or less equal in study districts. There is user policy for HIV test in Rupandehi (Rs 305) and Sunsari (Rs 250) however this is free in rest of the study district.

c. Price of transport service for referral cases: The referral cases are mostly transported using the available ambulance and the public transport service. The poor patients are

receiving transport cost from hospital as per the safety net policy (Terai- Rs.1000, Hill-1500 and Mountain- 2000).

***2. 4. Usefulness of 40 items Free Medicine (Senior Medical Doctors perspectives)***

The medical doctors identified 15 medicines as the most prescriped in OPD, Emergency and IP and 16 medicines as less prescribed. The Injectable medicine used in emergency and inpatient and Inj. Lignocain and Povidine Iodine are being used for dressing in OPD/IP and emergency. Rests of the medicines are not prescribed directly to patients because this is used for dressing and inpatients /emergency services. Most of the medical doctors requested to add *new drugs in drug free list such as Amclox (Ampilicillin+ cloxacillin), some third generation antibiotics (Agithromycin) and Anti-hypertensive and anti-diabetic drugs (Rupandehi).*

***2. 5. Medicine purchasing practices of service users (patient) as per prescription***

Total response 56 out of that 28.56 % (N-16) received all free medicines, 66. % (N-37) received partially free and 10.7 % (N-2) did not purchased medicine.

OOPE for medicine: Average cost for OPD (Median) Rs 93 with quartile values Rs 50 and 200 and Emergency average cost (median) Rs. 183 with quartile values Rs. 55 and 342. Similarly, Inpatient service average cost (median) Rs. 501 with quartile values Rs. 215 and 1350.

***2. 6. Service utilization in study DH***

The service utilization in 2008/9 in six study hospital shows that most used hospitals are Sunsari, Bardiya, Gorkha, and Nuwakot respectively. Rupandehi hospital reported only 7 month report so couldnot compare with other districts. The flow of patient in remote and hill district are less in comparison to terai district.

***2. 7. Budget allocation for free health care in six study districts.***[1]

The budgets for free health care are allocated in all district hospitals. The budget headings are OPD, Indoor and Emergency and Medicine. The budgets allocated are Rs. 1920000 in Baitadi, R. 2354000 in Nuwakot, Rs. 2245000 in Gorkha, Rs. 4740000 in Rupandhi, Rs. 4132000 in Sunsari and 3160000 in Bardiya

According to account officer of study district hospitals most of the budget received for free health care in OPD and IP services are used to purchase medicine for target group which are not included in free medicine list. In some hospital the fund were used to buy reagents for Lab test and chemicals for X- ray services.

## *3. Cost analysis and estimation for scaling up free health care at district hospital by abolishing user fees*

The three scaling up options with three demand scenario provides alternatives for scaling up of primary health care at district levels. The demand estimates were developed on the basis of actual data of utilization of health services at DHs after implementation of targeted free care in 2007/08 that covered around 40 percent of the population extrapolated to cover the remaining 60 percent population in case of universal coverage. The medium demand scenario is expected to be a more realistic projection of the demand under all three scaling up strategy.

The universal free care at DHs is a relatively resource demanding strategy requiring around Rs.11 million per DHs and a total program cost of Rs. 647 million with a need of

[1] Operational Guideline for District level program 2065 Management Division/DoHS.

additional Rs. 185 million at 2010/11 price under medium demand projection if this scaling up strategy is implemented.

The other alternative is the free care to children below five years and requires an additional budget of Rs.0.5 million per DH and an additional program cost of Rs. 287 million under medium demand scenario. This cost is 6.5 times lower than the universal free care strategy.

The third scaling up strategy of providing free care at DHs in the mountain districts requires an additional Rs. 2.2 million per DH and an additional program cost of Rs. 36 million for implementation under medium demand scenario. This cost is less than 5 times the cost of the universal free care strategy.

The government can start up with the medium cost yet highly beneficial health care strategy of free care to children below five years to start with. This will automatically address the scaling up strategy for the all regions including the mountain region, though partially.

## 4. Study of Free Health Care Policy in Referral Hospital

Central (NAMS Bir Hospital) and Zonal (Koshi and Lumbini)

*Background:* The MoHP allocated additional budget to implement the free health care as per operational guideline. The "Operational Guideline for Free Health Care for Poor, Destitute and other Target group in Central, Regional, Sub- Regional and Zonal Hospitals 2064". *The main objective:* Situation analysis to explore the management process of free health care service in secondary and tertiary referral hospital. *Methodology:* Review of hospital records and annual reports, Review of Operational guideline of free health care management in referral hospitals (Central, regional, sub-regional and zonal), study on mechanism of safety net to ensure the accessibility of FHS for target group

***Findings of study in referral hospitals***

***4.1. In Bir hospital the special policy safety net in Catastrophic Illnesses-*** Cash Support

In this scheme cash assistance up to Rs 50,000.00 provided for cases of chronic renal failure, cancer, chronic heart problem, Alzheimer's disease & Parkinson's disease, paraplegia due to spinal injury. The total budget available for this policy is 4700000. This was functioning as per the operational guideline 2064

***4.2. Process of implementation of free health policy in study referral hospitals***

The operational Guideline of free health care for referral hospital clearly mentioned the target group, process of assessment of economic condition, policy of referral cases and target group. In practice there is no social service unit. Therefore the decision regarding fee health care finally approved by MS as per the assessment and recommendation of the duty staff (nurse/doctor/paramedical).There is no special provision for referred cases in practice as mentioned in guideline. The staffs are not much aware about the operational guideline.

***4. 3. Management of free health care policy in referral hospital***

*The operational Guideline of free health care for referral hospital*

The guideline has clearly outline the format for to use the free health care by users and management in annexes sections but in practice the recording of the free health care is not maintained as per the guideline both service users and financial records. It was so difficult to access the exact record of free care users as per the policy. The monitoring/Evaluation of the program are not in regular basis.

*3.4. Issues and Challenges to implement the policy guideline (manager's perspectives)*

The medical superintendents of Zonal hospitals are little aware about the guideline but the administrative officers (medical record, finance section) were not aware about the operational guideline. Te medical superintendents of Zonal hospital are concerned about the free health care policy and additional requirement of budget for development of institutional capacity such as additional human resource, rooms and bed as per the patient load.

**5. Study of User Fee Policy of Cooperative Hospitals in Kathmandu**

Stupa Community Hospital (55 bed) and Manamohan Memorial Community Hospital (100 bed)is providing ranges of services including Medical, Surgery, ENT, Eye, Gynae, Maternity, Pediatric and Dermatology, neurology, gynecology Orthopedic, urology ,cancer treatment and Dental OPD departments. The public health services such as DOTS, immunization, health check packages and family planning services are also available in those hospitals. Both the hospitals are conducting bachelor academic program in allied sciences and technical program (CTEVT). Both hospitals are raising funds from shareholders and user fees and also students. The user fees are expensive than public hospitals and the shareholders have ranges of policies of free and subsidies rates to use services. Manamohan Memorail Community Hospital also conducted Out-reach services in some districts of Nepal. The cooperative has also been running a Manmohan Memorial Saving and Credit cooperative.

**6. Conclusion and Recommendations**

***6. 1. Ensure infrastructure in District Hospital and Referral Hospital***

The scaling up of the free health care services at district hospital will increase the utilization of services and people will demand of quality service. The scaling up of free health care at district hospital is necessary to run universal access to health care but there should be sound planning to develop institutional capacity both infrastructure and human resource. Budget allocation and policy operational guideline only do not ensure the availability of quality health care services.

***6. 2. Ensure Human Resource at District Hospital***

Any free health care policy does not satisfy users if there is no skilled service provider. Therefore the government must ensure the availability of permanent medical officers and skilled doctors. At least one MDGP, one Pediatrician and one gynecologist/ obstetrician anesthetist assistant with adequate number of SBA are basic human resources required to cope with demand of patient as the demand of the quality care.

***6. 3. Availability and Affordability of services at District Hospital relevancy to free policy***

Medical services (OPD/Emergency/ Inpatient services, SAS/PAC, minor surgical care, Normal and assisted Delivery Care, CS, Blood transfusion, Diagnostic services, Routine laboratory services, routine Radiology services, USG and ECG service could be the basic health services required in district hospitals.This has to be define with appropriate method and make policy for basic health care for district hospital.

***6.4. Usefulness and share out of pocket expenditure of the patient***

Out of 40 free ED medicines, only 31 were directly prescribed to patients and among them only 15 items are most useful. Some medicines are not used by some districts. The

injectable and antiseptive medicines are only useful for inpatient, emergency and dressing of the wound. In this context the prescribers do not perceive that list because patient demand all free as per prescription.

About 29%

patients only received all free Out of 40 items free medicine only 31 directly prescribed to patients and among them only 15 items are most useful. Some medicines are not used by some districts.

The **OOPE** for medicine: Average cost for OPD (Median) Rs 93 with quartile values Rs 50 and 200 and Emergency average cost (median) Rs. 183 with quartile values Rs. 55 and 342. Similarly, Inpatient service average cost (median) Rs. 501 with quartile values Rs. 215 and 1350.

Thus the list of free medicine must be reviewed and updated to reduce the cost of OOPE.

***6. 5. Service utilization in study DH and management of free health budget***

The flow of patient in remote and hill district are less in comparison to terai district. The variation of patient flow and service utilization varies form the location of hospital and initiative taken to develop awareness program to increase the access to health care. Each hospital are receiving additional budget for reimbursement of free care. The management should to organize more advocacy and coordination with concerned stakeholders to use health service and promotion of health.

***6.6. S*trategies for scaling up of free health services at District Hospitals**

This study provides various scaling up options to the government at the district level. Free care to children up to 5 years age group and free care to patients in mountain district hospitals provide immediately affordable scaling up options as these options do not impose excess burden on the existing human resources and physical infrastructure. The universal free care at the district hospitals need to be reconsidered in consideration with the physical infrastructure and human resources as these requirements cannot be increased in a short period of time.

***6.7. Establishment of Social Security Unit and ensure use of Guideline in referral Hospital***

Orientation program should be conducted to key managers of the referral hospital about the operational guideline. Specific policy and program should be planned to establish social security program in each referral hospital as per the need of human resource and budget.

***6. 8. Cooperative Hospital***

The cooperative hospitals are providing general and special health services through OPD, IP, Emergency and diagnostic services. The share holders are benefitted with services with range of free and subsidized policy. The policy for poor patient seems to available but clear policy is not available. The user fees are expensive than the public sectors. So general people are using service as private hospitals rates.

***6. 9. Strengthen the Management of National Free Health Program***

At present the national free health care program is being managed by free health section of Management Division in Department of Health Service. Only three staff is responsible to monitor and coordinate all districts. The free health section is facing many challenges regarding medicine supply, human resource issue, service availability etc. At the same time the regular monitoring of free care policy and program over burden the free health section. In this context to institutionalize the Social security program (free health care) urban health and environment health former cabinet made policy decision to establish a

new division under MoHP with these three sections. But this has not established yet. If government really wants to implement and scale up free health care effectively then the division and section of free health care under social security program must be established.

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# Chapter 1

# Introduction

**Background**

Interim Constitution of Nepal 2063 (2007) has declared 1) Every citizen shall have the right to get basic health service free of cost from the State as provided for in the law" (Basic health right of all citizens), 2). Women, labourers, the aged, disabled as well as incapacitated and helpless citizens shall have the right to social security as provided for in the law (Right regarding Social Security) 3).Every woman shall have the right to reproductive health and other reproductive matters and every child shall have the right to get nurtured, basic health and social security (Right to health of Woman and child). Thus the constitution vision of an inclusive society, where people of all race and ethnic group, gender, caste, religion, political belief, social and economic status live in peace and harmony, and, enjoy equal rights without discrimination .

Regarding the policy context the interim constitution clearly mentioned to make special provision for women education, health and employment, social security for the protection and welfare of single women, orphans, children, helpless, the aged, disabled, incapacitated persons and the disguising tribes and pursue a policy which will help to promote the interest of the marginalized communities and the peasants and laborers living below poverty line, including economically and socially backward indigenous tribes, Madhesis, Dalits, by making reservation for a certain period of time with regard to education, health, housing, food sovereignty and employment.

Nepal Health Sector Programme (2004-2010) - Systems for priority access for poor and vulnerable groups. The key actions outline is Criteria to identify the poor , expansion of EHCS in underserved areas, subsidized drugs and services; safety net: appropriate mechanisms will be developed and tested for public sector financing for a safety net for the poor accessing these services and for catastrophic illnesses.

To meet the first objective of Three year interim plan regarding -social inclusion the strategies are development of necessary policies and statutes to operationalize the concept of providing free Basic Health Service to all as per the provision in the Interim Constitution 2063, further expansion of the ongoing free health care services targeted to poor, socially disadvantaged women and indigenous people making provision of matching funds for improvement of Community hospital and co-operative hospital run on not for profit basis. In the current context GoN policy actions focusing towards social protection & social inclusion necessary legal frameworks and policies need to be developed to operationalize thus "defined" provision into practice.

**Rationale**

Cost sharing policies of past had silently pushed away the poor, helpless, disable, vulnerable and aged people from essential health care services which comprised of specific health programs such as safe motherhood and family planning, child health, control of communicable diseases and strengthened outpatient services etc. For universal access to basic health care in community level recently the policy of free health care for basic health services introduced in Sub Health Post,

Health Post and Primary Health Care Centre. (SHP, HP, PHCC), District Hospital (DH) (some essential drugs) free health care for target groups. Free delivery and cost sharing for institutional delivery scheme (Ama Surakchha Karyakram). These are some important initiatives to ensure the health right of people under taken by GON in recent years. However there is very limited free health care policy for poor or disadvantaged community services in Zonal, Sub-Regional, Regional and Central level hospitals. Table 1 summarise the category of population covered by the free health care policy.

**Table: 1 Category of population covered by free health care policy**

| **Category of population** | **Free health Policy** |
|---|---|
| Gender | Women health right : Ama program and support for uterine prolapse |
| Age elderly | Elderly are included target group |
| children | no specific policy for children curative service at DH level, |
| Geography | some exist for remote and isolate zone, districts |
| All population | Essential health services of SHP/HP/PHC |
| Poor, ultra poor, destitute, elderly, disabled, FCHV | FHCS for Target group at DH |
| Social security program at referral hospital | Safety Net for referral and poor patients |
| | Safety Net in Catastrophic Illnesses- Cash Support (Rs. 50000) |
| | Safety Net in Catastrophic Illnesses- Treatment Support |

*Source: MoHP/GoN, JAR meeting, 2009*

Access to district hospital level (primary level) , secondary and tertiary levels of treatment is still related to the paying capacity of the service users resulting into a larger out of pocket expenses as the health service cost at these levels is considerably higher than primary health care. Because of this higher level of OOPE the poor and vulnerable people are not able to access the health services at this level. At district hospitals only targeted groups can access the free health care services. In this regard the government is trying to explore the possibility of scaling up the free health care services to the poor, vulnerable and specific target groups at district hospitals and above for secondary and tertiary care services. Most of the public health facilities at these levels are managed by autonomous development board which is based on cost recovery policy.

Such hospital development boards do have some small funds available to subsidise the treatment cost of the people who cannot pay but the access, adequacy, and availability of this provision to the most needy people has been always under question. Therefore the MoHP have felt urgent need to scale up of the free health care policy towards universal health care at all level of public hospitals. This required a study to review and analyse health financing models to scale up and sustain the free health care program in public health facility. The process of the study includes review of in national context "*Operational Guidelines for Free Health Service targeted to poor, destitute and other target groups at District, Central, Zonal, Regional, Sub-Regional Hospitals 2064"*and international model , experiences and identification of sources of fund, mobilization of fund for social security program and formulation of the strategies to scale

up the free health care towards universal access to health care at district and above health institutions.

**Objectives of the Activity**

The overall objective of the proposed activity is to develop options and strategies for effective scaling up of the FHC program of the government at various levels of health service institutions.

**Specific Objectives**

1. To identify the scaling up strategies of free health services in District Hospitals.

2. To explore the management process of free health care service in three selected referral hospitals (central and zonal hospital).

3. Situation analysis on the cooperatives based health facilities/ hospitals and policy and mechanisms of free health service delivery.

**Study Period:** July to October 2009
*Data collection: August to September 2009*

**Study Health Facilities:**

- District Hospitals: Rupandehi, Gorkha, Nuwakot, Bardiya, Sunsari, Baitadi
- Central Hospital: Bir Hospital, Kahmandu
- Zonal Hospital: Lumbini and Koshi
- Cooperative Hospital: Manamohan Memorial Hospital and STUPA Community Hospital

**Limitations of study**

- This is the case study of selected district hospitals of hill, mountain and terai ecology and the information is limited to policy analysis to define the basic health care package at district level hospital for cost analysis
- Central and Zonal referral hospital study only limited to explore the current status of the free health service delivery at specific facility, this does not represent all other hospital system
- Cooperative study also limited to explore the present situation to generation information on cooperative system.

**Organization of chapter**

As per the objectives of the study there are five main chapters.

- In chapter one is described the introduction background of the study activities including main objectives and limitation of the study.
- In chapter two contains the details study of District Hospitals including introduction, rationale, specific objectives, methodology and findings and analysis.
- In chapter two contains the details study of cost analysis and scaling up strategies of free health services at District Hospitals including literature review abolition of free health care, methodology and cost estimation for free health care.
- The chapter four contains detail study on central (Bir Hospital) and zonal hospitals (Koshi and Lumbini) including the introductions rationale, specific objectives, methodology and summary of the findings and conclusion.
- The chapter five contains the details on situation analysis of selected cooperative hospitals including introduction, methods, findings and conclusions.
- The chapter six deals with conclusion and recommendations of all study activities in district, referral and cooperative hospitals.

# Chapter 2

## In-depth Study of Selected District Hospitals Availability, Affordability of Services and Cost Analysis

**Introduction**

This chapter is dealing with the in-depth study of selected district hospitals to describe the availability of services (curative/diagnostic) and cost analysis in various model. The chapter has covered the objectives, methodology, findings based on the information collected form field work in six district hospitals and literature review on cost analysis (HMIS and RTI reports of MoHP).The method, process, and analysis and findings are focus to identify the scaling up strategies of free health services in District Hospitals

**Objective of the study**

1. To assess the availability of health services at District hospitals of different ecological regions.
2. To find out the availability and usefulness of 40 items free medicine policy in study district.
3. To find out the medicine purchasing practice and medicine cost shared out of pocket of patient.
4. Identification of scaling up strategies
5. Estimate the cost of major scaling up alternatives
6. Estimation of revenue loss from user fee under partial free care strategies

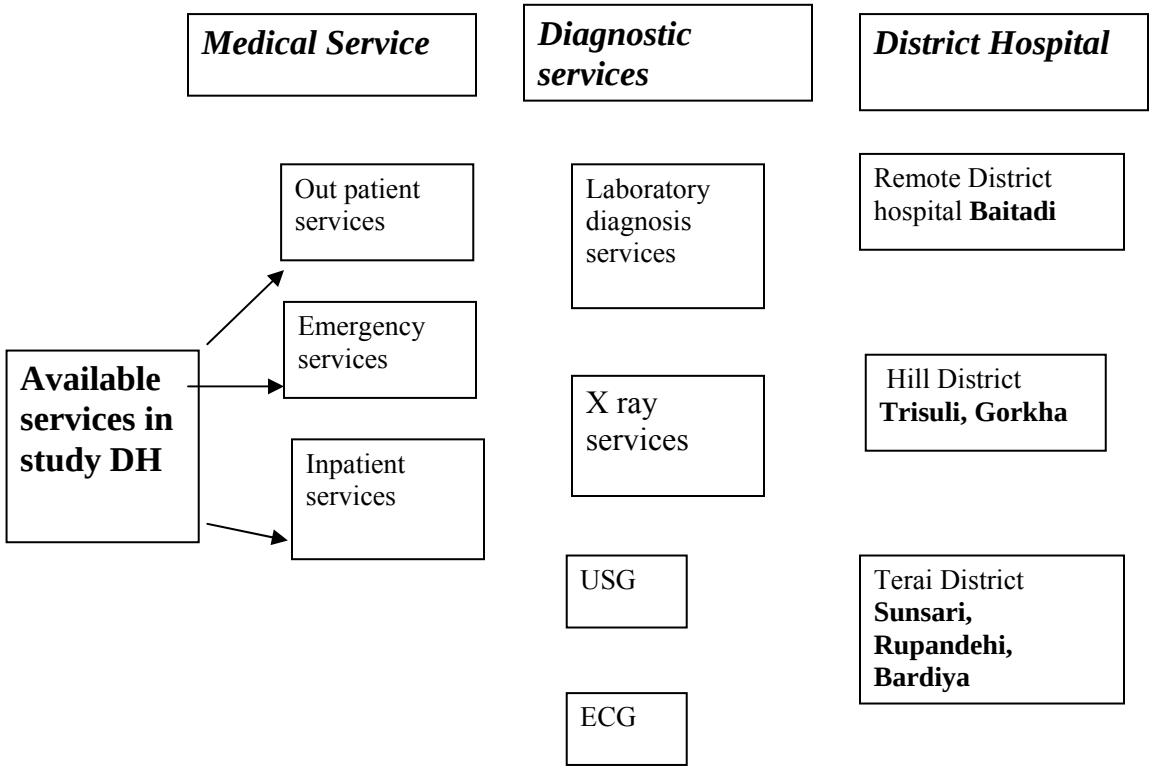
**Research questions**

1. Which types of health service are available at district hospitals?
2. What is the use and availability of free medicine policy?
3. What is the cost shared by the free medicine as per prescription of the patient?
4. What is alternative scaling up strategies?
5. What are the costs of major scaling up strategies?
6. What are the costs of partial free care strategies (free diagnostic service, free drugs)

***Plan for Cost analysis***

- Costing of universal free care at DH
- Costing of free care to children up to 5 years age at DH
- Costing of free care by ecological region (with focus on mountain region)

***Conceptual framework of study on* Available health services in DH**




# Methodology

## A. Methodology of District Hospital Study

### *Selection of district hospital*

The district hospitals are selected to conduct case study to see the variation as per the geographical ecology. One district form hill+ mountainous (Baitadi), 2 districts from hill (Nuwakot and Gorkha) and 3 terai (Sunsari, Rupandehi and Bardiya).

### *Data collection technique and tools*

1. Literature review: Secondary data from cost studies in Nepal and HMIS data sheet (MOHP, GON), reports of RTI International, 2009.
2. Discussion with experts and health policy makers and managers at ministry, DoHS and district level.
3. Observation of facilities and services at selected DH.: including Outpatient department (OPD), inpatient department, emergency, dispensary and diagnostic units to assess the physical infrastructure and availability of basic health services as per the policy of district hospitals.(Tool 1 in annex 1)
4. Key informant interview with hospital chief, administrative staff and service providers (see name list in annex 2) to explore the provision, process and comment on availability of services. to explore the process of health service delivery, user fees policy, free drug policy and fund mobilization to manage the curative and diagnostic services. (Tool 3 in annex 1)

5. Key informant interview with prescribers working in OPD, IP, emergency to explore the provision, process and comment on free drugs.
6. Exit interview with users of OPD, Emergency and inpatient services to find out he drug purchasing practices and cost incurred by the users for drugs as per the prescription. (See *Tool 6* Questionnaire in annex 1.
7. Record review from of selected District Hospital reports of HMIS and records of DH to find out Service type and user fees, service users /expenses and collections from user fees in OPD, Indoor, Emergency and Diagnostic services, expenses for free service delivery (account record), availability and use of free drugs (40 items), fund available and use for free health services. (*Tool 2 ,4 and 5* in annex 1)
8. Literature review on user fee abolition
9. Analysis of user fee data from sampled district and literature review.

***Process of data collection at district hospital***

Initial meeting was conducted in each study district hospital with staff of District hospital to introduce the objective and the activities to be conducted in the hospital. The meeting facilitated to identify records, registers and the key person to provide the reports on the service utilization and the other administrative information as per the objective of the study.

## Findings and Analysis of District Hospital Study

The findings are dealing with the availability of facilities and health services in six study district hospitals. The finding is based on the observations and key informant interview with the mangers and the service providers of the hospitals. The outline of analysis is aim to describe the service availability and the key human resources as per the policy of service provisions.

### 2.1. Infrastructure

Out of six study district hospitals three hospitals including, Runadehi, Sunsari and Bardiya is new building with more rooms and the rooms are not used. The rooms and spaces for OPD, Emergency and indoor of Nuwakot (Trisuli), Gorkha and Baitadi hospitals are not adequate. All five hospitals are 25 beds and Baitadi is 15 bed hospitals.

### 2.2. Human resource

Medical officer and the SBA are key human resource to provide services in district hospitals. The table 2 describes the availability of key health service providers in study hospitals.

**Table 2: Distribution of availability of key human resource in study districts**

| ***Key Human resource*** | ***Baitadi*** | ***Nuwakot*** | ***Gorkha*** | ***Sunsari*** | ***Rupandhi*** | ***Bardiya*** |
|---|---|---|---|---|---|---|
| Contractual Medical officer | 1 | 3 | 4 | 4 | 4 | 4 |
| Medical superintendent | 0 | 1 | 1 (MDGP) | 1 (*3 days in a week specialized service from BPKIHS)* | 1 Gynecologist | 1 |
| **SBA** | 0 | 2 | 2 | *2* | 3 | 2 |

## 2.3. Availability of services

*Medical services*

- OPD/Emergency/ Inpatient services are available in all study district hospitals.

*SAS/PAC*

- Safe abortion service is only available in Baitadi, Nuwakot and Rupandehi out of six study hospitals.

*Minor surgical care*

- Minor surgical services for injury, infection, hernia are available in all study district hospitals and in Gorkha major surgery such as laprotomy for appendicitis is also available.

*Maternal health services (Delivery Care)*

- All six study hospital provides normal delivery and assisted delivery services. Caesarian section service could be provided in Rupandehi but the there is no pediatrician ands anesthetists as mentioned by hospital manager. In Gorkha Hospital very soon CS service is going to be start.

*Laboratory services*

- Routine Blood, Stool, Urine test are available in all study hospital. Regarding basic test of biochemistry, pathology, microbiology *(Culture sensitivity test is not available in most of the study district hospital)*, phraseology test are included routine tests.

*Radiology services*

- The *radiology services routine X-ray* services are available in all study district hospital. In Sunsari this service is being provided from last 3month, it was discontinued for 6 years due to problem in x -ray machine. The newly received X ray machine still not functioning. Now the service is being providing with old machine received from BPKIHS.
- *Ultra-sonography (USG*) service is valuable in five hospitals recently. In Baitadi this service is not available.
- *ECG service* is also available in all study hospital regularly except Baitadi .

**Table 3: Distribution of service availability in study districts**

| Services | Sunsari | Nuwakot | Gorkha | Rupandehi | Bardia | Baitadi |
|---|---|---|---|---|---|---|
| Medical Services (OPD/Em/IP) | √ | √ | √ | √ | √ | √ |
| Delivery Care (normal and assisted) | √ | √ | √ | √ | √ | √ |
| Safe Abortion care | X | √ | √ | √ | X | X |
| Post abortion care | √ | √ | √ | √ | √ | √ |
| Minor Surgery | √ | √ | √ | √ | √ | √ |
| Laboratory services | √ | √ | √ | √ | √ | √ |
| X Ray | √ | √ | √ | √ | √ | √ |
| USG | √ | √ | √ | √ | √ | X |
| ECG | √ | √ | √ | √ | √ | X |
| Public Health services | √ | √ | √ | √ | √ | √ |

## 2.4. Affordability of services in six study hospitals

i. User fees of the curative services

The user fees to access the services mostly decided by the hospital development committee. The registration fee for OPD is decided as per the policy guideline of MoHP. The variation in the user fees as per the type of services is presented in table 4 This also indicates the availability of varieties of services in the hospital. The user fees for safe abortion service are Rs. 1000 decided by MoHP. This is not matching with reproductive right of women. Most expensive hospital service is available in Gorkha due to user fees policy in procedures and emergency however the utilization is increasing because the patients are very positive to quality of services. In Baitadi and Bardiya fewer services are available in comparison to others and in cheaper rates. In Sunsari most of the services are free due to impact of Koshi flood victim.

**Table 4: Distribution of User fees of the curative services in District Hospital**

| ***Type of services*** | ***Baitadi*** | ***Nuwakot*** | ***Gorkha*** | ***Rupandhi*** | ***Sunsari*** | **Bardiya** |
|---|---|---|---|---|---|---|
| OPD reg. fee | 3 | 3 | free | 3 | free | free |
| Emergency reg. fee | 3 | 50 | 25 | 10 | free | free |
| Admission rate | 30 | 0 | 0 | 0 | 0 | 0 |
| Rate of general bed | 10 | 10 | 15 | free | free | 15 |
| oxygen service rate/hour | free | 30 | free | free | free | NA |
| suturing/dressing/ID | free | 20 | 50 | free | free | free |
| plaster/cast | free | 75 | 50 | free | free | free |
| anesthesia (ketamin) plaster | NA | NA | 300 | NA | NA | NA |
| Safe abortion service | 1000 | 100 | 999 | 800 | NA | NA |
| **PAC** | Service NA | 100 | 400 | Data NA | Data NA | 500 |

*NA= Not available*

ii. User fees of diagnostic services

The rate of user for diagnostic services including lab test, X-ray, and USG are varies in six study hospitals. The details on rates and type of thee services with name of district are given in table 5. The rates for routine lab test are more or less equal in study districts. There is user policy for HIV test in Rupandehi and Sunsari however this is free in rest of the study district.

**Table 5: Distribution of Rates of User Fees in Study districts**

| ***Diagnostic services*** | **User fee rate and availability in Rs.** | | | | | |
|---|---|---|---|---|---|---|
| Laboratory diagnosis services | | | | | | |
| **Blood test** | **Baitadi** | **Nuwakot** | **Gorkha** | **Sunsari** | **Rupandhi** | **Bardiya** |
| Widel test | 50 | 120 | 125 | 75 | 55 | 40 |
| RA factor | 60 | 120 | 125 | 100 | 55 | 50 |
| Blood Grouping | 30 | 50 | 75 | 50 | 35 | 35 |
| urea | NA | 75 | 80 | 80 | 55 | 80 |
| Uric acid | 40 | 120 | 100 | 80 | 80 | 80 |
| Creatinin | NA | 100 | 120 | 80 | 80 | 100 |
| Blood total count | 10 | 20 | 20 | 20 | 15 | 10 |
| Diff count | 10 | 20 | 20 | 20 | 15 | 10 |
| ESR | 10 | 20 | 20 | 20 | 15 | 10 |
| Hb | 10 | 20 | 20 | 20 | 15 | 10 |
| VDRL | 60 | 75 | 100 | 60 | 55 | 35 |
| HIV | free | free | free | 250 | 305 | free |
| HBS Ag | 100 | 200 | NA | 175 | 295 | 100 |
| bilirubin | 40 | 120 | 120 | 80 | 80 | 80 |
| Blood sugar | 20 | 50 | 60 | 50 | 55 | 40 |
| Malaria | free | free | free | Free | free | free |
| aldehyde test | free | NA | NA | NA | NA | free |
| ASO titre | NA | NA | 150 | NA | NA | NA |
| BT/CT | NA | NA | 30 | NA | NA | NA |
| **Stool test** | | | | | | |
| RE/ME | 15 | 20 | 20 | 20 | 10 | 10 |
| Occult blood | NA | 50 | 15 | 30 | 25 | 15 |
| **Urine** | | | | | | |
| RE/ME | 15 | 20 | 20 | 20 | 10 | 15 |
| Bili. pigment | | | | 20 | 30 | |
| Pregnancy test, | 50 | 120 | 100 | 50 | 125 | 75 |
| **Others lab test** | | | | | | |
| Semen analysis | 40 | 25 | 60 | 100 | 60 | free |
| AFB stain | free | free | free | Free | free | free |
| Mantoux test | free | 75 | 100 | NA | NA | 50 |
| **X ray** | 70-90 | 100 -120 | 110-130 | X-ray ** | | 100 |
| **USG *** | *NA* | 400) | 400 | 300 | 350 | *NA* |
| **ECG** | service NA | rate NA | rate NA | rate NA | free (started recently) | service NA |

**USG started 3 months back in all four hospitals*

** X ray started 4 month back after 6 years in Sunsari

*Source: District hospital records*

iii. Price of transport service for referral cases

The referral cases are mostly transported using the available ambulance and the public transport service. The poor patients are receiving transport cost from hospital as per the safety net policy (Terai- Rs.1000, Hill- 1500 and Mountain- 2000).

**Table 6: Distribution of Rates of Ambulance in Study Districts**

| ***Ambulance rate hospital*** | ***Baitadi*** | ***Nuwakot*** | ***Gorkha*** | ***Rupandehi*** | ***Sunsari*** | **Bardiya** |
|---|---|---|---|---|---|---|
| Hospital Ambulance rate | NA | 3000 to Kathmandu | 4000 to KTM | NA | 900 to Dharan and BRT | 500 to Nepalgunj |
| **Microbus/bus** | 650 mostly use public transport | 4000 to Kathmandu | -- | 1000 to Butwal private ambulance | -- | -- |

*Source: District Hospital records*

### *2.5. Service delivery system at District Hospital*

*i. Out Patient Department (OPD) service*

The service users with general health problems (medical/ surgical/ reproductive etc) are receiving services from OPD from un-duty medical officer paying registration fee Rs. 3 (free in Gorkha) in study hospitals. The working hour of OPD is 10-2pm. The service provider makes diagnosis based on diagnostic test (Lab/radiology as per availability). Most of the prescribers use the free drug list as they are posted near to their working table. The OPD services also included the safe abortion care, post abortion care and dressing of injury and infections.

*ii. Emergency services*

There are 24 hour emergency services available in all six study hospitals. Te injury accidents and emergency obstetric care are mostly attend by emergency and provide service as per thee expertise and refer using available ambulance.

*iii. Inpatient services*

The inpatient department mostly used by the child (acute and chronic problems), elderly acute and chronic illness) and mothers for delivery care. At present about 80% of beds are occupied by mother for delivery care in all study hospital due free cared delivery policy. The general beds are mostly free and the they also receive food free of cost.

*iv. Dispensing of free medicines*

The hospital dispensary is dispensing the medicine to patients as per their prescriptions during OPD hour. Most of the patient inpatient and emergency should buy the medicine during off time of OPD. The stocks are well maintained in five study hospital except in Nuwakot.

### *2.6. Free Health Care services for target group*

The target group is using free services following the instruction of policy guideline. The medicine not included in free list also received free as per the prescription using the near by medical shop. The private medical store will get reimbursement later as per their credit with record of prescription of free patients.

### *2.7. Usefulness of 40 items Free Medicine (Senior Medical Doctors perspectives)*

The information regarding free medicine analysis is based on the key informant interview with prescribers working in OPD, emergency and inpatient. The prescribers identified the most use, less used and use for various purposes in OPD, IP and emergency. They also gave suggestions to improve the free list so that most of the patients can perceive support for cost of the medicines.

Usefulness of 40 items free medicines

Usefulness of 40 items free medicines: The medical doctors identified 15 medicines mostly used in prescription OPD, Emergency and IP and 16 medicines less prescribed. The Injectable medicine used in emergency and inpatient and Inj. Lignocain and Povidine Iodine used for dressing in OPD/IP and emergency. Rest medicines are not prescribed directly to patients because this is used for dressing and inpatients /emergency services. The name of medicine is given in table 7 (a, b, c, d).

**Table 7: Summary on use of 40 Free Medicines in six study District Hospitals**

| *a. Items most prescribed* | *Used in* | *b. Items less prescribed* | Used in |
|---|---|---|---|
| 1. Albendazol | OPD | 1. Chloramphenicol eye ointment | OPD |
| 2. Alprazolam | OPD | 2. Clove oil | OPD |
| 3. Aluminium hydroxide + Magnesium hydroxide | OPD | 3. Cap Chloramphenicol | Emergency/ OPD/ IP |
| 4. Amoxicillin | Emergency/ OPD/ IP | 4. Benzoic acid+Salicylic acid | OPD |
| 5. Ciprofloxacin cap | Emergency/ OPD/ IP | 5. Calamine Lotion | OPD |
| 6. Ciprofloxacin liq | Emergency/ OPD/ IP | 6. Charcol activated | Emergency |
| 7. Ciprofloxacine eye oint | OPD | 7. Aspirin | Emergency/ OPD/ IP |
| 8. Hyoscine butylbromide | OPD | 8. Atenolol | OPD |
| 9. Metronidazole | OPD | 9. Chlorpheniramine | OPD |
| 10. Paracetamol | Emergency/ OPD/ IP | 10. Metoclorpropamide | OPD |
| 11. Salbutamol | OPD | 11. Gamma benzene hexachloride | OPD |
| 12. Sulfamethoxazole+ Trimethoprim | Emergency/ OPD/ IP | 12. Frusemide | OPD |
| 13. Vitamin B complex | Emergency/ OPD/ IP | 13. Phenobarbitone | OPD |
| 14. Oral Rehydration Solution (ORS) (free supply under PH program) | OPD | 14. Promethazine | OPD |
| 15. Ferrous salt + Folic acid (free supply under PH program)) | OPD | 15. Pheniramine | OPD |
| | | 16. Magnesium Sulphate | OPD for dressing / IP |

**c. List if free drugs not prescribed directly to patient and mostly used in**

| *Used for dressing in Emergency/ OPD/ IP* | ***Medicines use only IP and emergency*** |
|---|---|
| *1. Povidine Iodine* | **1. Sodium chloride** |
| *2. Inj. Lignocaine* | **2. Oxytocin** |
| | **3. Gentamycin Inj.** |
| | **4. Compound solution of Sodium lactate ( Ringers' Lactate)** |
| | **5. Dexamethasone inj** |
| | **6. Dextrose Solution** |
| | **7. Atropine** |

*Inj. Magnesium Sulphate used only in IP service*

**d. Free medicine not in use (not purchased/prescribed)**

| *Name of not used medicines* | **District hospital** |
|---|---|
| Chlorampnicol | Rupandhi, Sunsari |
| Benzylbenzoic acid | Rupandehi |
| Charcoal activated | Rupandehi |
| Metoclorpropamide | Rupandehi |
| Phenobarbitone | Rupandehi |
| Pheniramine | Sunsari |
| **Magnesium Sulphate*** | Sunsari |

*Note: Inj Magnesium sulphate is used for PET (Taxaimia of pregnancy) and Power Magsulf used for would dressing. Therefore the type of product of Magnesium Sulphate should be specified in free drug list.*

**e. Summary of usefulness of 40 items free medicines above table**

| *Free 40 item medicine analysis of use* | **Total** |
|---|---|
| Items mostly used (prescribed) | 15 |
| Items less used (prescribed) | 16 |
| Items for Dressing (not prescribed) | 3 |
| Items ward/emergency (not prescribed) | 7 |
| **Total** | 40 |

**Perception Medical doctors on free medicine list**

The Medical superintendent mentioned that in OPD the service users are mostly need medical services. Among them the most prescribed drugs are antibiotics and analgesics. The antibiotics listed in free drug list are most of the time not available due to high demand. The drugs such as Cotrim, Cipro and Amoxicillin are effective only about 40% of the cases. Rest of the cases need advanced generation of antibiotics which are not included in free drug list and these medicines very expensive, this could be due to practices of health workers of SHP, HP, PHCC and private practitioners. Most of the time the OPD service users expressed their frustration because the free drug only cover about 50% from free drug supply. The users do not trust to prescribers and it also frustrating environment for service providers. But some prescribers are very positive to the free drug policy. They mentioned that *"The 40 items medicines are Ok for OPD service if the prescriber use rational prescription system. For emergency and Inpatient service we need to add some third generation antibiotics."* (Sunasari/Gorkha)
Most of the medical doctors requested to add *new drugs in drug free list such as Amclox (Ampilicillin+ cloxacillin), some third generation antibiotics (Agithromycin) and Anti-hypertensive and anti-diabetic drugs (Rupandehi).*

### *2.8. Medicine purchasing practices of service users (patient) as per prescription*

Exit interview conducted with 107 service users of four district hospitals including, Trisuli, Gorkha, Sunsari and Repandehi. The distributions of respondent's (service user)

are given in table 8 given below. The detail socioeconomic background of the respondent's (service user) is given in table Annex 5.

**Table 8: Distribution of respondents of exit interview**

| *District* | *OPD* | *IP* | *Emergency* | Total |
|---|---|---|---|---|
| **Sunsari** | 20 (25.3) | - | - | 20 (18.7) |
| **Nuwakot** | 7 (8.9) | 4 (40.0) | 7 (38.9) | 18 (16.8) |
| **Rupandehi** | 22 (27.8) | 4 (40.0) | 4 (22.2) | 30 (28.0) |
| **Gorkha** | 30 (38.0) | 2 (20.0) | 7 (38.9) | 39 (36.5) |

**Medicine purchasing practice of users:**

Total response 56 out of 107 (no response due to un diagnosed or no prescription)

- 28.56 % (N-16) received all free medicines
- 66. % (N-37) received partially free
- 10.7 % (N-2) did not purchased medicine

**OOPE** for medicine: Average cost for OPD (Median) Rs 93 with quartile values Rs 50 and 200 and Emergency average cost (median) Rs. 183 with quartile values Rs. 55 and 342. Similarly, Inpatient service average cost (median) Rs. 501 with quartile values Rs. 215 and 1350.

### *2.9. Service utilization in study DH*

The service utilization in 2008/9 in six study hospital shows that most used hospital is Sunsari, Bardiya, Gorkha, and Nuwakot respectively. Rupandehi hospital reported only 7 month report so could compare with other districts. The flow of patient in remote and hill district are less in comparison to terai district.

**Table 9: Distribution of Total Service Utilization in Study Districts**

| Name of Hospital | Total bed available | IP total | Total OPD | Total emergency | Total PH | Others | Total Emergency /OPD/IP |
|---|---|---|---|---|---|---|---|
| Sunsari | 25 | 3002 | 27021 | 6413 | 0 | 0 | 36309 |
| Nuwakot (Trisuli) | 25 | 2675 | 14695 | 3469 | 0 | 0 | 20839 |
| Gorkha | 25 | 2514 | 21196 | 3990 | 703 | 194 | 28590 |
| *Rupandehi (Bhairahawa) | 33 | 2090 | 9203 | 6207 | 0 | 0 | 17479 |
| Baitadi | 15 | 445 | 18550 | 1626 | 427 | 0 | 21028 |
| Bardiya | 25 | 1943 | 21369 | 2274 | 4211 | 1596 | 31374 |

*Source HMIS working data sheet, DoHS 2009: *Rupandehi (Bhairahawa) 7 months reporting*

**Table 10: Distribution of Diagnostic Service Utilization in Study Districts**

| District | X-ray | USG | ECG | Safe motherhood | Lab | Neonatal |
|---|---|---|---|---|---|---|
| Sunsari | 87 | 95 | 46 | 79 | 7805 | 79 |
| Nuwakot | 3510 | 53 | 5 | 624 | 9869 | 616 |
| Gorkha | 3228 | 103 | 36 | 350 | 16998 | 274 |
| Rupandehi | 2748 | 0 | 43 | 771 | 9865 | 0 |
| Baitadi | 1102 | 0 | 0 | 585 | 5304 | 173 |
| Bardiya | 1304 | 0 | 0 | 2399 | 9104 | 346 |

*Source HMIS working data sheet, DoHS 2009: *Rupandehi (Bhairahawa) 7 months reporting*

Some expressions on service utilization by managers and health workers:

*The service utilization will be increase if there are regular services by specialized doctors* (Rupandehi)

*The inpatients beds are mostly occupied by mothers for delivery care due to free delivery service.* (All six hospitals)

### *2.10. Budget allocation for free health care in six study districts*

The budget allocated for district hospital for free health care as per the patient load and type of services given in table 11. This is described in the Operational Guideline for District level program 2065 Management Division/DoHS. During the interview with finance officer of the district hospital they mentioned that budget but not provided total amount. This could be due to modality of budget disburse system for various purpose in different trimester.

**Table 11: Distribution of Budget Disburse in Study District for Free Health Care**

| ***Budget*** | ***Baitadi*** | ***Nuwakot*** | ***Gorkha*** | ***Rupandhi*** | ***Sunsari*** | **Bardiya** |
|---|---|---|---|---|---|---|
| OPD | 510000 | 510000 | 480000 | 900000 | 900000 | 900000 |
| Indoor and Emergency | 450000 | 400000 | 550000 | 1000000 | 642000 | 875000 |
| Budget for Medicine | 960000 | 1444000 | 1215000 | 2840000 | 2590000 | 1385000 |
| **total** | **1920000** | **2354000** | **2245000** | **4740000** | **4132000** | **3160000** |
| budget for referral incentive for DAG | 125x700 | 148x600 | 175x600 | 227x500 | 248x500 | 248x500 |
| ***VDC/NP*** | *62* | *61* | *66* | *69* | *49* | *31* |

According to account officer of study district hospitals most of the budget received for free health care in OPD and IP services are used to purchase medicine for target group which are not included in free medicine list. I some hospital the fund used reagents for Lab test and chemicals for X ray services.

### *2.11. Management of Free Health Care at National Level*

In process of data collection on management of free health care at national level an interaction program conducted in Kathmandu with the participation of focal person of free health care, chief of planning of Management division, Ministry of Health (Planning, budgeting division) and

officials/staff of NHRC. The name of the participants is given in annex 4. The main objective of the discussion was to share the preliminary findings of the district hospital study and proposal on projections for various strategic models for scaling up of the free health care at district hospital level. *The main outcome of the discussion is analyzed in main four areas*

*i. Feedback of study of district hospital preliminary findings*

- The findings on availability, analysis of 40 items free medicine and the affordability of the services will give background information on situation of district hospital service delivery. The infrastructure and the availability of key health professional provided the quality of services. The cost shared by the pocket of the patients for medicine was very useful information. The meeting were more focused to get detail information of assessment if use of the free drug and it availability. The interaction also focused to make more clarity on methodology of costing and projection in various model.

*ii.. Issues and challenges of management of free health care policy*

- Some public health managers put different view on free health care policy. He mentioned that free health care is only the fee medicine care; this does not ensure the quality of care because there are no qualified doctors, nurse as per the post and the facility also not up-gradated as pet the policy. In the response of this statement the focal person of free health care mentioned that *free health care is the policy to increase access to health care as mentioned constitution as per the health is fundamental right. We can not take alternative decision but we should be very keen to manage the policy effectively.* He also added that *free health care not only cover the free medicine but also cover the diagnostic services and free bed and registration in OPD, emergency and IP as per the guideline*.
- The free health care section of management division with three staff is facing lots of problems to manage all these free health policy. With these three staff it is not possible to mange effectively the program which includes the regular activities of monitoring and supervision for regular supply of medicine, use of guideline to manage the fund and coordination /communication and advocacy program with concerned stakeholders (district/national) of this team.

*iii. Suggestions to make useful recommendations for management of free health care*

- The cabinet of formal government recommended establishing a separate division of Revitalizing of Primary health care at ministerial level with three sections such as urban health, free health care and environmental health. But the new cabinet minister is not keen to implement he policy to establish the new division. If government really wants to implement and scale up free health care effectively then the division and section of free health care under social security program must be established.

*iv. Suggestions to make effective strategies for scaling up of free health care at district hospitals*

- Rethink about the projection basis- why 20, 25 and 30 percent?
- Formula for cost calculation- it should be inpatient discharge and emergency discharge rather than just number of discharges?
- Need to mention- parameters of cost calculation- what are included in the cost? i.e Unit cost should be splitted
- Estimation of the cost required for scaling up only should be mentioned
- The share of the budget should be divided as services in OPD, IP and Emergency
- The use medicine also should be divided in OPD, IP and Emergency, IPs so that budget could be allocated as per the projection of patient load.

- The costing also should be projected without inflation rate because this is implies automatically as per thee national policy.
- The modality could for disadvantaged population as per the proportion of those groups. But this is not possible under this study because at present the basic data set is not available. This can be recommended for future research.

# Chapter 3

## Study of Cost Analysis and Scaling up Strategies of Free Health Services at District Hospitals

**Literature review on user fee abolition**

There is a number of financing mechanism in the health sector such as the tax based financing, user fee, social insurance, private insurance and community based health insurance financing.

Tax based health financing are the predominant form of health care financing in south Asia and Africa. The benefits of tax based financing are that they provide a minimum protection from the shocks of health care payment to the poor, prevent financial access being a barrier to health care seeking and are based on relatively progressive tax system.

User fee is another widely practiced system of health care financing to supplement the tax based financing. Tax based financing constitutes two third of the health budget in the public health system in Nepal (NHEA, 2009) User fees have varying contribution by level of facility with contribution increasing in higher level facilities. User fee which used to make around 9 percent contribution in the incomes of DHs during 2003 (NHEA, 2004) have increased to about quarter of the hospital expenditures in the district hospitals in Nepal at present perhaps due to new services being available in the DHs for payment of user fees and imposition of user fee by hospital development committees to ensure that services are not obstructed due to lack of supplies and incentives to providers. Recent data have shown user fees being utilized to pay for staff salaries and incentives, purchase drugs and medical supplies, pay for utilities and in repair and maintenance (RTI International, 2009).

The abolition of user fee has been a debatable issue. User fee impose a financial burden to access particularly among the low income group. On the other hand, user fee provide resources that are vital to meet the recurrent cost such as staff salaries, drugs and medical supplies and prevent frivolous use of health services. Relative benefits and cost of abolition of user fee depend upon existing practices, share of user fees in health care financing and availability of alternative financing sources. We shall make a brief review of international and national experience of user fee practices.

A study by Pearson (2004) of DFID priority countries has mentioned that imposition of user fee are justified if they are the pragmatic means of getting resources to lower level; people are always willing to pay if the quality of care is reliable; are a means of enhancing accountability and popular support. In contrast, user fee might be a poor means of financing health care as low cost alternative such as tax financing are available (people have already paid taxes for public services as well), and they provide a barrier to access essential health services. The study concludes that there is no evidence of user fee improving efficiency and abolishing user fee raising frivolous use. User fee have imposed a barrier to access and the exemption and waiver schemes designed to protect the poor and the vulnerable have practically remained ineffective.

The example of abolition of user fee in Uganda in 2001 led to increased utilization of public health facilities particularly by the poor. The declaration of the abolition which was done without adequate preparation has emphasized the need for managing resource necessary to prevent quality in terms of health personnel and drugs supply from deteriorating and to make sure that curative care do not crowd out preventive services. The example of Madagaskar showed that temporary suspension of user fee led to a 16 percent increase in the number of visits to health centre. Abolition of user fee in Zimbabwe led to increased utilization in the beginning but subsequently led to a fall in utilization due to lack of drugs and essential supplies.
A reversal example of Sri Lanka showed that abolition of user fee took significant time to return back to normal utilization that had declined due to imposition of user fee in the 1970s. A study using simulation model combining evidences on key health interventions in 20 countries in Africa showed that 4-8 percent child deaths could be avoided by eliminating user fees (James et. Al, 2005). The example of Nepal has also shown that abolition of user fee among the target group population alone increased OPD visits by 21 percent during 2007/08 to 2008/09 which was instead declining in the preceding years (authors calculation from DOHS data; DOHS/MOHP/GON, 2007)

User fee are an essential source of health care financing in the higher level health facilities. The PHFES data showed that it contributed between 32 to 60 percent cost in the central level hospitals in 2003. However there is less controversy on the need for abolition of user fee at primary health care level. Most studies suggest that abolishing user fee improve utilization of health care services by eliminating financial barrier particularly among people in the lower income strata (Yates, 2006). Most of the studies supporting user fee at primary level health facilities suggest that abolishing user fees should not, however, be looked as a panacea for improving the access and quality of health services. Strengthening alternative sources of financing is essential to ensure the quality of the service in terms of availability of drugs and medical supplies as well as motivation of health staffs. From that perspective, abolishing user fee where utilization can be greatly enhanced with least revenue loss could be the scaling up strategy towards universal basic and primary health care.

**Scaling up strategies**

Based on available literature and interactions with health policy makers, three scaling up strategies were identified. As the government introduced free care policy to peripheral health facilities (SHPs, HPs and PHCs) and targeted free care policies at hospitals, the immediate scaling up strategy, it was suggested that the next scaling up strategy should focus on the district hospital (DHs). DHs are the highest tier of the primary health care system. Ensuring universal free care at DHs would thus ensure universal financial access to primary health care to the population. The three scaling up strategies at the DH level were identified as:

a. Universal free care to DHs
b. Free care to children under 5 years (based internationally adopted practice)
c. Free care to patients in DHs in the mountain region (remote due to terrain and physical access)

The appropriate methodology for demand projections and relevant cost estimates were determined based on available literature, consultation with health professionals, health economists and policy makers etc.

## Methodology for Estimating Costs Based on Scaling Up Strategies

### Demand Projection for Scaling up Strategies

The change in demand for health care with changes in price of services is explained by the price elasticity of demand for health services which explains by what percentage the number of health care users increase or decrease for a percentage change in price of the service. Removing user fee implies reducing price of service to zero or alternatively providing a 100 percent subsidy for the service. There are no adequate price elasticity data for various health services under different geographical and climatic conditions. A study by Pokhrel et al (cited in RTI International, 2008) has estimated health care utilization to increase by 56 percent for child care with 100 percent subsidy for Nepal. Price elasticity of demand for health care estimates by population group and ecological regions would be necessary as morbidity rates and health care seeking among population varies by population group and ecological regions.

In the absence of price elasticity data, experiences of free care introduced in countries with similar socio-economic characteristics might provide an idea of the change in demand for health care utilization for removal of user fee. South African health system experienced 77 percent increase in utilization with abolition of user fee for children under 6 and lactating mothers in 1994. In case of Kenya, for a replacement of a 10 and 20 shillings for all other costs in the health system in 2004, popularly known as the 10/20 policy, utilization went up by around 70 percent compared to the previous 6 months but by the final quarter of the year it sustained at around 30 percent higher only. Likewise scrapping up of user fee in Uganda in 2001 as a declaration during the presidential election raised outpatient attendance by 155 percent (Yates 2006). One of the reasons for such an upsurge was flow of patients from neighboring countries Rwanda and Congo, a possibility that exists for Nepal too. A few studies have adopted similar projections methodologies for instance RTI International (2008) estimated patient sizes by three scenario (20, 25 and 30 percent growth). Following such methodology may have to be resorted in the absence of more refined methodology.

The above mentioned scenario provides an idea of the possible increase in demand for health services with introduction of free care in Nepal too. There are, however, a few things to be considered before we base our estimates on international experiences. Nepal has already been providing free services in antenatal care, family planning, EPI, Vitamin A, Leprosy, TB etc since a long time. The government recently abolished user fees in primary health facilities at the peripheral level in 2008. The government also introduced free care in the hospitals to targeted group of populations (ultra poor, poor, disabled, senior citizens and FCHVs) which cover around 40 percent of the population of Nepal. In all hospitals, a number of drugs enlisted as essential drugs are being provided free of cost. As a result of the existing free care provisions as a backdrop and low cost services at public facilities introduced some time ago, the demand for free care can be expected to increase but not by significantly large amounts as experienced by countries where user

fees were abolished at once. The demand for health care services arising from abolition of user fee should be based on Nepalese scenario and utilization data

Some data were available on the growth of health care utilization before and after implementation of targeted free care. For instance utilization increased by 15, 54,104 and 71 percent in mountain, hills, terai and national level in the three months immediately after implementation of the program in 2064 compared to the same three months period one year back ( Slide presentation by Dr Ojha, Direct General of DOHS, MOHP, 2008 ). These are however aggregate figures for primarily level facility such as SHP, HP, PHC as well as secondary and hospital. The primary level facilities are at very close distance and do not impose travel cost to patients. Thus, expecting visits to DH increasing at the same rate would be impracticable.

In an effort to analyze the trend of utilization of services before targeted free care was implemented. An analysis of data visits in public hospitals during 2004/05 to 2006/07 showed a decline of 4 percent for new OPD. This was perhaps because of almost similar out of pocket expenditure in private and public hospital (NLSS, 2004) and poor quality of services in public health facilities. With the introduction of free care at the SHP, HP and PHC level along with targeted free care at hospitals in 2064/65 (Jan 15, 2008), the number of IP, OPD and Emergency in the DH increased by 18, 24 and 63 percent in 2064/65 compared to previous year 2063/64. But since the new policy was introduced in the mid of the Nepalese accounting year, it has not been possible to estimate the annual increase precisely. This upsurge might have been due to the drastic policy change after declining patient numbers in previous years. One year after the introduction of the above mentioned free care policy, the increase in demand for IP, OPD and Emergency care has fallen to 9, 17 and 16 percent respectively at DHs. This increase in demand might be considered as a more natural increase resulting from the free care policy introduced in the previous year.

Since targeted free care policy and universal free care policy have different coverage, projecting changes in demand for one based totally on the other would not be appropriate. So the methodology was slightly revised from the aspect of change in coverage.

The targeted free care policies introduced at DHs were covered around 40 percent of the population as shown in the table.

**Coverage of the targeted free care program in percentage of total population**

| *Category* | *Poor and ultra poor* | *Senior citizen* | *Disabled* | *FCHV* | *Total* |
|---|---|---|---|---|---|
| Percentage | 31 | 6.5 | 2.5 | Less than 0.5 | 40 (approx.) |

*Source: CBS (2005); CBS (2003); Economic survey (2009)*

Note: Some overlapping between two categories has not been considered

In contrast to the targeted free care policy, the universal care policy instead aims to cover total population. Accordingly, we make a projection of in-patient, OPD and emergency care by ecological region based on the average growth rate experienced in 206/65 and 2008/09 to cover cent percent of the population . The average growth rate of utilization during this period for inpatient, OPD and emergency for three ecological belts is given in Table

**Average growth rate of patient in DHs in 2007/08-2008/09**

| *Category* | *Mountain* | *Hills* | *Terai* | *Nepal* |
|---|---|---|---|---|
| In-patient | 9.6 | 16.6 | 10.7 | 13.6 |
| OPD | 18.9 | 21.8 | 19.6 | 20.6 |
| Emergency | 26.3 | 57.1 | 11.2 | 39.7 |

*Source: Authors' calculation from DOHS, MOHP data*

Based on the average growth rate of demand for services at DHs, the growth rate of patients in mountain, hills and the terai has been projected. The High demand projection is based on the expectation that with universal free care coverage increasing from present 40 percent level to 100 percent coverage. Accordingly the growth rate increases 2.5 times to the patient growth rate (2064/65 -2008/09) with 40 percent coverage. The low demand scenario is projected based on an increase to 60 percent coverage. This is due to the fact that in spite of free care policy, the access to information about the new provision, low possibility of patients at distance seeking health care from DHs, free care already available at SHP, HP and SHPs and inadequacy of service providers and drugs to meet demand of the new provision, availability of private providers in the district headquarters where most district hospitals are located etc. The medium demand scenario based which lies between the upper bound and lower bound projection with a coverage increasing to 80 percent population seems more realistic.

**Projected growth of utilization in 2010/11 with universal free care under low, medium and high demand scenario**

| *Category* | *Low Demand* | | | | *Medium Demand* | | | | *High Demand* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M | H | T | Nepal | M | H | T | Nepal | M | H | T | Nepal |
| In-patient | 14 | 25 | 16 | 20.3 | 19 | 33 | 21 | 27.1 | 24 | 42 | 27 | 33.9 |
| OPD | 28 | 33 | 29 | 30.9 | 38 | 44 | 39 | 41.2 | 47 | 54 | 49 | 51.5 |
| Emergency | 39 | 86 | 17 | 59.6 | 53 | 114 | 22 | 79.4 | 66 | 143 | 28 | 99.3 |

The utilization during the current year 2009/10 is expected to increase but by less percent than what it was in the initial years of the implementation of the targeted free care program in 2008. It is expected to take some time before utilization stabilizes. We therefore use of rule of thumb and project utilization to grow by half the average rate of utilization during the first two years of implementation. We make a projection based on the demand scenario presented in Table to this users of health services at DHs.

A number of unit cost analysis have been conducted for health system in Nepal. A Public Health Facility Efficiency Survey (PHFES) study by NHEA (2004) had estimated unit costs for peripheral health facilities (SHP, HP and PHC), district hospital, zonal and regional hospitals and central level hospitals. Though the coverage was significant with 104 health facilities covered, there has been several changes in the health system since then leading to significant changes in the cost components. A unit costs estimate study was conducted recently by GTZ (2009) as a part of the impact of the free health care services in Nepal. However, rather than being based on recent field data, unit costs in this study were imputed based on a field assessment of a district hospital by Health

Economics and Financing Unit (HEFU) in 2007 and the cost estimates of the PHFES study by NHEA (2004) along with some adjustments based on rules of thumb.

A relatively representative and recent study was conducted by RTI International (2009) covering 7 districts from all three ecological belts using recent primary data collected from DHs. The unit cost estimates, accordingly was NRs 1010, 154 and 346 for inpatient discharge, OPD visits and emergency discharges respectively[2].

For the present purpose, the unit cost estimates by RTI International were utilized with adjustments for ecological belts worked out further. These unit costs were adjusted for inflation for 2008/09 which was 9 percent (an average of GDP deflator and inflation rate for medical goods and services (MOF, 2009) and a projection of 10 percent were used for 2008/09 and 2010/11.

The unit cost of in-patient, OPD and emergency care have been used to estimate the total cost of the free care scaling up programme in the district hospitals by ecological belts. The total costs of services with population projection without program and with the program have been estimated to provide an estimate of the additional cost of various scaling up strategies.

The total cost for free health care for child less than five years is based on the data of proportion of children less than 5 years from population size by age for average patient for DHs(CBS, 2003). Likewise, the total cost estimation for free care to population in mountain ecological belts is based on projections from actual utilization in 2008/09 adjusted for 2010/11. An estimate is provided for average cost for DHs by ecological regions and total cost of the programme for DHs under each of the scaling up options. All estimations in the scaling up-strategies are based on the following average unit cost imputations.

**Average Unit Cost Estimation in NRs. For (2010/11)**

| ***Service Category*** | ***Mountain*** | ***Hill*** | ***Terai*** | ***Nepal*** |
|---|---|---|---|---|
| IP | 2295.61 | 974.03 | 726.63 | 1276.97 |
| OP | 225.07 | 208.81 | 175.45 | 206.47 |
| Emergency | 805.75 | 202.07 | 361.20 | 394.88 |

*Source: average unit cost estimate by RTI International (2009)with adjustment for inflation and ecological belt*

## Findings of Estimations of the Scaling-up Options

The present study estimated the cost of universal free care for district hospitals in all ecological belts. The three scenarios provide costs of implementing free care under low, medium and high demand projections. The total cost to be incurred by districts hospitals with the assumption of the above mentioned unit cost implies that additional cost on personnel, drugs and other non-personnel items will be maintained at the same level they were during 2008.

[2] The unit cost for in patient discharge comprised of 75, 12, 14 percent component for personnel cost, drug cost and non-personnel cost respectively. These figures were 63, 17, 20 percent for OPD and; 70, 13 and 17 percent for emergency discharge respectively. These costs included recurrent cost only for covered curative services as well as maternity and reproductive health care services such as CS and SAS. The cost of fixed capital has not been included.

## Scaling up options

### *I. Provision of Universal Free Care at DHs*

The medium scenario of the universal free care indicate that 24, 53 and 23 of the total cost are spent incurred by in-patients, out-patients and emergency patients respectively for Nepal with variance on these figures by ecological belts.

**Average cost of universal free care at District Hospitals (Medium Demand Scenario projections for 2010/11)**

| Service Category | Average costs in Rs. thousand | | | |
|---|---|---|---|---|
| | Mountain | Hill | Terai | Nepal |
| IP | 2639 | 2259 | 3625 | 2633 |
| OP | 3972 | 6035 | 6921 | 5662 |
| Emergency | 2116 | 1825 | 4737 | 2485 |
| Aggregate cost | 8727 | 10119 | 15283 | 10781 |
| Program cost | 139633 | 323810 | 183400 | 646843 |

Program cost: refers to the aggregate cost of scale up option of program in all relevant districts; all other costs are average figures: Original table with Low, medium and high demand figures are provided in Tables annex: 10.

The average cost to be incurred by a DH under medium demand scenario is Rs. 10.7 million at 2010/11 price. The expenditure of DHs adjusted for inflation based on RTI International (2009) adjusted for 2010/11 would be 7.85 million out of which government's funding is 5.9 million and accordingly around 80 percent government funding needs to be added to ensure universal free care. User fee complements 24 percent of DH expenditure at present. The total cost of the proramme of universal free care costs at DHs comes to Rs. 646 million at 2010/11 price.

**Additional Cost of Universal Free Care at District Hospitals (Low, Medium and High Demand Scenario projections for 2010/11)**

| Service Category | Without Programme | Cost of Programme | | | Additional Cost | | |
|---|---|---|---|---|---|---|---|
| | | Low | Medium | High | Low | Medium | High |
| IP | 2096 | 2501 | 2633 | 2780 | 405 | 537 | 684 |
| OP | 3999 | 5240 | 5662 | 6054 | 1241 | 1664 | 2056 |
| Emergency | 1600 | 2267 | 2485 | 2712 | 667 | 885 | 1111 |
| Aggregate cost | 7695 | 10009 | 10781 | 11546 | 2313 | 3086 | 3851 |
| Program cost | 461712 | 600521 | 646843 | 692784 | 138809 | 185131 | 231072 |

Program cost: refers to the aggregate cost of scale up option program in all relevant districts; all other costs are average figures

The cost of DHs without programme under normal demand scenario is estimated at Rs. 7.7 million at 2010/11. The cost to be incurred for free care would range between 10 to 11.5 million per DH. Accordingly, an additional cost of Rs. 2.3 to 3.9 million need to be provided to the DHs on an average. This makes an additional 30 to 50 percent resource needed to be allocated ranging from low to high demand scenario.

The program cost ranges between Rs.139 to 231 million.At 2010/11 prices depending upon demand scenario.

## *II. Provision of Free Care to children under 5 years at DHs*

A second scaling up option, a practice much emphasized to reduce child mortality rate with several long term advantages on human development (health of the child is directly related to the human development index through life expectancy, literacy and earning potential in the future). The cost estimate provided an estimate of the additional resource that would be necessary to ensure access to health care to all children less than 5 years at DHs in Nepal.

**Average Cost of Free Care for Children under 5 Years (Medium Demand Scenario projections for 2010/11)**

| Service Category | Average costs in Rs. thousand | | | |
|---|---|---|---|---|
| | Mountain | Hill | Terai | Nepal |
| IP | 410 | 351 | 563 | 409 |
| OP | 617 | 938 | 1076 | 880 |
| Emergency | 329 | 284 | 736 | 386 |
| Aggregate cost | 1356 | 1573 | 2375 | 1675 |
| Program cost | 21699 | 50320 | 28500 | 100519 |

Program cost: refers to the aggregate cost of scale up option program in all relevant districts; all other costs are average figures

There are no unit cost figures of health care at hospitals for child under 5. Thus the unit cost of average patient have been used. The estimate shows that DHs require around 1.7 million for treatment of around 15 percent of the patients who are children below 5 years. The total cost of the program is estimated at 100 million at 2010/11 price.
More important is the additional cost that needs to be incurred under various demand scenario. Accordingly, additional 30 to 50 percent additional resources need to be allocated to achieve this objective.

**Additional Cost of free care for children<5 at District Hospitals (Low, Medium and High Demand Scenario projections for 2010/11; in Rs. thousand)**

| Service Category | Cost Without Programme | Cost with Programme | | | Additional Cost | | |
|---|---|---|---|---|---|---|---|
| | | Low | Median | High | Low | Median | High |
| IP | 326 | 389 | 409 | 432 | 63 | 83 | 106 |
| OP | 621 | 814 | 880 | 941 | 193 | 259 | 319 |
| Emergency | 249 | 352 | 386 | 421 | 104 | 138 | 173 |
| Aggregate cost | 1196 | 1555 | 1675 | 1794 | 360 | 479 | 598 |
| Program cost | 71750 | 93321 | 100519 | 107659 | 21571 | 28769 | 35909 |

Program cost: refers to the aggregate cost of scale up option program in all relevant districts; all other costs are average figures

The program cost to the government came between Rs. 1.6 to 1.8 million per hospital depending upon demand scenario. Accordingly additional resource of 22 to 36 million would have to be earmarked to implement this scaling up option. In consideration with

the benefit from this practice, the cost is not very high. The additional cost of this scaling up strategy is around 6.5 times lower than the universal free care strategy.

### *III. Provision of Free Care to children under 5 years at DHs*

A third stragegy for scaling up identified by the study was ensuring free care at DHs in the mountain ecological belt. The mountains are poorly developed due to low economic opportunities and hardships imposed by harsh climatic condition and rugged terrain. The human poverty index is the highest in this ecological belt (43.3 against 35.4 for average Nepal; UNDP, 2009)Singificant area of the ecological belt is covered by snow and narrow foot trails are the only means of access to most of these regions. In consideration with the low level of utilization and poor ability to pay, many DHs were reported to be providing almost free care in these hospitals (based on interaction with heath policy makers). Thus formalizing free care with provision of additional resource would be an important strategy to improve the heath status of the population living in these areas.

**Average additional cost of free care in District Hospitals at mountain ecological belt (Low, Medium and High Demand Scenario projections for 2010/11)**

| Service Category | Without Programme | With Programme | | | Additional Cost | | |
|---|---|---|---|---|---|---|---|
| | | Low | Median | High | Low | Median | High |
| IP | 2217 | 2528 | 2639 | 2749 | 310 | 421 | 532 |
| OP | 2879 | 3685 | 3972 | 4231 | 806 | 1094 | 1353 |
| Emergency | 1383 | 1923 | 2116 | 2296 | 539 | 733 | 913 |
| Aggregate cost | 6479 | 8135 | 8727 | 9277 | 1656 | 2248 | 2798 |
| Program cost | 103662 | 130156 | 139633 | 148429 | 26493 | 35971 | 44767 |

Program cost: refers to the aggregate cost of scale up option program in all relevant districts; all other costs are average figures

The average unit costs in the mountains are quite high due to cost of transportation of drugs and supplies and remote area allowances provided to staffs. The mountain DHs are expected to incur Rs 6.5 million per DH in 2010/11 under existing situation. Introduction of free care at DHs would incur them an additional Rs 1.7 to 2.8 million per hospital and consequently between Rs. 26 to 45 million as a program cost depending upon demand response. This additional cost is more than 5 times lower than the expected cost for universal free care in all DHs.

**Projected growth of utilization in 2010/11 with various scaling up options**

As an indication of what would be the number of additional patients to be served under these three scaling up options under in-patient, OPD and emergency care, the number of patients expected to increase if provided in the table below. This will help health policy makers and health care service providers to plan for infrastructure, human resource and provision of drugs and supplies if these scaling up strategies are to be adopted.

**Percentage Change in patient number by three scaling up strategy under high, medium and low increase scenario in District Hospitals (projection for 2010/11)**

| | Universal free care | | | Free care for child<5 | | | Free care in Mountain DH | | |
|---|---|---|---|---|---|---|---|---|---|
| **Service category** | High | Medium | Low | High | Medium | Low | High | Medium | Low |
| IP | 34 | 26 | 20 | 34 | 26 | 20 | 24 | 19 | 14 |
| OPD | 51 | 42 | 31 | 51 | 42 | 31 | 47 | 38 | 28 |
| Emergency | 85 | 68 | 51 | 85 | 68 | 51 | 66 | 53 | 39 |

The estimates show that highest patient pressure will have to be borne by the emergency service under all scaling up options. This is quite natural as hospital registration OPD hours are limited to 3-4 hours. People travelling long ways to the DHs which are located at the district headquarter arrive at off OPD hours. The government has very thoughtfully extended this service for 24 hours for the greatest benefit of the people and as revealed in the table above based on actual data, emergency visits have increased by 57 percent in the hills, 26 percent in the mountain and 11 percent in the Terai with an average of 40 percent for Nepal.

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# Chapter 4

## Study of Free Health Care Policy in Referral Hospital

**Central (NAMS Bir Hospital)**
**Zonal (Koshi and Lumbini)**

### Introduction

In the background of free health care policy at SHP/HP, PHCC and District hospital for target group there is some policy poor and disadvantaged group safety net for referral and poor patients Safety Net in Catastrophic Illnesses- Cash Support (Rs. 50000) and Safety Net in Catastrophic Illnesses- Treatment Support under the social security program at referral hospitals (Zonal/regional/sub-regional and Central). In this context operational guideline also develop in 2007 for specific policies implement as per the level of referral hospital. The MoHP allocated additional budget to implement the free health care as per operational guideline. The *"Operational Guideline for Free Health Care for Poor, Destitute and other Target group in Central, Regional, Sub- Regional and Zonal Hospitals 2064"*.

The objective of the program stated in the guideline are 1) to ensure the access to health care for target groups including poor, disabled, and elderly people; 2) to make universal access to health services providing essential health care in order to reduce morbidity and mortality rates and improve health status of people; 3) To develop effective coordination and referral services between central, regional, zonal, district and local level health facilities and 4) to ensure the availability of specialised and regular quality health service. The contents of the guideline are 1) definition of target group, 2) process of decision making for free health care for target group, 3) management of referral patients, 4) organizational management, 5) provision of total free or partial free services 6) financial management, 7) management of medicine and other medical supplies 8) Recording and reporting system 9) monitoring and evaluation, 10) orientation program, for coordination and responsibility.

This chapter is focus to describe the present situation of the implementation of the policy.

### General Objective

Situation analysis to explore the management process of free health care service in secondary and tertiary referral hospital (Koshi and LumbiniZonal /Central: NAMS Bir Hospital).

### Specific objectives

- To describe the process of free health care for target group (poor), tackling/receiving the referred case
- Utilization of total budget available for free health service form Government source.
- Availability of additional source of fund for free health care (type of source and total amount in a year)

**Methodology**

*Interview/Record review on*

- Review of hospital records and annual reports
- Review of Operational guideline of free health care management in referral hospitals( Central, regional, sub-regional and zonal)
- Mechanism of safety net to ensure the accessibility of FHS for target group
- Utilization of free health care fund in selected zonal and central hospital

# Findings and Analysis of Referral Hospitals

## 4.1. General background of study Hospitals

### *4.1.1. National Academy of Medical Science Bir Hospital, Kathmandu*

Bir Hospital , established in 1889 AD as the first ever hospital in Nepal is now a tertiary level hospital with 450 beds indoor beds, very busy emergency and casualty department , busy OPD with most of general services, sub specialties and few super specialties. In 2008/9 the total OPD attendance was 325923, total emergency attendance was 48598 and 10261 patients were admitted in various departments. There are 22 departments providing a general and specialized service which includes Cardiology, CTVS, and Dental, Emergency, ENT, Eye, Gastrology (med), Gastro surgery, Gastroenterology, general practice, Gynecology, Liver, Medical, Nephrology, Neuro medicine, Neuro surgery, Orthopedics, Plastic Surgery, Radiotherapy, Skin, General surgery and Urology. The price list is given in Annex 6.

*Budget for free care and service utilization in NAMS, Bir Hospital*

| ***Source*** | ***Amount*** | **policy implantation for** |
|---|---|---|
| Government total budget | 25 corer | all patient from dalit community |
| Internal income (cabin, renting house for medical shops) students fees) | 10 corer | Poor patient form other community using safety net. |
| Additional fund for free care (as per MoHP staff) | 1 corer | |
| Free service user in 2008/9 | All service users for free OPD ticket and general bed. | total free or partial free |
| **Christina dispensary (serving for last 20 years)** | 340000 per month (served 11572 patients 33204 times in 2008) | Support for free medicine |

*In Bir hospital the special policy* ***safety net in Catastrophic Illnesses- Cash Support*** *In this scheme cash assistance up to Rs 50,000.00 provided for cases of chronic renal failure, cancer, chronic heart problem, Alzheimer's disease & Parkinson's disease, paraplegia due to spinal injury* . The total budget available for this policy is 4700000. This was functioning as per the operational guideline 2064

### *4.1. 2. Koshi Zonal Hospital, Biratnagar*

Koshi Zonal Hospital is located in Biratnagar sub metropolitan, which is located 1 hour distance from east west highway. . It is the referral hospital of district of Koshi zone namely Morang, Terathum, Shankuwashava, Dahnakuta, Sunsarih in eastern region.

The Hospital was established in 1947 BS with 14 departments and 11 wards with 350 beds. The departments are Medical, Surgical, Gynae and Obs., Orthopaedic, ENT, Pediatric, Skin, Psychiatry, Eye, and Dental. The indoor services are running with all departments except dental. Besides these services the other facilities are Laboratory, USG, endoscopy, X-ray, ECG, Audiogram, Emergency service. The price list of hospital services is given in annex 7.

*Budget for free care and service utilization in Koshi Zonal Hospital*

| ***Source*** | ***Amount*** | **policy implantation for** |
|---|---|---|
| Government Free health budget | 4000000 | all patient from dalit community |
| 5% of total Government budget for free care | 1800000 | Poor patient form other community using safety net. |
| Free service user in 2008/9 | 8400 (investigation) | total free or partial free |
| | Medicine supply | record could not access |

### *4.1. 3. Lumbini Zonal Hospital (LZH), Butwal*

LZH lies in Butwal Municipality, which is located at the sea side of Tinau river. Lumbini zonal Hospital is one of the most developed and richest zonal hospitals of Nepal. It is the center for most of the districts of Lumbini Zone and also the center for western region. Most of the patients from Lumbini Zone and the Pts. of Pyuthan, Dang, Syangja, Salyan, Rolpa & Dolpa etc, districts come here to seek medical advice. It is the referral center of the above districts, so it covers the wide area in terms of the treatment of the patient.

The Hospital was established in 1967 BS with 6 beds having 2 doctors. After construction of its own building the hospital was started with 24 beds in 2024 BS. At present 136 beds are available but the sanctioned beds is only 100 and the 36 beds are added from the Hospital development committee. At present the following OPDs are being run in the Hospital with five departments like Medical, Surgical, Gynae and Obs., Orthopedic, ENT, Pediatric, Skin, and Dental. The indoor services are running with all departments except dental. Except these services, the other facilities e.g. Laboratory USG, X-ray, ECG, Audiogram, Emergency service, Intercom etc are provided throughout 24 hours. List of list of service charge of LZH is given in annex 8.

*Budget for free care and service utilization in Lumbini Zonal Hospital*

| ***Source*** | ***Amount for free health care*** | **policy implantation for** |
|---|---|---|
| Government Free health budget | 2440000 | Poor patient using safety net. |
| 5% of total Government budget for free care | 2000000 | |
| Hospital internal source (total 4 corer) | 2796317 | for staff and patient recommended for hospital development committee even cabin service available in free in this category |
| **Total** | **7236317** | |

**Lumbini Zonal Hospital service user's record**

| ***Service*** | **2065/66** |
|---|---|
| Total Inpatient | 12670 |
| Total OPD | 1,13786 |
| Total emergency | 32703 |
| Total patient | 1,59,159 |
| Total patient of free treatment | 26227(16.5%) |
| **Total cost of free** | **1,48,36,322 (22.6%)** |

*Source: Medical Record LZH*

## 4. 2. Process of implementation of free health policy in study zonal (Koshi/Lumbini) and central (Bir) hospitals

*The operational Guideline of free health care for referral hospital*

- The target group are eligible to get free medicine services in referral hospital as per the free drug list mentioned at district hospital.
- Other services for all free or partial free should be decided on the basis of assessment of the patients' economic condition.
- The patients from target group referred form VDC or district to referral hospital should be reassessed using patient economic condition assessment form the format given in annexes of the guideline by social service unit and make decision for all free or partial free care.
- The patient visited without following referral process to referral hospital also get free care per the policy of district hospital after assessment of economic condition for free health care as
- Ultra poor and destitute will only get specialised (more then district) service all free after economic condition assessment. Other category of target group such as poor, elderly, disabled, FCHV will get partial free care (if they do not identified as ultra-poor or destitute)

**In practice**

- As the patient claims that he/she is poor then the duty staff asks to fill the format to request free health care. The duty staff then assesses the socioeconomic

condition of the patient using the format. The format is more or less similar to operational guideline.

- The form then forwarded to medical superintendent to get final approval. By the time the patient starts to get services.
- There is no social service unit. Therefore the decision regarding fee health care finally approved by MS as per the assessment and recommendation of the duty staff (nurse/doctor/paramedical
- Special committee is not established in zonal hospital.
- There is no special provision for referred cases in practice as mentioned in guideline.
- The staffs are not much aware about the operational guideline.

### 4. 3. Management of free health care policy in referral hospital

*The operational Guideline of free health care for referral hospital*

The guideline has clearly outline the format for to use the free health care by users and management in annexes sections including namely 1) Patient economic status assessment format, 2) Budget plan as per fiscal year 3) Free health care request form,4) Expenses reimbursement form for patient 5) Record format for free service users (target group profile and utilization of services) 6) Financial report format ,7) Social security program reporting format (quarterly), 8) Emergency service register, 9) Social security program reporting format (monthly) and 10) Indicators of the monitoring and evaluation.

**In practice**

The recording of the free health care is not maintained as per the guideline both service users and financial records. It was so difficult to access the exact record of free care users as per the policy. The monitoring/Evaluation of the program is not in regular basis.

### 4.4. Issues and Challenges to implement the policy guideline (manager's perspectives)

- The mangers are not aware about the operational guideline
- Medical superintendent is little aware about the guideline but not positive to implement due to lack of additional staff, budget and space to establish social service unit.
- The medical superintendents were very much concerned free health care policy and additional requirement of budget for development of institutional capacity such as additional human resource, rooms and bed as per the patient load. They mentioned that the free maternity care policy already overloaded because there is no additional budget to add human resource and beds. MS of Lumbini Zonal Hospital said that "*now the weekly load of maternity care has cope in a day, we need make it 300 beds and add human resource to cope the patients load"*.

# Chapter 5

# Study of User Fee Policy of Cooperative Hospitals in Kathmandu

**Introduction**

Cooperative Hospitals are established in various places of countries under the Cooperative Act. The financing scheme is the fund raising from the community and named as shareholders. The hospital is mainly non profit and dedicated to serve the people with cheaper or subsidized rates. They also make special policy to the shareholders or family of the shareholders. The principle of financing is community participation in health care. Government role is to provide approval to establish the hospital and regular monitoring as per the standard of operational guideline to maintain the quality of care. This study will highlight accessibility and the affordability of the of the services analysis the resources and benefits to the people.

**Objective**

Situation analysis on the cooperatives based health facilities/ hospitals and policy and mechanisms of free health service delivery

**Methodology**

Key informant Interview with concerned authority of hospital
Literature and record review for published form study hospitals

**Findings and Analysis**

**5.1. Stupa Community Hospital:**

Stupa Community hospital is providing service from last 7 years. The hospital has Medical, Surgery, ENT, Eye, Gynae, Maternity, Pediatric and Dermatology, Orthopedic, and Dental OPD departments. It has capacity of 55 beds (52 general and 3 cabins). It is equipped with 24 hour Emergency and most of the diagnostic services. At present, 12 (5 full time and 7 part time) doctors, 28 Nurses, 3 CMA, 1 HA, 14 Staff Nurses, and 8 AMA are working in the hospital.

Source of fund: Community members and user fees are main source of fund In 2008, the organization collected Rs. 28448390 from 374 share holders and Rs. 7491495 from service user fee.

*Service utilization*

In last three years, the numbers of service users were as follows:

| Year | OPD | Indoor | Emergency |
|---|---|---|---|
| 2063/64 | 5196 | 904 | 3835 |
| 2064/65 | 5782 | 1055 | 2665 |
| 2065/66 | 7640 | 852 | 2958 |

*Use fees policy*

Regarding user fee policy, the share holders and staff of the hospital get discounts in different services, which varies from 5% (in medicine) to 50% (in bed). There was not any written policy of charity for poor and DAG people. However, the hospital is

providing free services for a few poor people. The hospital director decides cases of free treatment: diagnostic plus general care. The service charges of Stupa Community Hospital are given in Annex 9.

**5.2. Manmohan Memorial Community Hospital**

As per the review of "*NHSCL (2009) Report of the Third General Assembly, Nepal Health Service Cooperative Limited" the* situation was analyzed.

*Services*

The hospital has radiology, USG, IVU, Endoscopy, echo cardiogram, audiometry, spirometry, ECG, EEG services for diagnosis and hematology, microbiology, biochemistry, immunology, histopathology and cytology, virology and serology services in its Pathology services. The hospital provides ICU services, physiotherapy, DOTS, immunization, health check packages and family planning services as well. The hospital is providing IP services with 100 beds capacity, 24 hours emergency and 7 hours OPD services along with specialist's services for general medicine, surgery, ENT, pediatrics, mental diseases, eye, neurology, gynecology and obstetrics, orthopedics, dental, urology and cancer treatment.

*Source of fund*

Manmohan Memorial Community Hospital was established in 2006 with share amounts collected from shareholders (Rs. 0.1 to a maximum of 1 million) had 955 by April 2009 under Nepal Health Service Cooperative Limited (NHSCL, 2009).

*The special provision of services provided to share holders consists of:*

- Free health services to 3 beds allocated to shareholders above 75 years age
- A discount of 20 percent and 15 percent on all medical costs to shareholders and their family members respectively. The shareholders children study in the affiliated college of the hospital receive 10 percent discount in educational fees. 5 percent discount is provided for drugs in the pharmacy of the hospital.
- Shareholders spending more than 0.1 million in the hospital provide with a 10 percent refund and honoured in the general assembly.
- Patients on referral by shareholder members are provided a 10 percent discount in all expenses.
- A 30 percent discount to shareholder members for their overall health check-ups costs once a year
- A 10 percent discount to children of shareholders studying in the Institute run by the cooperative once MBBS study starts

Out-reach services: free health camps in Dailekh, Sindhupalchowk, Dhading

The hospital has planned to establish a fund for the treatment of the poor and helpless in the future. There is no clear policy regarding health care to the dis-advantaged group except some free treatment based on the assessment of the patient by hospital authority at present.

***Services provided to inpatient and OPD visitors***

| ***Service*** | ***2063*** | ***2064*** | ***2065*** |
|---|---|---|---|
| OPD | 13186 | 22167 | 23009 |
| IP | 928 | 2032 | 1984 |

*(no separate data on Emergency, might have been included in OPD)*

The Cooperative has been running Manmohan Memorrial Institute of Health Sciences that provides BSc Nursing, Bachelor in nursing, Bacheor in public health, Bachelor in pharmacy, staff nurse, Health assistants and lab technician courses. There are 304 students under these courses at present. The cooperative has also been running a Manmohan Memorial Saving and Credit cooperative.

# Chapter 6
# Conclusion and Recommendation

### 6. 1. Ensure infrastructure in District Hospital and Referral Hospital

The scaling op of the free health care at district hospital increase the demand of quality service and the utilization will be increased due to increasing in access. The scaling up of free health care at district hospital is necessary to move universal access to health care but there should be sound planning to develop institutional capacity both infrastructure and human resource. Budget allocation and policy operational guideline only do not ensure the availability of quality of health care.

### 6. 2. Ensure Human Resource at District Hospital

Availability of skilled human resource to provide services which made free must be ensured. At present government managed to make available of at least one lmedical doctors and in some district they are more 3. This has developed positive impact to patient's expectations. But as per the government policy district hospital must serve by MDGP who can deliver services of minor surgery, caesarian section including other medical services. In Gorkha district hospital MDGP doctor is available and he is very keen to expand the surgical services and very soon CS service will be started. This shows that qualified doctor can do much with the help of other medical officer and SBA.

In Rupandehi district hospitals patient flow is very high if the OPD of Gynaecologist running. One pediatrician and MDGP of Rupandehi hospital is deputed other hospital and the other doctor also do not motivate to work so CS is service is not available in Reupandehi however there is operation theatre and other infrastructure is in place with support of DfID. In Baitadi district there is no government permanent medical superintendent. The temporary officer may not motivate to develop hospital service in sustainable manner.

In this context the government must ensure the availability of permanent medical officers and skilled doctors. At least one MDGP, one Pediatrician and one gynecologist/ obstetrician with adequate number of SBA and anesthetic assistant are basic human required to cope with demand of patient as the free health policy also expanded to those services.

### 6. 3. Availability and Affordability of services at District Hospital relevancy to free policy

The basic health service including Medical services (OPD/Emergency/ Inpatient services, SAS/PAC, minor surgical care, Normal and assisted Delivery Care) , Diagnostic services Routine laboratory services, routine Radiology services, USG and ECG service are available in four study hospital .In Baitadi and Bardiya district USG, ECG and lab test for biochemistry are not available.

All the diagnostic services are based on the user fees and the rates are not so cheap. The free health care can be scaled up abolishing user fees of service charges on SAS, PAC, minor surgical procedure and diagnostic services in package. At the same time the missing services have to make available in Baitadi and Bardiya. Caesarian section service

free but not available in all study district thus mother do not perceive any relief with this policy if she has to visit other hospital with long travel during labour pain.

### 6. 4. Usefulness and share of out of pocket expenditure of the patient

Out of 40 items free medicine only 31 directly prescribed to patients and among them only 15 items are most useful. Some medicines are not used by some districts. The injectable and anticipative medicines are only useful for inpatient, emergency and dressing of the wound. In this context the prescribers do not perceive that list because patient demand all free as per prescription. About 29% patient only received all free . Average cost for OPD (Median) Rs 93 with quartile values Rs 50 and 200 and Emergency average cost (median) Rs. 183 with quartile values Rs. 55 and 342. Similarly, Inpatient service average cost (median) Rs. 501 with quartile values Rs. 215 and 1350.

The budget of free health care mostly used to purchase medicine for target group which are not included in free medicine list. The high demand of medicine raise the questions whether there is lack of budget for medicine or the medicines are not used rationally. Therefore it has to be study in detail to find out the usefulness and rationale use of medicine by the prescribers and also the behavior patient on compliance of the treatment.

### 6. 5. Service utilization in study DH and Promotion activities

The flow of patient in remote and hill district are less in comparison to terai district. The variation of patient flow and service utilization varies form the location of hospital and initiative taken to develop awareness program to increase the access to health care. The management should be working to organize more advocacy and coordination with concerned stakeholders to use health service and promotion of health.

### 6. 6. Strategies to scale up Free Health Service at District Hospitals

The three scaling up options with three demand scenario provides alternatives for scaling up of primary health care at district levels. As stated earlier, peripheral health facilities have been providing free health care already. Universal free care at DHs completes the target of primary health care envisioned in ensuring access to primary health care in the heath policy.

The medium demand scenario is expected to be a more realistic projection of the demand under all three scaling up strategy.

The universal free care at DHs is a relatively resource demanding strategy requiring around Rs.11 million per DHs and a total program cost of Rs. 647 million with a need of additional Rs. 185 million at 2010/11 price under medium demand projection if this scaling up strategy is implemented.

The other alternative is the free care to children below five years and requires an additional budget of Rs.0.5 million per DH and a an additional program cost of Rs. 287 million under medium demand scenario. This cost is 6.5 times lower than the universal free care strategy.

The third scaling up strategy of providing free care at DHs in the mountain districts requires an additional Rs. 2.2 million per DH and an additional program cost of Rs. 36 million for implementation under medium demand scenario. This cost is less than 5 times the cost of the universal free care strategy.

The government can start up with the medium cost yet highly beneficial health care strategy of free care to children below five years to start with. This will automatically

address the scaling up strategy for the all regions including the mountain region, though partially

### 6.7. Establishment of Social Security Unit and ensure use of Guideline in referral Hospital

Orientation program should be conducted to key managers of the referral hospital about the operational guideline. Specific policy and program should be planned to establish social security program in each referral hospital as per the need of human resource and budget.

### *6. 8. Cooperative Hospital*

The cooperative hospitals are providing general and special health services through OPD, IP, Emergency and diagnostic services. The share holders are benefitted with services with range of free and subsidized policy. The policy for poor patient seems to available but clear policy is not available. The user fees are expensive than the public sectors. So general people are using service as private hospitals.

### 6. 9. Strengthen the Management of National Free Health Program

At present the national free health care program is managing by free health section of Management Division in Department of Health Service. Only three staff is responsible to monitor and coordinate all districts. The free health section is facing many challenges regarding medicine supply, human resource issue, service availability etc. At the same time the regular monitoring of free care policy and program over burden the free health section. In this context to institutionalize the Social security program (free health care) urban health and environment health former cabinet made policy decision to establish a new division under MoHP with these three sections. But this has not established yet. If government really wants to implement and scale up free health care effectively then the division and section of free health care under social security program must be established.

# Annex

## Annex 1: Study Tools for data collection

**Tool 1**

**Observation Checklist of district hospital**

| *Name of Hospital* | *Date of observation* | *Name of observer/interviewer* | **Name of informant** |
|---|---|---|---|
| Room/Space<br>Supplies | OPD | Emergency | IPD |
| **Human resource** | | | |

**Tool 2 : Format for Record review**

**Tool 2.1.**

**Rates of Registration, Curative services**

| *Name of Hospital* | *Date of observation* | *Name of interviewer* | **Name of informant** |
|---|---|---|---|

| Treatment categories | Price (Rs.) | Percentage out of total treatment | Percentage by total patients in service centers | | |
|---|---|---|---|---|---|
| | | | IP | OP | Emerg. |
| OP reg fee | | | | | |
| Emergency reg fee | | | | | |
| CAC /PAC | | | | | |
| Normal Delivery | | | | | |
| General Bed charge | | | | | |
| Oxygen /hour | | | | | |
| plaster | | | | | |
| **suturing** | | | | | |

**Tool 2.2.**

**Transportation rates and policy for referral cases**

| ***Emergency transport service*** | **Rate** |
|---|---|
| Ambulance<br>micro | |
| **Policy: transport allowance for referred case** | |

**Tool 2.3.**

**Number of patients and free care recipient by fiscal year**

*District: ….*

| *Fiscal year (duration)* | *In-patient* | | *Out patients* | | *Emergency* | | *remark* |
|---|---|---|---|---|---|---|---|
| | Total | Free | Total | Free | Total | Free | |
| 2064/65 (Magh-Asadh) | | | | | | | |
| 2065/66 (Shrawan-Poush) | | | | | | | |
| 2065/66 (Magh- Asadh) | | | | | | | |

**Tool 2.4**

**Use of fund available for free health services**

***Record of 20065/66 fiscal year***

| District | Total amount received for free care | Lab and X-ray reagent | Drug for fee patient from non free list | source of information |
|---|---|---|---|---|
| | | | | |

## Tool 3. Lab tests

| *Name of Hospital* | *Date of observation* | *Name of observer/interviewer* | ***Name of informant*** |
|---|---|---|---|
| | | | |

### Tool 3.1. Blood test

| *S. N.* | *Test categories (main categories only)* | *User fee (Rs.)* | *Percentage out of total blood tests* | *Percentage by total patients in service centers* | | |
|---|---|---|---|---|---|---|
| | | | | **IP** | **OP** | **Emerg.** |
| 1. | Widel test | | | | | |
| 2. | RA factor | | | | | |
| 3. | Blood Grouping | | | | | |
| 4. | urea | | | | | |
| 5. | Uric acid | | | | | |
| 6. | Creatinin | | | | | |
| 7. | Blood total count | | | | | |
| 8. | Diff count | | | | | |
| 9. | ESR | | | | | |
| 10. | Hb | | | | | |
| 11. | VDRL | | | | | |
| 12. | HIV | | | | | |
| 13. | HBS Ag | | | | | |
| 14. | bilirubin | | | | | |
| 15. | Blood sugar | | | | | |
| 16. | Malaria | | | | | |
| Total Blood Tests this year | | | | | | |

### 3.2 Stool test

| *District* | *Test categories* | *Price (Rs.)* | *Percentage out of total stool tests* | *Percentage by total patients in service centers* | | |
|---|---|---|---|---|---|---|
| | | | | IP | OP | Emerg. |
| | Routine test | | | | | |
| | Occult blood test | | | | | |
| Total stool test this year | | | | | | |

### 3.3. Urine test

| *District* | ***Test categories*** | *Price (Rs.)* | *Percentage out of total urine tests* | *Percentage by total patients in service centers* | | |
|---|---|---|---|---|---|---|
| | | | | IP | OP | Emerg |
| | RE/ME | | | | | |

| | |
|---|---|
| | Pregnancy test, |

**3.4. Others lab services**

| *District* | *Test categories* | *Price (Rs.)* | *Percentage out of total urine tests* | *Percentage by total patients in service centers* | | |
|---|---|---|---|---|---|---|
| | | | | IP | OP | Emerg. |
| 1. | semen analysis | | | | | |
| 2. | AFB stain | | | | | |
| 3. | Mantoux test | | | | | |
| | Total test this year | | | | | |

**<u>Tool 4:</u>**
**Diagnostic services**
**Tool 4.1**
**Radiology record**

| *Name of Hospital* | *Date of observation* | *Name of observer/interviewer* | **Name of informant** |
|---|---|---|---|

| District | X-ray | Price (Rs.) | Percentage out of total x-rays | Percentage by total patients in service centers | | |
|---|---|---|---|---|---|---|
| | | | | IP | OP | Emerg. |
| **Total X-rays this year** | | | | | | |

4.2. USG service record

| *Name of Hospital* | *Date of observation* | *Name of observer/interviewer* | **Name of informant** |
|---|---|---|---|

| District | Test categories | Price (Rs.) | Percentage out of total ultras-sound | Percentage by total patients in service centers | | | |
|---|---|---|---|---|---|---|---|
| | | | | IP | OP | Emerg. | Out side |
| | Ultra-sounds (USG) | | | | | | |
| **Total ultra-sounds this year** | | | | | | | |

**Tool 5**

**Assessment of Free Drug (40 items) availability and use**

*Name of district:*

*Source of information:* *Date:*

| *S. N.* | *Medicine* | *Availability* | *Use* | **Purchasing price** |
|---|---|---|---|---|
| 1. | Albendazol | | | |
| 2. | Alprazolam | | | |
| 3. | Aluminium hydroxide + Magnesium hydroxide | | | |
| 4. | Amoxyciline 250mg | | | |
| 5. | Aspirin | | | |
| 6. | Atenolol | | | |
| 7. | Atropine | | | |
| 8. | Benzoic acid+Salicylic acid | | | |
| 9. | Calamine Lotion | | | |
| 10. | Charcol activated | | | |
| 11. | Cap Chloramphenicol | | | |
| 12. | Chloramphenicol eye ointment | | | |
| 13. | Chlorpheniramine | | | |
| 14. | Ciprofloxacin | | | |
| 15. | Ciprofloxacin | | | |
| 16. | Ciprofloxacine eye oint | | | |
| 17. | Clove oil | | | |
| 18. | Compound solution of Sodium lactate ( Ringers' Lactate) | | | |
| 19. | Dexamethasone | | | |
| 20. | Dextrose Solution | | | |
| 21. | Ferrous salt + Folic acid | | | |
| 22. | Frusemide | | | |
| 23. | Gamma benzene hexachloride | | | |
| 24. | Gentamycin Inj. | | | |
| 25. | Hyoscine butylbromide | | | |
| 26. | Lignocaine | | | |
| 27. | Magnesium Sulphate | | | |
| 28. | Metoclorpropamide inj | | | |
| 29. | Metronidazole 200mg | | | |
| 30. | Oral Rehydration Solution (ORS) | | | |

| | |
|---|---|
| 31. | Oxytocin |
| 32. | Paracetamol 500mg |
| 33. | Pheniramine |
| 34. | Phenobarbitone |
| 35. | Povidine Iodine |
| 36. | Promethazine |
| 37. | Salbutamol |
| 38. | Sodium chloride |
| 39. | Sulfamethoxazole+ Trimethoprim |
| **40.** | Vitamin B complex |

**Tool 6**
**Questionnaire for Exit Interview**

| | | | | |
|---|---|---|---|---|
| *Date of interview:* | *Name of interviewer:* | *Name of hospital* | | **Name of respondents** |
| Age of respondents | Sex of respondents | Family of patient Caste/ ethnicity | Education | Occupation of care taker of patient/ patient |
| Source of income of patient's family | Sufficiency of income in patient family | 2. Registration fees | 3. Type of service used by patient | |
| **4. Drug prescription and purchasing history** | 5. Place of Drug purchasing and cost | 6. If partially purchased drug why<br>7. Days of hospital stay if admitted inpatient ward | | |

8. Copy of the Prescription

| | | |
|---|---|---|
| *Name of patient:* | *Sex* | **Symptoms:** |
| Date | Age | Lab test advised |
| X ray advised | USG | Referred any |
| Name of drug | total days (course) | |
| **Prescriber** | | |

***Annex 2:*** **<u>Participants district stakeholder meeting and data review team</u>**

1. Nuwakot District Hospital (12th August 2009)

| *SN* | *PARTICIPANT* | **Designation** |
|---|---|---|
| 1 | Dr. Arjun Sapkota | DHO |
| 2 | Mr. Narayan Rai | Lab technician |
| 3 | Mr. Deepak Rimal | Free health focal person |
| 4 | Mr. Bal Mukunda Dangol | DHO, Statist O |
| **5** | Mr.Ram Raja Bhandari | AHA, Assistant to Radiology dept. |

2. Gorkha District Hospital (21st August 2009)

| *SN* | *PARTICIPANT* | **Designation** |
|---|---|---|
| 1 | Dr.Guna Raj Lohani | DHO |
| 2 | Mr. Santosh Kr. Jaisawal | Radiology technician |
| 3 | Mr. Hari Khadka | Lab Assistant |
| 4 | Mr. Madhu Bhatta | Free health focal person |
| **5** | Mr. Raheshyam Shrestha | Medical recorder |

3. Rupandehi District Hospital "Bhim Hospital" (28th august 2009)

| *SN* | *PARTICIPANT* | **Designation** |
|---|---|---|
| 1 | Dr. Prayaschit Shrestha | MS |
| 2 | Bishnu Gautam | Administration Staff |
| 3 | Sarbajit Barai | Med. Recorder |
| 4 | Manish Shrestha | Lab. Technician |
| **5** | Dhruba Shrestha | Radiographer |

4. Inaruwa District Hospital "Sunsari" (6th September 2009)

| *SN* | *PARTICIPANT* | **Designation** |
|---|---|---|
| 1 | Dr. Daya Sankar Lal Karna | DHO |
| 2 | Ram Charita Mehata | Free health focal person |
| 3 | Dhruba Ghimire | Radiography assistant |
| 4 | Giri Raj Sharma | Lab. Technician |
| 5 | Saligram Karki | Lab assistant |
| **6** | Tumsa Shrestha | Research assistant |

5. Baitadi District Hospital (18 Sep 2009)

| *SN* | *PARTICIPANT* | **Designation** |
|---|---|---|
| 1 | Dr. Bikram Basaula | Act. MS |
| 2 | Mr. Saroj Patel | Radiology Assistant |
| 3 | Gyan Raj Sharma | Lab Assistant |
| 4 | Dilli Ram Sharma | Stat Assistant |
| **5** | Keshav Prasad Gautam | Office Assistant |

6. Bardiya District Hospital (20 Sep 2009)

| *SN* | *PARTICIPANT* | **Designation** |
|---|---|---|
| 1 | Mr. Gagan Singh HA | Act. -In-charge |
| 2 | Devaki Nandan Acharya | Lab Assistant |
| 3 | N. K. Sharma | Stat Officer |
| **4** | Yogendra Joshi | Radiology Assistant |

***Annex 3: Participants of Referral hospital***

1. Lumbini Zonal Hospital (29th Aug 2009)

| *SN* | *PARTICIPANT* | **Designation** |
|---|---|---|
| 1 | Dr. Yam B. Oli | Medical Superintendent |
| 2 | Mr. Laxmi Raj Regmi | Medical Recorder |
| 3 | Ram Prasad Pandey | Account Officer |
| 4 | Ram Sharan Sharma | Pharmacist |
| 5 | Gyanu Kumari Bhusal | Admin. Assistant |
| **6.** | Mina Somai | ANM on-duty Surgical ward |

2. NAMS Bir Hospital ( 4 Sep 2009)

| *SN* | *PARTICIPANT* | **Designation** |
|---|---|---|
| 1 | Prof. C.P Maskey. | VC, NAMS, Bir Hospital |
| 2 | Dr. Dhirag Raj R.C | Director |
| 3 | Yagyswar joshi | Account assistant |
| 4 | Keshav Prasad Prasain | Account officer |
| **5** | Shankar Kumar Jha | Free health focal person |

3. Koshi Zonal Hospital ( 4 Sep 2009)

| *SN* | *PARTICIPANT* | **Designation** |
|---|---|---|
| 1 | Dr. C.P Upadhyay | Medical Superintendent |
| 2 | Devi Prasad poudel | Medical Recorder |
| 3 | Ganesh Niraula | Account Officer |
| **4** | D. N. Jha | Pharmacist |

***Annex 4***

**Participants of national level stakeholders (2nd October, 2009)**

| *SN* | *PARTICIPANT* | **Organization** |
|---|---|---|
| 1 | Mr. Yogendra Gouchan, chience finance | MoHP, Planning |
| 2 | Mr. Lila , Social Security unit | MoPH, Planning |
| 3 | Mr. Girairaj Subedi | MoHP, Planning |
| 4 | Mr. Parasuram Shrestha | Free health care unit/ Management Division/ DoHS |
| 5. | Mr. Mahendra Shrestha | MoHP |
| 6. | Mrs. Rita Joshi | |
| 7. | Yubaraj Aryal | MoHP |
| **8.** | Ghanashyam Pokharel | Planning section/Management Division/DoHS |

***Annex 5:*** **Socioeconomic background of the DH service users (respondent of exit interview)**

| | | | | |
|---|---|---|---|---|
| *1.1. Gender (patient)* | | | | |
| *Men* | *36 (45.6)* | *5 (50.0)* | *4 (22.2)* | **45 (42.1)** |
| *Women* | *43 (54.4)* | *5 (50.0)* | *14 (77.8)* | **62 (57.9)** |
| 1.2. Caste/ethnicity | | | | |
| Bra/Che | 35 (44.3) | 3 (30.0) | 11 (61.1) | 49 (45.8) |
| Dalit | 5 (6.3) | 2 (20.0) | 1 (5.6) | 8 (7.5) |
| Muslim | 5 (6.3) | - | - | 5 (4.7) |
| Newar | 4 (5.1) | 1 (10.0) | 3 (16.7) | 8 (7.5) |
| Tamang/Gurung/Magar | 15 (19.0) | 2 (20.0) | 1 (5.6) | 18 (16.8) |
| Terai ethnic | 15 (19.0) | 2 (20.0) | 2 (11.1) | 19 (17.8) |
| 1.4. Age | | | | |
| Children under 13 | 17 (21.5) | 4 (40.0) | 3 (16.7) | 24 (22.2) |
| Adult 14-60 | 56 (70.9) | 4 (40.0) | 13 (72.2) | 73 (67.6) |
| Elderly 60+ | 6 (7.6) | 2 (20.0) | 2 (11.1) | 10 (10.2) |
| 1.3. Education (lit Ill) | | | | |
| Illiterate | 27 (39.2) | 6 (60.0) | 2 (11.1) | 35 (32.7) |
| Literate | 42 (59.8) | 4 (40.0) | 16 ( 88.9) | 72 (67.3) |
| 1.4. Occupation | | | | |
| Agriculture | 27 (34.2) | 6 (60.0) | 6 (33.3) | 39 (36.4) |
| Business | 11 (13.9) | - | 2 (11.1) | 13 (12.1) |
| Labor | 9 (11.4) | 1 (10.0) | 1 (5.6) | 11 (10.3) |
| Service | 10 (12.7) | 1 (10.00 | 4 (22.2) | 15 (14.0) |
| Others | 22 (27.8) | 2 (20.0) | 5 (27.8) | 29 (27.1) |
| **1.5. Sufficiency of income** | | | | |
| **0-3 months** | - | 2 (20.0) | - | 2 (1.9) |
| **3-6 months** | 14 (17.7) | 4 (40.0) | 3 (16.7) | 21 (18.7) |
| **One year** | 52 (65.8) | 3 (30.0) | 6 (33.3) | 61 (57.0) |
| **Surplus** | 13 (16.5) | 1 (10.0) | 9 (50.0) | 23 (21.4) |

## Annex 6
## Bir Hospital price list of services

| ***Services*** | ***Unit price in Rs in range*** | ***Services*** | ***Unit price in Rs in range*** |
|---|---|---|---|
| Ambulance | 200-400 | Liver | 10-550 |
| Bed charge | 110-1000 | Microbiology | 25-100 |
| Biochemistry | 50-400 | Nephrology | 125-2500 |
| Blood bank | 40-200 | Neurology | 600-1000 |
| Cardiology | 50-3000 | Operation charge | 2500-8000 |
| CTVs | 500-1000 | Orthopedics | 25-500 |
| Dental | 50-800 | Parasitology | 15-200 |
| ENT | 25-300 | Physiotherapy | 50-100 |
| Gastroenterology | 500-4000 | Radiology | 300-2500 |
| Gastrology | 250-500 | Radiotherapy | 150-5500 |
| Hematology | 20-200 | Skin | 50-400 |
| Histopathology | 30-600 | Surgery | 10-9000 |
| Immunology | 50-905 | Ultrasound | 400 |

| | | |
|---|---|---|
| | Urology | 400-750 |

*Source: Bir Hospital Account Section*

**Annex 7: Koshi Zonal Hospital**

| **ORTHOPEDIC DEPARTMENT** *Source: Account section Koshi Zonal Hospital* | | | | |
|---|---|---|---|---|
| **Bed Charge** | **Rate (Per Day)** | 1 | Plaster with Anesthesia | **DAY CASE CHARGES** |
| General Bed Charge | Rs. 50 | A | Upper Limb | Rs. 250 |
| Double Bed Cabin | Rs. 200 | B | Lower Limb | Rs. 500 |
| VIP Cabin | Rs.2000 | 2 | Plaster without anesthesia | |
| **PAYING CASE OPERATION** | | A | Upper limb | Rs. 200 |
| Major Operation Package Service | Rs. 7500 | 4 | ITU | Rs.700 |
| Intermediate Operation Package Service | Rs. 6000 | B | Lower limb | Rs. 400 |
| Minor Operation Package Service | Rs. 3000 | 3 | Hip-spica Cast: | Rs. 600 |

**2003 August (1060/5/23) (all the charges are double in cabin and ICU)**

| | | | |
|---|---|---|---|
| *Source: Account section LZH 2009* | 4 | Plaster Removal charge | Rs. 50 |
| | 5 | Intra-articular injection | Rs. 60 |
| | 6 | Incision and drain | |
| | A | With GA/RB | Rs. 500 |
| | B | With Local | Rs. 300 |
| | 7 | Dressing Charge | Rs. 50 |

| PHYSIOTHERAPY TREATMENT | Current Course 10 Days | Current Per sitting Rs. | PHYSIOTHERAPY TREATMENT | Current Course 10 Days | Current Per sitting Rs. |
|---|---|---|---|---|---|
| Short Wave diathermy | 400/- | 40/- | Chest Physio | 250/- | 30/- |
| U/S Therapy | 400/- | 40/- | Cervical Electric Traction | 400/- | 45/- |
| Intra-Red Heat | 250/- | 30/- | Lumber Electric Traction | 500/- | 60/- |
| Steam Pack (Hot Pack) | 200/- | 20/- | ICE or cold Therapy | 100/- | 15/- |
| Paraffin Therapy (Wax Bath) | 400/- | 45/- | Plaster – Arms and Short Leg | 100/- | 125/- |
| Muscle Stimulation | 500/- | 60/- | Plaster – Long Leg | 200/- | 250/- |

| | | | | | |
|---|---|---|---|---|---|
| | | | full Plaster | | |
| Trans Cutaneous Nerve Stimulation | 400/- | 40/- | Plaster – Hip Spica | 400/- | 500/- |
| Hemiplegic Pt. Exercises | 700/- | 75/- | I & D Local | 50/- | 60/- |
| Cervical Exercises | 250/- | 30/- | I & D GA | 200/- | 250/- |
| Back Exercises | 250/- | 30/- | Debriderent & Suture | 200/- | 250/- |
| Shoulder Exercises | 250/- | 30/- | Dressing | 10/- | 20/- |
| Exercises for fracture case | 250/- | 30/- | Hyjection Service | 50/- | 75/- |
| *Source: Account section Koshi Zonal Hospital* | | | | | |

**Annex 8**

**Lumbini Zonal Hospital price list**

OPD Service New patient 10/-
Old patient 5/-

| | |
|---|---|
| USG | 350/- |
| X-Ray(12x15) | 110/- |
| X-Ray 12x10 | 100/- |
| X-Ray 12x8 | 100/- |
| ECG | 125/- |
| Endoscopy | 375/- |

**Patient Admission**

| | |
|---|---|
| General | 25/- |
| Cabin | 300/- |

**Operation**

| | |
|---|---|
| Cabin Major | 2500/- |
| Cabin Intermediate | 1800/- |
| Cabin Minor | 600/ |
| General ward Major | 1000/- |
| General ward Intermediate | 500/- |
| General ward Minor | 150/- |
| Plaster | |
| Minor | 125/- |
| Major | 300/- |
| Intermediate | 200/- |
| Physiotherapy | 10/- |
| Audiogram | 125/- |
| Inj ARV | 15/- |
| Police case examination | 150/- |
| Birth certificate | 100/- |
| Dressing charge | 15/- |
| Tooth remove | 30/- |

Oxygen only for cabin patient
200/- for 6- 24 hrs

| | |
|---|---|
| VDRL (MCH clinic) | 100/- |
| Pregnancy test | 80/- |
| Inj TT | 10/- |

**Lab Service**

| | |
|---|---|
| Lumber Picture | 200/- |
| Peritoneal tab | 200/- |
| Plural tab | 200/- |
| Intercostals drainage | 200/- |
| Cervical traction OPD | 60/- |
| " Indoor | 50/- |
| Blood grouping | 25/- |
| TCDC | 30/- |
| Hb | 20/- |
| PCV | 15/- |
| ESR | 10/- |
| Reticulocyte | 25/- |
| RBC | 20/- |
| Platelets | 20/- |
| BTCT | 20/- |
| PT | 70/- |
| Blood Sugar | 50/- |
| Blood Urea | 50/- |
| Serum Creatinin | 60/- |
| Serum Bilirubin | 50/- |
| SGPT (ASG) | 70/- |
| SG0T (ASG) | 70/- |
| Alkaline phosphate | 70/- |
| Albumin | 45/- |
| Total Protein | 50/- |
| Uric Acid | 60/- |
| Amylase | 150/- |
| Triglyceride | 100/- |
| LFT | 250/- |
| Lipid Profile | 200/- |
| CFS Test (Including ascites plural) | 150/- |
| Electrolyte | 150/- |
| HBsAg | 150/- |
| Widal test | 70/- |
| VDRL | 40/- |

| | | | |
|---|---|---|---|
| *HIV Test* | *300/* | **Malarial parasites** | **25/** |
| Montoux Test | 50/ | Filarial parasites | 30/ |
| Ra Factor | 65/ | Stool for RM | 15/ |
| ASO Titre | 125/ | Occult Blood | 15/ |
| C. Reactive protein | 80/ | Reducing substances | 15/ |
| Culture all types | 100/ | Urine RM | 15/ |
| Gram stain | 40 | Bile salt | 15/ |
| Sputum for AFB | 20/ | Urobilinogen | 15/ |
| Semen analysis | 50/ | Acetone | 15/ |
| LE cells | 15/ | HCG (Pregnancy Test) | 80/ |
| | | Urine Chyle | 20/ |

**Annex 9.**

**Price list of Stupa Community Hospital**

| **Service** | **Price** |
|---|---|
| OPD registration | 50 |
| Emergency | 100 |
| Paying OPD | 275 |
| Ward consultation | 150 |
| Ward dressing | 150 |
| Cabin dressing | 200 |
| Cabin consultation | 200 |
| General bed | 210 |
| Cabin bed | 1200 |
| Deluxe cabin | 1500 |
| Minor operation | 10,000 |
| Intervediate operation | 15,000 |
| Major operation | 20,000 |
| Very major operation | 25,000 |
| Ultrasound | 580 |
| Delivery charge(general bed) | 1500 |
| Delivery (cabin bed) | 2000 |

*Source: Account section of Stupa Community Hospital*

**Annex 10: Cost estimation for free health care at District hospital**

**Average cost of universal free care at District Hospitals (Low, Medium and High Demand Scenario projections for 2010/11)**

| *Service Category* | *Mountain* | | | *Hill* | | | *Terai* | | | *Nepal* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Low* | *Median* | *High* | *Low* | *Median* | *High* | *Low* | *Median* | *High* | *Low* | *Median* | *High* |
| **IP** | 2528 | 2639 | 2749 | 2123 | 2259 | 2412 | 3475 | 3625 | 3804 | 2501 | 2633 | 2780 |
| **OP** | 3685 | 3972 | 4231 | 5574 | 6035 | 6454 | 6423 | 6921 | 7419 | 5240 | 5662 | 6054 |
| **Emergency** | 1923 | 2116 | 2296 | 1586 | 1825 | 2073 | 4543 | 4737 | 4970 | 2267 | 2485 | 2712 |
| **Aggregate cost** | 8135 | 8727 | 9277 | 9283 | 10119 | 10938 | 14441 | 15283 | 16194 | 10009 | 10781 | 11546 |
| **Program cost** | 130156 | 139633 | 148429 | 297068 | 323810 | 350027 | 173298 | 183400 | 194328 | 600521 | 646843 | 692784 |

*Program cost: refers to the aggregate cost of scale up option program in all relevant districts; all other costs are average figures*

**Average cost of universal free care at District Hospitals (Low, Medium and High Demand Scenario projections for 2010/11)**

| *Service Category* | *Mountain* | | | *Hill* | | | *Terai* | | | *Nepal* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Low* | *Median* | *High* | *Low* | *Median* | *High* | *Low* | *Median* | *High* | *Low* | *Median* | *High* |
| **IP** | 2528 | 2639 | 2749 | 2123 | 2259 | 2412 | 3475 | 3625 | 3804 | 2501 | 2633 | 2780 |
| **OP** | 3685 | 3972 | 4231 | 5574 | 6035 | 6454 | 6423 | 6921 | 7419 | 5240 | 5662 | 6054 |
| **Emergency** | 1923 | 2116 | 2296 | 1586 | 1825 | 2073 | 4543 | 4737 | 4970 | 2267 | 2485 | 2712 |
| **Aggregate cost** | 8135 | 8727 | 9277 | 9283 | 10119 | 10938 | 14441 | 15283 | 16194 | 10009 | 10781 | 11546 |
| **Program cost** | 130156 | 139633 | 148429 | 297068 | 323810 | 350027 | 173298 | 183400 | 194328 | 600521 | 646843 | 692784 |

*Program cost: refers to the aggregate cost of scale up option program in all relevant districts; all other costs are average figures*