Evaluation Study of Cost Recovery of Hospital Development Committee in Nepal

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Deepak Kumar Karki

Acronyms

ANM	Auxiliary Nurse Midwife
CRR	Cost Recovery Rate
DoHS	Department of Health Services
FCHV	Female Community Health Volunteer
FGCD	Focus Group Discussion
GoN	Government of Nepal
HDC	Hospital Development Committee
HEIC	Health Education Information and Communication
HP	Health Post
INGO	International Non Government Organization
MCHW	Maternal Child Health Worker
MoH	Ministry of Health
MoHP	Ministry of Health and Population
MTEF	Medium Term Expenditure Framework
MTSP	Medium Term Strategic Plan
NGO	Non Government Organization
NHEICC	National Health Education Information and Communication Centre
NHP	National Health Policy
NHRC	National Health Research Council
ORC	Out Reach Clinic
PHC	Primary Health Care
PHCC	Primary Health Care Centre
RCRR	Recurrent Cost Recovery Ratio
SDCA	Step Down Cost Accounting
SHP	Sub Health Post
TBA	Trained Birth Attendant
VHW	Village Health Worker
VDC	Village Development Committee
WHO	World Health Organization

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Executive Summary

Health care system of Nepal is in tremendous pressure because of the triple burden caused by increasing demand of services for communicable diseases, increasing non-communicable diseases, and poverty. The demand of quality health services with increased number of hospitals and hospital beds is being seriously challenged by the lack of adequacy and mobilization of resources. Different levels of public hospitals represent important health care outlets in Nepalese context. The government has found difficulties in ensuring the equitable access of hospital services in fair manner to the people. Resource generation and resource management are the major concern for making these services available and accessible to the general people. Albeit, in general health care policies, government has come up with few options of alternative approaches of health care service provisions and resource generation like using user charges, public private-partnerships, community participation in and through health sector reform strategies, practice of such options has been limited by the absence of autonomy of decentralized decision making space by the hospitals. At the time the government is planning to handover its all health care facilities to local bodies by making them more autonomous through health care reform strategies. However, there is very little understanding from evidence whether these health institutions will be able to stand autonomously. Very less information is available regarding the efficiency status as well as the cost recovery status of public hospitals in Nepal. Thus the current study aims to understand the status of public hospitals in resource generation and mobilization, efficiency of hospitals (allocative efficiency), accessibility of hospital services to people, feasibilities of hospitals for autonomy, and possible options for remedying the access barriers for improved access to hospital services, and financially sustained institution.

This study applied quantitative and qualitative research methods for data collection and analysis. Step-down approach was used to distribute costs into three major cost centres: overhead, intermediate and final service departments. So as to ensure the wider representation of different levels, development and ecological regions of Nepal, hospitals were selected conveniently based on the variety of services components – specialization of hospitals by service components, willingness to support the study. Altogether 16 hospitals - 3 central, 1 regional, 3 zonal and 9 district level hospitals – were studied. A total of 367 in- and out-

patients enrolled for semi-structured interviews. Focus group discussions in 6 hospitals and 23 in-depth interviews were conducted different hospitals. Quantitative data were expressed through descriptive statistics whereas qualitative information were collected and analyzed based on the grounded theory approach with native reflections.

Budget allocated by the government was the major source of income for all levels of hospital. Income from the different services provided by the hospital was another major source of income for almost all hospitals. Cost recovery rate of the hospitals as a whole was not found satisfactory. Among all hospitals, Solu hospital had the best cost recovery status whereas BP Koirala Memorial Cancer Hospital had the lowest cost recovery rate in 2003.

Staff of different hospitals were mainly categorized under doctors/nurses, paramedics and administrative staff. Koshi zonal hospital had the highest proportion of doctors and nurses and Mahakali zonal hospital had the highest proportion of administrative staff when compared to all levels of hospital. Total expenditure on paramedical staff was found lower in almost all hospitals which were mainly due to the lower number of paramedical staff in those hospitals.

Hospitals are mainly relying on central government fund to deliver services to the people. However, hospitals located in urban centres generate revenues from various sources, for example, having shopping complex. Qualitative findings suggested that hospitals are not financially sustainable. Frequent transfer of staff, a lot of vacant posts and hospital development board without autonomy were the major hindrances for the smooth functioning of those hospitals.

The key message of the study is hospitals could grow to gain cost recovery status and financial sustainability if the hospital development boards are provided adequate decision space for its autonomy. The role of government should be facilitating and monitoring the quality of hospital services rather controlling the hospital management activities directly. Also the allocative efficiency of public hospital can be achieved if:

- The hospital development boards are allowed more decision space to take necessary actions for ensuring better service provision and its utilization;

- The hospital development boards are allowed to take decision for ensuring the effective human resource planning and its use. Most of the hospital management boards have the problem of frequent transfer of stall (the government ones) and lack of necessary incentive and upgrading trainings for the staff. Provided the staffs are well trained and their skills are upgraded according to the demands of health care market, public hospitals can do achieve better cost-effective ratios for hospital services and so the improved allocative efficiency.
- Practically, to improve the allocative efficiency of public hospitals in Nepal, resources should always be used to produce the most cost-effective interventions. The cost-effectiveness of interventions can be ensured through: (a) providing a mix of health interventions that reflects people's need and has a potential to yield the highest return on health, (b) delivering and using the produced health interventions by the people who need them the most and get maximum health gain, and (c) providing health interventions, ensuring that the people who need hospital services, are accessible physically (geographically), culturally and economically.
- It is by having the reform in the overall management of hospital in public sectors that can help in achieving efficiency. For example, extending the hospital services according to the needs of such services in the health care market; allowing hospital generating revenues for improved cost recovery based on the service components and people's ability to pay but fairly; having competent staff and providing necessary training according to the needs, etc.
- The public hospitals need to gain its autonomy.

The autonomy of the public hospitals in Nepal is possible only by devising and implementing appropriate policy and interventions in at least five major domains: Governance and administration, Finance, Human resource management, Procurement and Hospital information system.

This leads to public sector hospitals recover the costs of services and make the hospital services quality-assured, sustainable and also improve the access to the services, in true. This can be done through piloting in few sites, initially and scaling-up the scheme in other hospital incorporating the lessons learned.

1. Introduction

Country profile

Nepal is landlocked between India and China with a population of 26.6 million (UNDP, 2006). Topographically, it is divided into three distinct ecological zones i.e. the Mountains (35%), the Hills (42%) and the Tarai (23%) (CBS, 2003). For administrative purposes, Nepal is divided into 5 development regions, 14 zones and 75 districts. Districts are further divided into 3,914 Village Development Committees (VDCs) and 58 municipalities with smaller Wards as the lowest political units.

Nepal is predominantly rural: nevertheless, the urban/rural population ratio has increased steadily over the last 30 years, from 4 percent in 1971 to 14 percent in 2001 (CBS, 2002) attributable largely to migrations induced by economic opportunities as well as conflict. The population is diverse, multi-ethnic and multi-lingual (UNDP, 2004).

Nepal is one of the least developed countries and ranked 138th in Human Development Index with per capita GDP US$ 252 in 2004, life expectancy at birth of 61.4 years in 2005, and adult literacy rate of 48.6% in the year 2004 (UNDP, 2006). About 80% of Nepalese rely on agriculture for their livelihood. The decade long civil conflict (arising from persistent poverty and inequality) took a great toll on people's lives, destabilizing political and economic structures, resulting in country's increased dependency on foreign aid for its development needs.

With the restoration of multiparty democracy in 1990, many sectoral policy reforms have been introduced in line with Poverty Reduction Strategy Paper (PRSP) and 10th Five Year Plan (2002-7) to be implemented through a decentralized governance system guided by the 1999 Local Self-Governance Act, but the implementation part has been weak, failing to effectively address the issues of exclusion and discrimination in society (MoH, 2004c). Nevertheless, the Government of Nepal (GoN) has embraced the spirit of the Millennium Declaration and is committed to the achievement of the Millennium Development Goals (MDGs) in reducing poverty and advancing human development through equal opportunity

policy for all its citizens. It can be hoped now that the recent political change following the People's Movement-II in 2006 will consolidate Nepal's efforts in this regard.

Country health profile

Nepal's National Health Policy 1991 aims at addressing the health need of the people through primary health care (PHC) approach. With the objective of providing essential PHC services to the people, the Ministry of Health and Population (MoHP) has extended basic health infrastructure under the aegis of Department of Health Services (DoHS) at four levels i.e. central, regional, district and periphery levels. The district health service consists of district hospital, Primary Health Care Center (PHC), Health Post (HP) and Sub-Health Post (SHP) with about 48,000 village-based Female Community Health Volunteers (FCHVs). Although there is extensive coverage of PHC throughout the country, major variables affecting access to health care and the burden of disease are related to gender, age, caste, ethnic group, income and area of residence.

The MoHP, with its External Development Partners (EDPs) and Ministry of Finance (MOF), developed Health Sector Strategy-An Agenda for Reform 2002, which aims to '*achieve the health sector Millennium Development Goals in Nepal with improved health outcomes for the poor and those living in remote areas and a consequent reduction in poverty*' (MoH, 2004a). This is the strategy document for the health sector reform and the Sector Wide Approach process (SWAp), which is currently being implemented through Nepal Health Sector Programme-Implementation Plan, 2004-2009 (MoH, 2004b).

Despite health inequalities and poverty coupled with civil conflict, the country has made significant improvements in health indicators over the last decade. People's average span of life is now 61.4 years and the Maternal Mortality Rate (MMR) has decreased from 850 per 100,000 live births in 1991 to 540 in 2004 (UNDP, 2006). The infant mortality rate (IMR) declined from 79 per 1,000 live births in 1995 to 51 in 2006 and Contraceptive Prevalence Rate increased from 26% in 1996 to 44% in 2006 (MoHP, 2006). A regional level comparison place Nepal at the lower end in measures of human development. Nepal's key development and health indicators are presented in Table 1.

Table 1: Nepal's key development and health indicators

Indicators	Value	Year
Human Development Index (value) (138th)	0.527	2004
GNP per capita (US$)	252	2004
Population size (million)	26.6	2004
Population growth rate (%)	2.3	2004
Urban population (% of total)	15.3	2004
Percentage of population below national poverty line		
Total fertility rate (births per woman)*	3.1	2006
Contraceptive prevalence rate (%)*	44	2006
One-year-olds fully immunized against tuberculosis (%)	85	2004
Combined gross enrolment ratio for primary, secondary and tertiary schools	57	2004
Adult Literacy rate (% ages 15 and above)	48.6	2004
Mortality rate of under-fives (per 1000 live births)*	61	2006
Infant mortality rate (per 1,000 live births)*	48	2006
Maternal mortality ratio (per 100,000 live births)*	281	2000-2006
Prevalence of HIV/AIDS in age group 15-49 years (%)	0.5	2005
Health Expenditure		
- Public (% of GDP)	1.5	2003
- Private (% of GDP)	3.8	
- Per capita (PPP US$)	64	

Source: UNDP, 2006

*Note: * NDHS, 2006*

Background of the study

One of the major parts of the health services in a nation is a hospital. Hospitals are the major health care outlets both in developed as well as in developing countries of the world. Hospitals perform a range of functions such as provision of inpatient treatment services within various medical specialties, specialist and general outpatient care, medical and paramedical support services, and other support services like administration, cleaning, and so on (Mills 1990).

According to Walford and Grant (1998), building and running hospitals absorb a major share of health expenditure in any country. As demand for hospital care increases and the cost for service provision rises, it is essential to make more efficient use of the resources already devoted to hospitals. There are three main types of initiatives targeted towards improving hospital efficiency. Firstly, making more efficient use of the resources available across the health system by reviewing the numbers of hospitals and their distribution and secondly by increasing hospital autonomy and giving managers clear responsibility for performance. Lastly, by introducing measures to make more efficient use of the available resources to the hospital sector will be helpful in running hospitals. Cutting down wastage and abuse in purchasing of supplies, using generic rather than branded drugs, improving procedures and rationalizing staff levels and mix to achieve more patient throughput relative to staff inputs are some of the examples of efficient use of resources available. These approaches are interrelated and are complementary to each other. As for example, greater hospital autonomy with clear responsibility and accountability means that hospital managers have incentives and opportunities to introduce efficiency improvement measures in their hospitals.

Since early 1980s, public sector hospitals around the world have come under the intense scrutiny in policy circles due to the bureaucratic complexities of these institutions, the heavy burden they impose on public funds, and the perceived difficulties in ensuring their efficient and effective functioning under the centralized government control. Govindaraj and Chawla (1996) further stated that one policy option, which has found particular favor with governments, is the granting of full autonomy to these public sector hospitals in running their operations. As a result, in many developed countries like Denmark, France and Singapore and in many developing countries like Ghana, Indonesia and Kenya, “hospital autonomy” has been proposed as an integral part of a broader health sector reform process.

In low-income countries, policy makers, planners, donors and development banks have largely ignored the hospital sector over the last twenty years. Hospitals were viewed as “disease palaces”, consuming disproportionate amounts of scarce resources, which could be spent more cost effectively on primary care. After the Alma Ata declaration on primary healthcare in 1978, most countries’ health plans began with statements such as “our priority is primary care”. Yet twenty years later, little real shift in resource allocation has taken place – indeed many countries have moved in the opposite direction. Despite this, many hospitals

are in no better shape. Some are grossly overcrowded and have inadequate drugs and supplies; others lie empty making little use of their capital and recurrent investment (Walford & Grant, 1998).

Walford and Grant (1998) further stated that public hospitals are now just beginning to receive attention from the authorities. This is mainly because policy makers and funding agencies have now realized that the poor people also need hospital care but they have become poorer as they have to pay for the hospital services. At the same time, there is much debate on whether hospitals should be run by the public sector or whether ownership and management of hospitals should be in the private sector. The evidence from higher income countries shows that if governments wish to control hospital costs and maximize equity of access, they should not leave hospital care to the private sector. However, this does not mean that the traditional public service system of owning and running hospitals is the only alternative. The focus is now on how to use public finance to buy (or commission) services for the public from a combination of autonomous, NGO and private hospitals.

In developing countries, user fee may represent an important source of revenue for hospitals, but they may also affect access, use and equity of the hospital services (Amone et al. 2005). Studies from Africa have shown that user fee represents an unfair mechanism of financing for health services because they exclude the poor and the sick. To mitigate this effect, flat rates and lower fees for the most vulnerable users were introduced to replace the fee-for-service system in some hospitals, depicting the possibility of a more equitable user fee system in hospitals (Amone et al. 2005; Osei et al. 2005). Although user charges are the major source of finance for many health care systems, traditional approaches to health care priority setting, such as cost-effectiveness analysis, usually assume there are no user charges and therefore may ignore important implications for equity and efficiency (Smith 2005).

Proponents of user fee in the health sector in low-income countries cite a number of often interrelated underlying principles, relating *inter alia* to cost recovery, improved equity and greater efficiency. On the other hand there are also groups of people who believe that user fee will decrease the service utilization rate if they will not be able to provide improved quality of care. It is also seen that people do not prefer to go to the government hospitals when service charge is more than what they have to pay to the private health care providers. Utilization of public health services in Cambodia is found low and authors believe that supply

side factors are significant determinants. Supply side factors mainly include lower salaries of service providers which may force them to look for additional income from other sectors and often irregular and insufficient operation budget to run service outlets. Hence, the Cambodian Ministry of Health (MoH) encourages user fee schemes at operational district level health service outlets (Jacobs and Price 2004).

During the past two decades user charges have come to play a significant role in the financing and delivery of publicly provided health services in many developing countries and transitional economies. It can be stated that introduction of user fee and increasing the charges of hospital services was mainly due to budget constraints to meet the increasing demand for health care and to minimize the role of states in health care delivery process. User charges have often been promoted as a way of rationalizing the use of care, mobilizing local additional sources within the health sectors, and thereby making the delivery of health services more efficient, equitable and financially sustainable (World Bank 1987).

The introduction of a comprehensive system of user fee in 1995 provided public health facilities in Vietnam, especially hospitals, with a growing source of revenue. By 1998 revenue from user fees accounted for 30% of public hospital income. (Sepehri et al. 2005). The case was different in a district of Burkina Faso where a study for three years observed the reduction of service utilization by 15% following the introduction of user fee (Ridde 2003).

An Ezyptian study of Gamhuria General Hospital has shown that 11% of total annual costs are attributable to overhead departments, of this, 27% for capital costs, 60% for personnel, and 13% for other recurrent costs. Twenty-six percent of total annual costs are attributable to intermediate service departments, of this, 32% are for capital costs, 40% are for personnel costs, and 28% are for other recurrent costs. Sixty-three percent of total costs are attributable to direct service departments, of these, 14% are for capital costs, 54% for personnel, and 32% are for other recurrent costs (Department of Planning/MoHP, 1997).

Regarding the Cost Recovery Rate (CRR), findings from a study of 41 hospitals in Georgia have shown that CRR of full costs for 14 hospitals was less than 70% and CRR of full costs minus capital consumption costs was less than 70% for 8 hospitals. Collected actual revenue accounted for 75.2% of hospitals' full costs. Mean CRR for the sample was 78.6±25.2%. The

hospitals operated with low efficiency, low occupancy rates (31%), and excessive staffing (1.5 physicians per occupied bed). They adopted salary equalization policies, which increased the share of fixed costs, perpetuated the oversupply of medical personnel, and yielded low pays. Hospitals charged in excess of their officially accounted costs but, and due to the low collection rates, cost recovery rates were below the officially accounted costs which was 87.6% (Jorbenadze et al. 1999).

Another study of cost recovery of public hospitals in Indonesia demonstrated the failure of the policy objective of generating additional revenue to subsidize the care of poorer patients. This was mainly because more than 50% of thus generated revenue was used as staff incentives, specially for doctors. Hence cost recovery was found very low in those hospitals (Suwandono et al. 2001).

A case study was conducted by Meuwissen (2002) in Niger regarding the problems of implementation of a cost recovery system in district health care. This system had introduced a fixed user fee to seek services from public hospitals. However, it did not meet its objective to improve the quality and accessibility of health care services in a sustainable way. Many patients stopped coming and there was a fear that the revolving fund will be depleted in a few years time.

Initial results from Mauritania after the introduction of cost recovery system, however, are largely positive regarding the improvement of the health care. They suggest that users are globally willing to pay when the quality of health care improves. That study also suggested that cost recovery has probably had no major negative results as far as equity is concerned (Audibert & Mathonnat, 2000).

The history of organization of health system in Nepal is not new. It has a long history of traditional medical practice with faith healer, naturopathy, yoga, Ayurveda and homeopathy, which were playing a dominant role in the provision of health care in the past. Allopathy was introduced in Nepal with the emergence of missionaries during Malla regime. During Rana regime, there were few dispensaries for the curative health care which were mainly used for Rana family members. Establishment of Bir Hospital in 1990 AD was the first step towards the beginning of a gradual growth of modern medicine in Nepal. In mid 1950s, preparation of a five year development plan was initiated in which the health plan emphasized on

institutionalization of curative health services. Concept of preventive health care began with establishment of Vector Borne Disease Control Unit in Dang in 1951 to control Malaria where as promotive health care was institutionalized by establishing the Health Education Section in 1961 under the Department of Health Services. Although the formulation, development and implementation of the health policy were shaped in five year development plans, the health services efforts remain deficient. Therefore, to develop health system to meet the basic health needs of the people at sustainable level, a long term health plan (1975-1990) was first formulated in 1975 with a calendar of operations for the 5th, 6th and 7th five year plans. That long term health plan emphasized on the provision of comprehensive basic health services to the majority of the rural population of the country.

The restoration of multi-party democracy system established the new National Health Policy (NHP) in 1991 with a framework to guide health sector development to upgrade the health standard of the people by strengthening the primary health care system making effective health care services readily available at the local level. (HEIC Program in Nepal-NHEICC)

After the completion of the 1st long term health plan, the Government of Nepal (GON), MoHP felt the need of having a perspective health plan for the next 20 years and as a consequence a Second Long Term Health Plan (1997 – 2017) was developed. This second long term health plan is based on the National Health Policy 1991and it aims to guide health sector development in response to the changing trends in the society in order to improve the health status of the population particularly of the most vulnerable groups, women and children, the rural population, the poor and the under privileged and the marginalized people. The main ‘instrument; of the second long term health plan is the " Essential Health Care Package” which includes priority public health measures and basic curative care based on the principles of primary health care approach, economic efficiency and equity (HMG/MoH, 1997).

Health services are organized in different ways in different parts of the world and mostly they follow the primary health care model for the provision of services as proposed by the World Health Organization (WHO). For example, the organization of health services in Ghana, a West African country, more or less mimics its administrative structure. The country's health services are organized at the following levels.

It starts form a community level where the health services are mainly delivered through outreach programmes, herbalists, TBAs and retail drug peddlers. Basic curative services are provided through sub district level. This level also deals with other components of primary health care such as disease prevention and maternal and child health services. A district hospital provides support to sub-district level health centres in disease prevention and control, health promotion, public health education, referral, outpatient and inpatient care, training, supervision of health centers, maternity services, especially the management of complications and family planning services including emergency contraceptives.

A regional hospital lies above the district hospital in hierarchical order which provides specialized clinical and diagnostic care, management of high-risk pregnancies and complications of pregnancy, technical and logistical back up for epidemiological surveillance and research and training. Tertiary level is at the apex of the referral system which provides specialized services, undertakes research and also functions as educational institution. Finally the national level is responsible for the development of national health policy and for providing strategic directions for service delivery. National level is also involved in coordinating among various stakeholders and monitoring the ongoing programmes (Osei et al. 2005).

The organization of health services of Nepal is also on the ground of principles of primary health care. From an institutional point of view a Sub Health Post (SHP) is the first place of contact for the service provider and consumer for basic health services. However in reality, the SHP also functions as a referral centre of the volunteer cadres like Traditional Birth Attendants (TBAs) and Female Community Health Volunteers (FCHVs) as well as other outreach activities like PHC outreach clinics and EPI clinics. At each level above the SHP, there are referral points in a network which are Health Post (HP), Primary Health Care Centre (PHCC), district hospital, zonal hospital, regional hospital and central hospital in hierarchical order respectively. This referral hierarchy has been designed to ensure that the majority of population receives public health and minor treatment in places accessible to them and at price they can afford. Inversely, the system works as a supporting mechanism for lower levels by providing logistical, financial, supervisory, and technical support from the centre to the periphery (DoHS-2003/2004).

In today's context, the health care system of Nepal is composed of public and private sectors. The public sector comprises 14769 Primary Health Care Out-Reach Clinics (PHC/ORC), 3129 SHPs, 698 HPs, 188 PHCCs, 62 district hospitals, 11 zonal hospitals, 1 regional hospital and about 5 central level hospitals. The private health sector includes licensed pharmacies, nursing homes and hospitals, poly clinics, private clinics as well as unlicensed providers. PHC/ORCs are the extension of HPs and SHPs at the ward level of a Village Development Committee (VDC). These outreach clinics run in a pre arranged place and are managed by VHWs, MCHW, and ANMs as per the availability of the staff in the health institution. There is a provision of three to five PHC/ORC in a VDC which run in a predetermined day once per month to provide basic PHC services such as family planning, ante natal care services, health education and treatment of minor illnesses (DoHS-2003/2004).

SHPs, HPs and PHCCs provide preventive, promotive and curative health services in an integrated way. District hospitals provide outdoor services, in-door services, family planning, maternal and child health services along with emergency services. Zonal hospitals provide specialty services relating to pediatrics, gynecology, general surgery, general medicine, eye, ENT and dental surgery, etc in addition to the services that are being provided through district hospitals. In regional hospitals dermatology, orthopedics, and psychiatry services are also added besides those available at zonal hospitals (HMG/MoH, 1991).

Hospital autonomy and decentralized hospital services have been promoted as means to improved health services and sustainability in the country. Recent policy documents of government, viz. The Second Long Term Health Plan, Tenth Plan, Mediun Term Strategic Plan (MTSP) along with Medium Term Expenditure Framework (MTEF) have highlighted topics that are important for hospital autonomy and decentralized hospital services in Nepal. These include decentralized health management system, need for improved equity and access for the poor, need for a functional referral system, alternative financing mechanisms, provision of essential health care services, and public private partnership (Knuuttila et al. 2003).

Currently, provision of equitable access to health to attain an acceptable level of health and better quality of life by creating more equitable distribution of resources is the dominant concern of Nepal. In accordance with this, at the policy level, efforts are underway to reform

the national health system. For this, several analytical works were undertaken in the health sector and most of them concluded that the MoH should focus on and deal with those health problems which are disproportionately and maximally contributing to the highest level of mortality and burden of diseases. All these reviews and studies indicated the need for development of a coherent strategy on the health sector where all interested can assist to contribute to better health outcomes. Hence, the strategy document "Health Sector Strategy – An Agenda for Reform" was developed, which draws on several health sector documents like NHP, SLTHP, MTEF, MTSP, Tenth plan etc. The health sector strategy focuses in particular on how the health sector will make its contribution in poverty reduction and improving health outcomes for the poor and those living in remote areas (HMG/MoH, 2004).

Health care system of Nepal is in tremendous pressure because of the triple burden caused by increasing demand of services for communicable diseases, increasing non-communicable diseases, and poverty. This problem is further aggravated by a decade long ongoing conflict and social unrest in the country, making the use of existing health services poor and hard to access. The demand of quality health services with increased number of hospitals and hospital beds is being seriously challenged by the lack of adequacy and mobilization of resources. The government has found difficulties in ensuring the equitable access of hospital services in fair manner to the people. Resource generation and resource management are the major concern for making these services available and accessible to the general people. Albeit, in general health care policies, government has come up with few options of alternative approaches of health care service provisions and resource generation like using user charges, public private-partnerships, community participation in and through health sector reform strategies, practice of such options has been limited by the absence of autonomy of decentralized decision making space by the hospitals. The stakeholders of hospitals in Nepal are primarily supposed to ensure services provision, however, relatively few space is allowed to decide the scope of the hospital services.

Rationale of the study

Different levels of public hospitals represent important health care outlets in Nepalese context. At the same time, the government of Nepal is going to handover its all health care facilities to local bodies by making them more autonomous through health care reform

strategies. However, there is very little understanding from evidence whether these health institutions will be able to stand autonomously. Virtually, no or very less information is available regarding the efficiency status as well as the cost recovery status of public hospitals in Nepal. Thus the current study focused to understand the status of public hospitals in resource generation and mobilization, efficiency of hospitals (allocative efficiency), accessibility of hospital services to people, feasibilities of hospitals for autonomy, and possible options for remedying the access barriers for improved access to hospital services, and financially sustained institution.

Objectives of the study

The study aims to achieve the following objectives:

1) to assess incomes and expenditures of hospitals by resources;
2) to assess the allocation of resources between hospital department and units (different cost centres);
3) to determine the cost recovery rate of the hospitals;
4) to assess the allocative efficiency and criteria of resource allocation of hospital development boards;
5) to determine the levels of user charges in the hospitals; and
6) to assess the extent of autonomy of hospital development boards regarding resource management

Limitations of the study

Albeit, considering the urgency of the study for its immediate policy implications, the study could not remain free from few limitations that may minimize the implications of getting this research into practice. This study encountered following limitations:

Capital cost items

Although the study, initially, was aimed to estimate the efficiency and cost recovery status of hospitals by measuring revenues and expenditures in totality, this study could not reflect

these estimations in total. In most of the public hospitals, a large number of capital cost items (building, land, equipments, furniture, vehicles, etc.) are found not properly recorded, and more than that, purchasing price, installation price, purchasing year, useful life years are not available. Also, many capital items in public hospitals are received in kinds and donations. The price and costs parameters of these items are not properly known to the hospitals. The current study team recorded, at least, thousands of such capital items from study hospitals, and tried to estimate the replacement price from market. However, because of various models and unavailability of purchasing years of these items, this study could not estimate expenditure incurred in these items. Thus the scope of this is narrowed since the findings such as recovery rates do not truly represents the recovery status of hospital in true. Findings of this study, particularly the expenditures, and its cost recovery status, are to be read and use cautiously. There is huge possibility of underestimating the expenditures and thus cost recovery status in the results of this study, since these estimates are calculated excluding capital items incurred in the hospitals. However, the recurrent cost recovery ratios give the functions of hospital expenditures for its operation and thus recurrent cost recovery.

Time factor

The study is definitely an ambitious one in relation to time availability. The study team felt that the duration of four months allocated for this study was not sufficient for carrying out a multi-level study covering nationwide representation of public hospitals. Considering the unavailability of necessary data and difficulty in processing, such studies could have done better if it is focused on few hospitals and relatively for adequate time to collect all the necessary data.

The field work of the study was coincidence with the period of People Movement part two. This has engulfed almost a month time, and the people trained for this job were about to leave the team (one field officers left the team in between), and the entire field work was done in rush. Due to limited access (particularly of time), the required number of interactions (e.g. FGD) with the key stakeholders of hospital in wider perspective could not be carried out as planned.

Quality of data

Unavailability of data at potential sources, incompleteness of data to be recorded, and talking longer time to generate data are the major issues limiting the quality of the information

generated from this research. For example, most of the hospitals did not have and/or did not provide data regarding capital items and its expenditures (purchasing price, installation price, purchasing year, useful life years,). Similarly, the study team experienced reluctance among the personnel in hospitals in providing financial information.

In spite of the above-mentioned limitations, the study was completed. It is hoped that the outcome of the study will serve the underlying purpose.

2. Methodology

Study design and sampling

Both quantitative and qualitative research methods were used to complete this study. Cross-sectional descriptive survey was designed for quantitative aspect, while the qualitative techniques for in-depth understanding of the issues were designed based on the grounded theory approach.

Step-down approach of costing hospitals

Although the estimation of unit cost is context specific and reliant on available data, this study used a common technique of calculating unit cost, namely Step Down Cost Accounting (SDCA) which is a relatively simple and practical approach to costing health care facilities (Conteh & Walker 2004). Step down method is used to distribute costs into three major costs centres: overhead, intermediate and final service departments. This method of costing hospitals has been widely used in many studies such as in cost analysis and efficiency indicators study in EI Gamhuria General Hospital (Dept. of Planning/MoH, 1997).

Sampling

Convenient sampling method was used to select hospitals for this study to fulfill certain criteria. This included representation of different levels, development and ecological regions of Nepal, availability of relevant documents, variety of services components – specialization of hospitals by service components, willingness to support the study and use of its results for policy changes. Random selections of hospitals were made from each stratum after convenient stratification of different types of hospitals (central through district levels).

Data were collected from 16 different hospitals which included 3 central level hospitals, 1 regional level hospital, 3 zonal level hospitals and 9 district level hospitals. Patient interview were taken from 367 patients including both in- and out-patients. Focus group discussions

were conducted in 6 different hospitals whereas in-depth interviews were conducted with 23 persons of different hospitals.

Data collection techniques and tools

Quantitative techniques

Services and financial records and reports of different hospitals were reviewed for the collection of quantitative information for this study. Annual and financial reports and service statistics of fiscal years 2000/01 to 2002/03, logbooks from different departments and units, accountants' book, planning, budgeting and other financial documents, including agreements with other agencies and price list for drugs and other services gave quantitative data required for the study. Information collection checklist was used to collect those data.

Another source for the quantitative information was patient survey. Since the study aimed to offer a pool for a more focused and rational structure and management of user fees in hospitals, ideas and strengths of users were equally important. Hence, service users were interviewed with semi-structured interview guidelines by local surveyors in local languages.

Qualitative techniques

To generate qualitative information, Focus group discussion (FGD) and in-depth interview (IDI) were used as tools. FGDs were conducted with stakeholders of hospitals and in-depth interviews were conducted with Chairpersons of hospital development boards, medical director/medical superintendents, hospital administrators, other staffs and in-charge of departments/units. In-depth interviews acquired deeper understanding of hospital service utilization, existing hindrances, possible options for remedying the access barriers to hospital services, making the hospital financially sustained institute to provide quality services in a fair and equitable manner. In BP Memorial Cancer Hospital, Rasuwa and Baglung district hospital both in-depths interviews and FGDs were conducted whereas in other hospitals either in-depth interviews or FGDs were conducted.

Pre-testing

All tools administered in this study – observation record sheets, semi-structured interview guidelines, FGD guidelines, and in-depth interview guidelines – were pre-tested for both technical and administrative managerial aspects by the researchers and necessary amendments were made.

Data management and analysis

Quantitative data generated through survey were edited, coded and entered into a database developed on MS Excel, EPI Info 6.04d, and analyzed in SPSS 13.0 for windows. Descriptive analysis in terms of frequency, mean, median and standard deviation were carried out in key quantitative variables. The findings of the study are presented in the tables, figures and graphs in the report.

Qualitative information obtained from in-depth interviews and focus group discussions were transcribed and managed manually using free listing and pile sorting techniques and then categorized into different themes based on grounded theory approach. Each categories of information were coded, and many similar categories were merged into few major categories by inductive methods. These categories were analyzed based on the principle of grounded theory shaping the data into major categories of information through content analysis. This qualitative analysis is explained in the report and also presented in the form of narrative reflection.

3. Findings and Discussion

Background Information

Information needed for this study was collected from different sources. To generate quantitative data, information was collected from 16 different hospitals and 367 patients attending those hospitals. Qualitative data were gathered from 6 focus group discussions and 23 in-depth interviews.

General information of hospitals studied

Information collection checklist gave in-depth information about 16 different hospitals of Nepal. Different levels of hospitals were selected as sample hospitals for this study. There were 3 central level hospitals, 1 regional level hospital, 3 zonal level hospitals and 9 district level hospitals. Details of these hospitals are shown in Table No. 1. Among these hospitals Solu hospital and Mustang district hospital do not have road access to national road network of the country (Table 2).

Two of the central level hospitals studied are located in Kathmandu, the capital city of Nepal whereas BP Koirala memorial cancer hospital is out of the capital city. The three zonal level hospitals are situated in the terai region of Nepal. However, diversities of locations can be seen in district level hospitals. These district level hospitals are representing Himalayan region, hilly region and terai region.

Data collected for the three fiscal years 2057/58, 2058/59 and 2059/60 hereinafter will be used as 2001, 2002 and 2003 respectively.

Table 2: General information of hospitals

SN	Name of hospitals	District
A	***Central level***	
1	Bir Hospital	Kathmandu
2	BP Koirala Memorial Cancer Hospital	Chitwan
3	Sahid Gangalal National Heart Centre	Kathmandu
B	***Regional level***	
1	Western Regional Hospital	Kaski
C	***Zonal level***	
1	Bheri Zonal Hospital	Banke
2	Koshi Zonal Hospital	Morang
3	Mahakali Zonal Hospital	Kanchanpur
D	***District level***	
1	Baglung District Hospital	Baglung
2	Bardiya District Hospital	Bardiya
3	Bhim Hospital	Rupandehi
4	Dadeldhura District Hospital	Dadeldhura
5	Hetauda Hospital	Makwanpur
6	Illam Hospital	Illam
7	Mustang Hospital	Mustang
8	Rasuwa District Hospital	Rasuwa
9	Solu Hospital	Solukhumbu

General information of patients interviewed

Patient survey was conducted among 367 patients visiting different health institutions being studied. However, due the missing information of different questions, total may not be always 367 in each and every case.

Among the respondents, more than 50% were taken from district level hospital. Only 7% of the respondents were interviewed form regional level hospital. Categorization of respondents into different age group showed that around 45% were between the age of 25 to 49, about 18% were less than 14 years and 14% were 50 years or older. Number of male exceeded the

number of female respondents as females represented about 45% of the total respondents (Table 3).

Table 3: General characteristics of respondents in the survey

Particulars	Frequency	Percent
Hospitals		
• Central level hospitals	73	19.9
• Regional level hospitals	26	7.1
• Zonal level hospitals	74	20.2
• District level hospitals	193	52.7
Total	366	100.0
Age (years)		
• ≤ 14	67	18.4
• 15-24	95	26.1
• 25-49	152	41.8
• ≥ 50	50	13.7
Total	364	100.0
Sex		
• Male	198	54.4
• Female	166	45.6
Total	364	100.0
Education		
• Illiterate	112	31.2
• Primary (1-5)	46	12.8
• Secondary (6-10)	160	44.6
• Higher education	41	11.4
Total	359	100.0
Religion		
• Hindu	292	81.6
• Buddhist	55	15.4
• Muslim	4	1.1
• Christian	3	0.8
• Other	4	1.1
Total	358	100.0

Source: Field Survey, 2006

Majority of the respondents were found to be Hindus followed by Buddhists, Muslims, Christians and others. On an average there were 6 members in a family of a respondent.

General information of respondents of qualitative study

Qualitative information was collected through six focus group discussions and twenty three in-depth interviews.

Focus group discussions were conducted in six different levels of hospitals situated in different ecological regions. Among these hospitals, one is central level hospital, another zonal level hospital and the other six are district level hospitals.

Incomes and Expenditure of Hospitals

Income sources

The central government was the major source of regular budget for all levels of hospitals. Hospitals like Dadeldhura district hospital and Ilam hospital have also received some fund from the local government in the year 2003. Information on the situation of local government support in other hospitals was not available. Hospital services were found to be the major source of income for the hospitals at all levels. Registration fees, fees collected from OPD and IPD, laboratory and radiology were some of the major services which contributed to the income of hospitals. Those hospitals which were located in market area also had a regular source of income from the rent of shopping complexes that were built by the hospitals. Among the total sampled hospitals, Koshi zonal hospital, Mahakali zonal hospital, Bhim hospital, Dadeldhura, Mustang, Rasuwa and Solu district hospital did not have income from rent. Hospitals like Western regional hospital were adding its source of income by providing vehicle parking facilities in their territory.

Table 10 shows the total income and expenditure of the 16 different hospitals for 2003 as information for some years was not available for some hospitals. Expenditures represent only recurrent costs as expenditure on capital items is not included. Information on income and expenditure for 2001 and 2002 for Bir hospital, 2001 for western regional hospital was not available. Similarly expenditure of 2001 for Bheri zonal hospital and income and expenditure of 2001 for Rasuwa district hospital were also missing.

Table 4: Income sources for different levels of hospitals, 2003 (Amount in *NRs.)

Sources for hospital resources*	Central hospital		Regional hospital		Zonal hospital		District hospital	
	Amount	%	Amount	%	Amount	%	Amount	%
Government								
Central	*233,964,212*	*51*	*NA*		*22,038,715*	*62*	*10,444,290*	*63.6*
Local	-	*0*	-	*0*	-	*0*	*250,000*	*1.5*
OPD fees	58,429,542	13	2,315,610	7.1	315,210	0.9	807,666	4.9
Indoor fees	8,719,563	1.9	9,381,512	29	1,144,485	3.2	388,179	2.4
Laboratory services	15,811,006	3.4	3,495,965	11	1,473,173	4.1	480,193	2.9
Radiology	34,028,069	7.4	6,005,268	18	2,075,320	5.8	1,048,507	6.4
Other hospital income	48,493,111	11	663,757	2	242,983	0.7	85,980	0.5
Medico-legal cases	775,000	0.2	NA		45,200	0.1	6,750	0
Gyane and obs	54,584	0	NA		613,916	1.7	379,150	2.3
Dental	-	0	650,214	2	73,175	0.2	20,350	0.1
Surgery	4,266,515	0.9	4,498,413	14	1,224,683	3.4	485,499	3
Drug	-		-		2,555,000	7.1	700,000	4.3
OJT	1,962,200	0.4	-		1,695,500	4.7	56,033	0.3
Shopping complex (rent)	23,990,155	5.2	4,734,970	15	1,070,680	3	396,317	2.4
Donation	-		81,617	0.2	-		144,251	0.9
Others	30,651,211	6.6	870,983	2.7	1,211,264	3.4	716,878	4.4
Total	**461,145,167**	**100**	**32,698,309**	**100**	**35,779,304**	**100**	**16,410,042**	**100**

Source: Field Survey, 2006

Table 4 shows that the major source of income for all level of hospitals is fund from central government in increasing proportion from central hospital (50.7%) to district hospitals (63.6%), however the figure for regional level hospital was not available. Other major sources of income are OPD fees, radiology, shopping complex rent and laboratory services. Only less than 40% of the total resources are raised from hospital services and contribution from local government is almost zero except a negligible proportion in case of district hospital. Only zonal and district hospital have income from sales of drug. Regional hospital had no income from OJT.

Contribution of OPD charges is highest in the central level hospitals and that of in-door charges in case of regional hospitals. Contribution from those sources in other hospitals is very less. Though very negligible (less than 1%), regional and district hospitals have 'donation' as an income source.

Hence, the major sources of hospital income were government allocated budget, user fee, donation from individuals as well as organizations, pharmacy, shopping complex rent , canteen, health tax fund, OJT, ambulance etc. But in remote areas like Dadeldhura and others there were no income from rent of shopping complex and pharmacy.

Table 5: Contribution of different income sources on hospital income from the year 2001, 2002 and 2003

Income sources	% Contribution of different income sources in hospitals (in nearest whole number)											
	Central			Regional			Zonal			District		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Government of which:												
Central	88	53	51	0	37	0	30	35	62	75	70	64
Local	0	0	0	0	0	0	0	0	0	0	0	2
OPD fees	0	2	13	0	6	7	2	2	1	6	4	5
Indoor fees	0	0	2	0	20	29	6	2	3	1	2	2
Laboratory services	0	5	3	0	1	11	7	3	4	3	3	3
Radiology	0	8	7	0	12	18	14	12	6	4	4	6
Other hospital income	5	16	11	0	1	2	3	2	1	0	2	1
Medico-legal cases	0	0	0	0	0	0	0	0	0	0	0	0
Gyane & Obs	0	0	0	0	0	0	3	3	2	1	1	2
Dental	0	0	0	0	0	2	0	0	0	0	0	0
Surgery	0	2	1	0	11	14	6	6	3	1	1	3
Drug	0	0	0	0	0	0	12	15	7	2	4	4
OJT	0	0	0	0	0	0	11	10	5	0	0	0
Shopping complex (rent)	0	3	5	0	11	14	4	9	3	2	5	2
Donation	0	0	0	0	0	0	0	0	0	0	1	1
Others	6	12	7	0	1	3	2	2	3	3	3	4
Total	**100**	**100**	**100**	**0**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Field Survey, 2006

Though income from government is the major source of income for all hospitals except regional hospital, proportion of government contribution to hospital income is in decreasing trend in central hospital (from 88% in 2001 to 51% in 2003), regional (from 37% in 2002 to 0% in 2003) and district hospitals (from 75% in 2001 to 64% in 2003). However, in case of zonal hospital it has been increased from 30% in 2001 to 62% in 2003. Alternatively, contribution from OPD fees, indoor fees, radiology, surgery and rent of shopping complex has increased in central hospitals. In regional hospital proportion of indoor fees, laboratory services, radiology, dental, surgery, rent of shopping complex and other sources is increasing. In zonal hospitals proportion of all of other than government income sources are in decreasing trend.

In-depth interview respondents considered government allocated budget, user charges and rent as main sources of income for the hospital. The hospital was also getting income from On the Job Training (OJT) students as an OJT charge and even form donation from different I/NGOs and individuals. This was rightly justified by one the participants who said:

"Even hospital staff also donates money and food from time to time".

Although the hospital has number of sources of income, FGD participants considered insufficient budget as an existing hindrance in the smooth delivery of the services. Filling all vacant posts, providing training to the existing human resource, strengthening hospital facilities and utilizing hospital land for productive work were some of the opinions given by the participants when asked for their view on making hospital financially sustainable. Increased community participation including increased DDC and municipality support were also identified by the participants as additional means of financial sustainability. Interestingly, donor support was also considered one of the ways to achieve financial stability. Increasing user fee was also considered appropriate in order to be financially sustainable.

According to the discussions made in FGDs in district level hospital, main sources of income of district hospitals were the government source, user fees and sometimes donations and support form other government and non government organizations. However, the budget allocated by the government was not considered enough to run the hospital efficiently. These hospitals did not have financial resources to conduct mobile and outreach camps instead hospitals support these types of outreach and mobile camps organized by other organizations by providing them technical staffs. Sometimes mobile health camps are planned by the ministry and district hospital provides logistic support as per their capacity.

Resource Allocation to Hospital Departments/Cost Centers

Expenditure by different cost centers

Table 6 depicts that the direct expenses are increased with decreasing level of hospital. The central level hospitals have only 7.6% expenditure as direct expense and 90.4% in indirect expenses. The reason behind are unavailability of data in the required format from the Bir Hospital and Sahid Gangalal National Heart Center.

As there was no detail expenditure data available for the zonal hospitals, the cost center-wise allocation is not shown in Table 7. The major proportion of expenditure during 2003 in central and regional hospitals were found to incur for administration, however it was very less (only 15%) in the district hospitals. However, expenses in personnel (salary, training and development and allowances) was higher in the regional and district hospital (45% and 73% respectively during 2003) than that of central hospital (only 15%). Expenses in repair and maintenance is higher in central hospitals, however it is sharply decreasing from 47 to 25 to 9% in year 2001, 2002 and 2003 respectively. Expenditure in drugs is decreasing with decrease in level of hospitals being 30% in central, 11% in regional and only 4% in district level hospitals during year 2003. Hence, the major cost centers to analyze for making hospital operation more efficient are the aspects related to administration, personnel management and drugs purchase, inventory management and supply.

To have estimates of hospital expenditures by sources (as one of the three characters of National Health Accounts; the other two are: expenditure by providers and expenditure by functions) and thus analysis per the standard, it needs to have a detail study based on the national health accounts (NHA) [1] framework. The current study is focus mere on the hospital source of income and expenditures.

Staffing pattern and expenditure incurred

The percentage distribution of different categories of staff at different levels of hospitals is shown in Table 8. Due to lack of enough information, staff distribution at the central and regional level hospital could not be explored in detail. The percentage of doctors and nurses was found higher in Koshi zonal hospital as compared to other zonal hospital whereas the percentage of administrative staff was greater in Mahakali zonal hospital in all the years taken for this study. Allocation of other paramedics was more or less similar in all zonal hospitals. The percentage of doctors and nurses among the total staff at district level hospitals was ranged from 27% to 40%. The proportion of administrative staff was higher in most of the district hospitals along with the zonal hospitals.

[1] Nepal National Health Accounts (NNHA) 2001 – 2003 is available, now, at Ministry of Health and Populations, Health Economics and Financing Unit. This is the first of its kind of study the country every have. This NNHA provides any health expenditure by its source of funding, providers of health care, and functions.

Table 6: Total hospital expenditures by cost centres (in NRs.)*

SN	Name of Hospital	Cost Centers											
		2001				2002				2003			
		Total	Indirect	Intermediate	Direct	Total	Indirect	Intermediate	Direct	Total	Indirect	Intermediate	Direct
	Central Hospitals	**240,598,337.7**	**53.1**	**10.0**	**36.9**	**194,371,693.4**	**46.9**	**11.5**	**41.6**	**464,528,144.2**	**40.5**	**12.3**	**47.2**
1	Bir Hospital	NA	NA	NA	NA	NA	NA	NA	NA	195,344,479.0	100	0.0	0.0
2	BP Koirala Memorial Cancer Hospital	95,003,028.3	53.1	10.0	36.9	70,331,349.7	46.9	11.5	41.6	74,638,033.3	40.5	12.3	47.2
3	Sahid Gangalal National Heart Centre	145,595,309.4	100.0	0.0	0.0	124,040,343.8	100.0	0.0	0.0	194,545,631.9	100.0	0.0	0.0
	Regional Hospitals	**NA**	**NA**	**NA**	**NA**	**37,433,688.5**	**26.2**	**8.1**	**65.7**	**23,810,899.9**	**78.8**	**12.5**	**8.7**
4	Western Regional Hospital	NA	NA	NA	NA	37,433,688.5	26.2	8.1	65.7	23,810,899.9	78.8	12.5	8.7
	Zonal Hospital of which:	**147,069,124.6**	**33.0**	**5.6**	**61.5**	**66,170,814.1**	**45.5**	**14.1**	**40.4**	**59,327,041.4**	**48.9**	**16.8**	**34.4**
5	Bheri Zonal Hospital	NA	NA	NA	NA	27,446,096.2	50.0	7.7	42.3	12,710,000.0	62.1	8.9	28.9
6	Koshi Zonal Hospital	141,531,909.5	32.1	4.9	63.0	31,640,343.6	39.4	18.4	42.2	37,192,753.5	40.4	19.8	39.8
7	Mahakali Zonal Hospital	5,537,215.1	56.6	22.6	20.9	7,084,374.3	55.8	19.6	24.6	9,424,287.8	64.3	15.4	20.3
	District Hospitals	**14,864,361.7**	**51.7**	**13.3**	**35.1**	**24,105,677.2**	**43.3**	**12.2**	**44.5**	**21,415,328.4**	**48.9**	**12.0**	**39.1**
8	Baglung District Hospital	3,230,411.0	54.7	11.4	33.9	3,753,810.6	51.0	9.8	39.2	808,783.0	59.1	11.5	29.4
9	Bardiya District Hospital	3,068,301.2	57.6	12.2	30.2	2,955,868.0	55.1	10.0	35.0	3,130,175.3	56.6	9.6	33.8
10	Bhim Hospital	2,230,000.0	42.6	17.8	39.6	3,105,539.5	24.6	8.5	67.0	3,013,664.6	37.5	11.9	50.6
11	Dadeldhura District Hospital	1,977,515.9	49.7	10.6	39.7	1,933,500.0	48.2	10.8	41.0	1,967,872.7	47.4	10.4	42.1
12	Hetauda Hospital	1,653,425.4	50.6	6.7	42.7	5,241,045.0	39.8	7.6	52.6	5,786,724.6	58.1	7.5	34.4
13	Ilam Hospital	850,574.8	74.5	7.5	17.9	2,979,031.7	61.6	8.3	30.1	3,048,389.7	54.1	11.5	34.3
14	Mustang Hospital	1,706,984.1	34.8	26.4	38.8	1,998,258.6	21.3	31.0	47.7	1,754,806.1	22.0	28.9	49.1
15	Rasuwa District Hospital	-	0.0	0.0	0.0	1,651,000.0	36.0	21.6	42.4	1,677,000.0	36.7	18.0	45.3
16	Solu Hospital	147,149.3	100	0.0	0.0	487,623.9	52.1	36.3	11.5	227,912.5	65.9	9.3	24.8

Source: Field Survey, 2006

*All cells showing 100% indicates that the information on different categories of staff are not available for those hospitals. Hence, average is calculated excluding those figures.

Table 7: Proportion of expenditure out of total expenditure in different levels of hospitals (in nearest whole number)

Expenditure category	Proportion of expenditure under different headings in different levels of hospitals (in nearest whole number)								
	Central			Regional			District		
	2001	2002	2003	2001	2002	2003	2001	2002	2003
Preventive and promotive services	3	2	10	0	4	1	8	2	2
Administrative	32	54	36	0	17	36	10	9	15
Personnel	18	19	15	0	66	45	76	79	73
Repair and maintenance	47	25	9	0	3	5	0	0	1
Transport	0	0	0	0	0	1	0	0	0
Drugs	0	0	30	0	8	11	5	5	4
Medical supplies	0	0	0	0	0	0	1	0	0
Other supplies	0	0	0	0	0	0	0	0	0
Furniture	0	0	0	0	1	1	0	0	0
Food	0	0	0	0	0	0	0	5	4
Total	**100**	**100**	**100**	**0**	**100**	**100**	**100**	**100**	**100**
Total in amount (NRs.)	**240,598,338**	**194,371,693**	**659,872,623**	**-**	**37,433,689**	**23,810,900**	**14,864,362**	**24,105,677**	**21,415,328**

Source: Field Survey, 2006

Table 8: Distribution of staff by category (%)

SN	Name of Hospital	2001				2002				2003			
		Number	Doctor & nurse	Other paramedic	Admin	Number	Doctor & nurse	Other paramedic	Admin	Number	Doctor & nurse	Other paramedic	Admin
1	Bir Hospital	NA	NA	NA	NA	NA	NA	NA	NA	910	46.1	11.4	41.9
2	BP Koirala Memorial Hospital	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3	Sahid Gangalal National Heart Centre	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4	Western Regional Hospital	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5	Bheri Zonal Hospital	155	34.8	14.8	50.3	155	34.8	14.8	50.3	157	34.4	14.7	51.0
6	Koshi Zonal Hospital	239	45.6	13.4	41.0	250	44.0	12.8	43.2	246	43.1	13.0	43.9
7	Mahakali Zonal Hospital	68	27.9	16.2	55.9	68	29.4	17.7	52.9	68	30.9	14.7	54.4
8	Baglung District Hospital	44	27.0	29.7	37.8	44	29.7	29.7	35.1	45	31.6	31.6	34.2
9	Bardiya District Hospital	29	27.6	20.7	51.7	25	28.0	20.0	52.0	28	25.0	17.9	57.1
10	Bhim Hospital	46	32.6	19.6	47.8	46	28.3	19.6	52.2	47	29.8	19.1	51.1
11	Dadeldhura District Hospital	20	30.0	20.0	50.0	21	28.6	23.8	47.6	22	31.8	22.7	45.5
12	Hetauda Hospital	52	36.6	24.4	39.0	58	34.0	25.5	34.0	58	38.3	23.4	34.0
13	Ilam District Hospital	24	29.2	20.8	50.0	24	29.2	20.8	50.0	24	29.2	20.8	50.0
14	Mustang Hospital	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
15	Rasuwa District Hospital	15	33.3	20.0	46.7	10	40.0	30.0	30.0	12	33.3	25.0	41.7
16	Solu Hospital	20	35.0	20.0	45.0	20	40.0	15.0	45.0	14	36.8	15.8	47.4

Source: Field Survey, 2006

Table 9: Total expenditure on staff by types of hospital (in NRs. and %)

SN	Name of Hospital	2001				2002				2003			
		Amount	Doctor & nurse (%)	Other paramedic	Administration	Amount	Doctor & nurse	Other paramedic	Administration	Amount	Doctor & nurse	Other paramedic	Administration
1	Bir Hospital	NA	NA	NA	NA	NA	NA	NA	NA	195,344,479.0	46.07	11.43	41.87
2	BP Koirala Memorial Hospital	95,003,028.3	NA	NA	NA	70,331,349.7	NA	NA	NA	74,638,033.3	NA	NA	NA
3	Sahid Gangalal National Heart Centre	145,595,309.4	NA	NA	NA	124,040,343.8	NA	NA	NA	194,545,631.9	NA	NA	NA
4	Western Regional Hospital	NA	NA	NA	NA	37,433,688.5	NA	NA	NA	23,810,899.9	19.33	4.00	76.67
5	Bheri Zonal Hospital	-	NA	NA	NA	27,446,096.2	35.26	14.74	50.00	12,710,000.0	35.48	14.19	50.32
6	Koshi Zonal Hospital	141,531,909.5	61.72	8.59	29.69	31,640,343.6	58.87	8.51	32.62	37,192,753.5	57.66	8.76	33.58
7	Mahakali Zonal Hospital	5,537,215.1	19.67	24.59	55.74	7,084,374.3	26.23	19.67	54.10	9,424,287.8	27.87	16.39	55.74
8	Baglung District Hospital	3,230,411.0	41.86	11.63	46.51	3,753,810.6	41.86	11.63	46.51	808,783.0	36.59	17.07	46.34
9	Bardiya District Hospital	3,068,301.2	26.92	19.23	53.85	2,955,868.0	31.82	18.18	50.00	3,130,175.3	30.43	17.39	52.17
10	Bhim Hospital	2,230,000.0	40.00	20.00	40.00	3,105,539.5	50.00	25.00	25.00	3,013,664.6	36.36	24.24	39.39
11	Dadeldhura District Hospital	1,977,515.9	30.00	20.00	50.00	1,933,500.0	30.00	20.00	50.00	1,967,872.7	33.33	19.05	47.62
12	Hetauda Hospital	1,653,425.4	36.59	21.95	41.46	5,241,045.0	37.21	23.26	39.53	5,786,724.6	35.59	22.03	42.37
13	Ilam District Hospital	850,574.8	33.33	16.67	50.00	2,979,031.7	30.43	17.39	52.17	3,048,389.7	33.33	16.67	50.00
14	Mustang Hospital	1,706,984.1	30.77	46.15	23.08	1,998,258.6	30.77	46.15	23.08	1,754,806.1	28.57	50.00	21.43
15	Rasuwa District Hospital	NA	NA	NA	NA	1,651,000.0	28.57	33.33	38.10	1,677,000.0	30.00	30.00	40.00
16	Solu Hospital	147,149.3	NA	NA	NA	487,623.9	37.84	18.92	43.24	227,912.5	35.00	20.00	45.00

Source: Field Survey, 2006

Lack of enough information made it difficult to explore the expenditure pattern on different categories of staff at central level hospitals. In Koshi zonal hospital the expenditure on doctors and nurses is higher as compared to administrative and other paramedics in all three years of study. The case in other zonal hospital is different as the total expenditure was found higher for administrative staff as compared to the expenditure on doctors and nurses. The scenario at district hospital was also found more or less similar to zonal hospitals other than Koshi zonal hospital. In most of the district hospitals, the total expenditure was higher among the administrative staff in comparison to other paramedics along with doctors and nurses. In most of the hospitals the expenditure on paramedical staff was found lower which was mostly due to the lower number of paramedical staff.

Cost Recovery Status

From Table 10, it is obvious that many of the hospitals have more expenditure than income like BPMCH, Shahid Gangalal, Bhim and Dadeldhura hospital in 2003. Except Shahid Gangalal, all rest of the hospitals had surpluses during either 2001 or 2002. It is observed that many hospitals are bearing their expenditure which is higher than income from their surpluses of last years and additional financing from government as reimbursement in the same year or increased budget in the next year. In total, the studied hospital had surplus during 2001 and 2003 and the total surplus of two years was around two times the deficit during 2002 and number of deficit hospitals was 4, 6 and 3 during 2001, 2002 and 2003 respectively.

Table 11 shows that the annual saving in total (total income over total expenditure) was in decreasing trend from 2001 to 2003 and was negative in total. The savings in central hospitals was highly fluctuating from year to year. Out of 12 hospitals studied, which had information available, only four district level hospitals, viz. Bardiya hospital, Bhim hospital, Hetauda hospital and Mustang hospital had increased level of surplus.

Findings from in-depth interview explore that many hospitals are not being able to cover its expenditure through their own income because most of the times they are needed to

cater free services to those people who cannot pay at all. This type of situation was mainly put forward by the respondents of the central and zonal level hospitals.

> One of the respondents explained the situation as
> *"Income is not enough for hospital expenditure because cancer is a very expensive disease in itself. Radiotherapy actually costs Rs 40,000 and we are charging only Rs 4,000 to a patient then how to recover cost."*

In few district hospitals' cost recovery status was found satisfactory as stated by participants of interview.

One of the participants of a district hospital gave a view:

> *"In financial terms we are neither at positive nor at negative balance but still we do have sufficient infrastructure and instruments."*

Table 10: Total income, expenditures and surplus/deficit by different levels of hospitals (in NRs.)

Name of hospitals	2001			2002			2003		
	Income	Expenditures	Surplus/deficit	Income	Expenditures	Surplus/deficit	Income	Expenditures	Surplus/deficit
Central level	**446,760,366**	**240,598,338**	**206,162,029**	**140,460,190**	**194,371,693**	**-53,911,503**	**461,145,167**	**464,528,144**	**-3,382,977**
Bir Hospital	NA	NA		NA	NA		259,027,937	195,344,479	**63,683,458**
BP Koirala Memorial Cancer Hospital	380,814,108	95,003,028	**285,811,080**	27,446,077	70,331,350	**-42,885,273**	34,101,369	74,638,033	**-40,536,664**
Sahid Gangalal Nayional Heart Centre	65,946,258	145,595,309	**-79,649,051**	113,014,113	124,040,344	**-11,026,231**	168,015,861	194,545,632	**-26,529,771**
Regional level	**NA**	**NA**		**42,035,791**	**37,433,689**	**4,602,103**	**32,698,309**	**23,810,900**	**8,887,409**
Western Regional Hospital	NA	NA		42,035,791	37,433,689	**4,602,103**	32,698,309	23,810,900	**8,887,409**
Zonal level	**34,583,056**	**147,069,125**	**-112,486,069**	**37,824,096**	**66,170,814**	**-28,346,718**	**74,713,662**	**59,327,041**	**15,386,621**
Bheri Zonal Hospital	6,973,472	-		7,015,933	27,446,096	**-20,430,163**	23,132,809	12,710,000	**10,422,809**
Koshi Zonal Hospital	17,616,929	141,531,910	**-123,914,980**	23,041,807	31,640,344	**-8,598,537**	41,489,358	37,192,754	**4,296,605**
Mahakali Zonal Hospital	9,992,654	5,537,215	**4,455,439**	7,766,356	7,084,374	**681,982**	10,091,495	9,424,288	**667,207**
District level	**23,276,278**	**14,864,362**	**8,411,916**	**33,357,388**	**24,105,677**	**9,251,711**	**29,059,663**	**21,415,328**	**7,644,335**
Baglung District Hospital	383,479	3,230,411	**-2,846,932**	1,487,350	3,753,811	**-2,266,461**	1,458,145	808,783	**649,362**
Bardiya District Hospital	5,675,422	3,068,301	**2,607,121**	5,507,881	2,955,868	**2,552,013**	5,816,237	3,130,175	**2,686,061**
Bhim hospital	1,357,379	2,230,000	**-872,621**	1,466,755	3,105,540	**-1,638,785**	1,851,834	3,013,665	**-1,161,831**
Dadeldhura District Hospital	4,438,400	1,977,516	**2,460,884**	4,476,528	1,933,500	**2,543,028**	1,106,232	1,967,873	**-861,641**
Hetauda Hospital	3,366,000	1,653,425	**1,712,575**	9,214,478	5,241,045	**3,973,433**	8,092,800	5,786,725	**2,306,075**
Ilam Hospital	3,985,165	850,575	**3,134,590**	4,740,800	2,979,032	**1,761,768**	5,192,965	3,048,390	**2,144,576**
Mustang Hospital	1,856,000	1,706,984	**149,016**	2,373,000	1,998,259	**374,741**	2,220,500	1,754,806	**465,694**
Rasuwa District Hospital	NA	NA		1,651,000	1,651,000	**0**	1,811,081	1,677,000	**134,081**
Solu Hospital	2,214,432	147,149	**2,067,283**	2,439,596	487,624	**1,951,972**	1,509,870	227,913	**1,281,957**
Total	**504,619,700**	**402,531,824**	**102,087,876**	**211,641,674**	**284,648,185**	**-73,006,511**	**564,918,493**	**545,270,514**	**19,647,979**

Source: Field Survey, 2006

Table 11: Changes in surplus/deficit of income over expenditure of hospitals taking 2001 as base year

SN	Name of Hospitals	Surplus/deficit			Changes in surplus/deficit (2001 as base year)	
		2001	2002	2003	2002	2003
	Central level	***206,162,029***	***-53,911,503***	***-3,382,977***	***-126.2***	***-101.6***
1	Bir Hospital			63,683,458	NA	NA
2	BP Koirala Memorial Cancer Hospital	285,811,080	-42,885,273	-40,536,664	-115.0	-114.2
3	Sahid Gangalal Nayional Heart Centre	-79,649,051	-11,026,231	-26,529,771	-86.2	-66.7
	Regional level		***4,602,103***	***8,887,409***	***NA***	***NA***
4	Western Regional Hospital		4,602,103	8,887,409	NA	NA
	Zonal level	***-112,486,069***	***-28,346,718***	***15,386,621***	***-74.8***	***-113.7***
5	Bheri Zonal Hospital		-20,430,163	10,422,809	NA	NA
6	Koshi Zonal Hospital	-123,914,980	-8,598,537	4,296,605	-93.1	-103.5
7	Mahakali Zonal Hospital	4,455,439	681,982	667,207	-84.7	-85.0
	District level	***8,411,916***	***9,251,711***	***7,644,335***	***10.0***	***-9.1***
8	Baglung District Hospital	-2,846,932	-2,266,461	649,362	-20.4	-122.8
9	Bardiya District Hospital	2,607,121	2,552,013	2,686,061	-2.1	3.0
10	Bhim hospital	-872,621	-1,638,785	-1,161,831	87.8	33.1
11	Dadeldhura District Hospital	2,460,884	2,543,028	-861,641	3.3	-135.0
12	Hetauda Hospital	1,712,575	3,973,433	2,306,075	132.0	34.7
13	Ilam Hospital	3,134,590	1,761,768	2,144,576	-43.8	-31.6
14	Mustang Hospital	149,016	374,741	465,694	151.5	212.5
15	Rasuwa District Hospital		0	134,081	NA	NA
16	Solu Hospital	2,067,283	1,951,972	1,281,957	-5.6	-38.0
	Total	***102,087,876***	***-73,006,511***	***19,647,979***	***-171.5***	***-80.8***

** NA: Not available*

Source: Field Survey, 2006

Recurrent cost recovery status

Cost recovery status is a useful indicator in assessing the financial situation of any organization. It shows whether an organization is sustaining on its own income or needs additional support each year to continue its services. Usually when the annual expenditure exceeds the annual revenue collection or income, it is reflected in the cost recovery rate. This also indicates that the institution cannot operate without any additional support from other concerned authorities. In the present context, caution should be taken while interpreting the cost recovery rates of different hospitals as they are the functions of recurrent costs only and do not incorporate costs for capital items. Thus the current study has estimate the recurrent cost recovery ratio only and talks about.

Among the central level hospitals, the cost recovery rate of Bir hospital for 2001 and 2002 was not available but the rate for 2003 revealed the fact that the hospital was financially sustainable. The status of cost recovery for other central level hospitals, however, was not found good. The value of cost recovery rate of less than one indicated that those hospitals expenditures were always exceeding the total income for the given year. Information was lacking for the two zonal hospitals so cost recovery status for those two hospitals could not be explored whereas Mahakali zonal hospital was showing continuous improvement towards achieving a satisfactory cost recovery rate.

Regarding district hospitals, the cost recovery rate was satisfactory except for Bhim hospital and Dadeldhura district hospital. The cost recovery rate of Dadeldhura district hospital for the year 2001 and 2002 was above one which later decreased to less than one in 2003. Among the sampled hospitals, the best cost recovery rate was found in Solu hospital.

Cost recovery rate of Bheri and Koshi zonal hospital and Baglung district hospital is increasing in good trend. It is worthy to study the measures taken to improve the situation in the hospitals like BPKMCH, Bhim and Dadeldhura district hospitals where recurrent cost recovery rate is poor.

Table 12: Recurrent cost recovery rates of hospitals (%)

SN	Name of hospitals	2001		2002		2003	
		%	NR	%	NR	%	NR
Central level hospital of which:		**185.7**	**1.9**	**72.3**	**0.7**	**99.3**	**1.0**
1	Bir Hospital	NA	NA	NA	NA	132.6	1.3
2	BP Koirala Memorial Cancer Hospital	400.8	4.0	39.0	0.4	45.7	0.5
3	Sahid Gangalal National Heart Center	45.3	0.5	91.1	0.9	86.4	0.9
Regional level hospital of which:		**NA**	**NA**	**112.3**	**1.1**	**137.3**	**1.4**
4	Western Regional Hospital	NA	NA	112.3	1.1	137.3	1.4
Zonal level hospital of which:		**23.5**	**0.2**	**57.2**	**0.6**	**125.9**	**1.3**
5	Bheri Zonal Hospital	NA	NA	25.6	0.3	182.0	1.8
6	Koshi Zonal Hospital	12.4	0.1	72.8	0.7	111.6	1.1
7	Mahakali Zonal Hospital	180.5	1.8	109.6	1.1	107.1	1.1
District level hospital of which:		**156.6**	**1.6**	**138.4**	**1.4**	**135.7**	**1.4**
8	Baglung District Hospital	11.9	0.1	39.6	0.4	180.3	1.8
9	Bardiya District Hospital	185.0	1.8	186.3	1.9	185.8	1.9

10	Bhim Hospital	60.9	0.6	47.2	0.5	61.4	0.6
11	Dadeldhura District Hospital	224.4	2.2	231.5	2.3	56.2	0.6
12	Hetauda Hospital	203.6	2.0	175.8	1.8	139.9	1.4
13	Ilam Hospital	468.5	4.7	159.1	1.6	170.4	1.7
14	Mustang Hospital	108.7	1.1	118.8	1.2	126.5	1.3
15	Rasuwa District Hospital	NA	NA	100.0	1.0	108.0	1.1
16	Solu Hospital	1,504.9	15.0	500.3	5.0	662.5	6.6

Source: Field Survey, 2006

NR = Net ratio (net recurrent cost recovery ratio)

Table 13 depicts that increasing OPD fees could be a better option compared to increasing indoor fees. Hospitals at regional and zonal level have better recurrent cost recovery ratios, where as hospitals that of central and district levels are of poor cost recovery status. Increasing 200% of OPD fees could gain recurrent cost recovery ratios both in central and district levels. However, this modeling is not the final answer for improving cost recovery status. This is limited as this estimate does not incur the capital cost expenditures of hospitals.

Table 13: Modeling recurrent cost recovery ratios with different OPD fees and Indoor fees by types of hospital based on the statistics of the study year 2003

	Hospitals			
	Central	**Regional**	**Zonal**	**District**
Recurrent cost recovery ratio (2003)	0.70	1.37	7.92	0.77
Modeling:				
A: Increased OPD fees by 20%	0.72	1.39	7.94	0.77
Increased OPD fees by 50%	0.74	1.42	7.96	0.79
Increased OPD fees by 100%	0.79	1.47	7.99	0.80
Increased OPD fees by 200%	0.88	1.57	8.06	0.84
Increased OPD fees by 500%	1.14	1.86	8.27	0.95
B: Increased Indoor fees by 20%	0.70	1.45	7.97	0.77
Increased Indoor fees by 50%	0.71	1.57	8.05	0.78
Increased Indoor fees by 100%	0.71	1.77	8.18	0.78
Increased Indoor fees by 200%	0.73	2.16	8.43	0.80
Increased Indoor fees by 500%	0.76	3.34	9.19	0.86

Source: Field Survey, 2006

Criteria of Resources Allocation and Allocative Efficiency

Most of the interviewees had a view that resources are allocated by the Hospital Management and Operation Committee/Hospital Development Committee among different departments and units according to the need on priority basis. However, in part of the government resources, they also admitted that they cannot do it by themselves as the government disburses budgets which were already allocated to different headings.

> One of the respondents stated:
> *"Resources are allocated by upper level considering the trend of last year, that's why there is no need to allocate at local level"*.

This situation was more or less similar in all levels of hospital.

Allocative Efficiency

Number of hospitals and their distribution

As Walford and Grant have suggested three measures for improving hospital efficiency as follows:

1) making more efficient use of the resources available across the health system by reviewing the numbers of hospitals and their distribution,
2) increasing hospital autonomy and giving managers clear responsibility for performance, and
3) introducing measures to make more efficient use of the available resources to the hospital sector will be helpful in running hospitals.

The number of hospitals and their distribution with available data based from the study itself and from DoHS Annual Reports (Annex II, Table 19) along with the resources are reviewed. The distribution of hospitals within the country seems proportionate to the population in different topography; viz. flat, mountain and hills. However, it is the political/administrative criteria that have determined the distribution of public hospitals,

in Nepal. Since most of the public hospitals are located in the easy to access settings, the distribution of hospitals has not adequately addressed and ensured the access of the people to these hospital services. For example, many zonal hospitals are in southern boarders of the zone. And, most of the central level hospitals are located in the Kathmandu valley. There is no public hospital in Kalikot district yet. Nevertheless, the current study is not designed to measure the access of hospital services to the clients, as such. The use of resources available to provide quality hospital services has not yet assessed. To measure the economic efficiency of hospitals, it is important to estimate the total costs of hospitals and its operations (recurrent costs) and looking the costs of per unit hospital service outputs, for example, cost per patients treated in OPD, Indoors, emergency, while making decisions in allocation of resources, reallocation, and promotion of hospitals and hospital services. This study attempts to gather key hospital services indicators (Table 15) and costs to key functions of hospitals (Table 16), and shows that regional and zonal hospitals have better outputs compared to central and district.

The issue of autonomy and making hospital manager more accountable for performance is explained in section 3.7 (page 48). Some of the respondents in the district hospitals were satisfied with the level of autonomy they are enjoying however the respondents from zonal hospital were not satisfied with the limited autonomy for financial dealing (government officials can not make expenditure above NRs.100,000) and no autonomy in recruitment and transfer of staffs in the hospitals. Frequent transfer of staff, even without informing to the hospital development boards, is challenging for the running of the hospitals. Hospital development boards strongly feel that the board is not allowed to mobilize their own resources as per need of the hospitals.

Assurance of more efficient use of resources in the hospitals needs dynamism like increased autonomy to hospital development board, inclusion of bio-medical engineering courses in medical education to ensure full use of existing and recent advancements in medical equipments and managerial and associated technical training to the personnel of hospital development board.

Accessibility to the hospital services

Participants of the focus group discussion at a central level hospital admitted that the service utilization is satisfactory as the services are being used by all classes of people.

Table 14: Access to hospitals (physical distance in Km)

Hospitals	From permanent residence			From current residence		
	Mean	Median	Std Dev	Mean	Median	Std Dev
Central hospitals	213.9	150.0	209.6	40.4	5.5	139.9
Regional hospitals	23.6	7.5	26.9	21.5	7.0	26.8
Zonal hospitals	57.2	40.3	67.6	40.7	15.0	58.6
District hospitals	52.6	15.0	116.1	16.8	8.0	24.9

Source: Field Survey, 2006

Average distance between the residence of the respondent and health institution being visited is calculated on the basis of median. Mean is not taken here because of the high value of standard deviation. Respondents coming to the central level hospital had to travel a long distance from their permanent residence as compared to the respondents visiting other levels of hospitals. However, the average distance was found greater between the current residence of the respondent and the health institution at zonal and district level hospitals. The average distance from permanent residence to hospitals is found to decrease with decrease in level of hospital and it is practically logical as well because of the referral system of Nepal. However, the average time from permanent and current residence as well as their negligible difference shows that the majority of the people attending regional hospitals are from nearby locality with the lowest average distance from residence to hospital, 7 km.

Most of the participants in in-depth interview in central level hospital emphasized the need of filling all vacant posts, providing better quality services, regular supply of medicines, proper maintenance of equipments, regularity of staff and raising awareness towards utilization of hospital services for the increased accessibility of hospital services by the people. Moreover, they also believed that cheaper services would increase accessibility. One of the participants emphasized on '4Qs strategy' (Quick service, Quick response, Quick diagnosis and Quality) for more efficient operation of hospital services.

Options to increase the accessibility of hospital services

Most of the participants emphasized the need of fulfilling all vacant posts, providing better quality services, regularity of services, regular supply of medicines, proper maintenance of hospital sanitation, proper maintenance of equipments, regularity of staff, regular training of staff and mass awareness campaign for health service utilization to increase access of the hospital services.

> *"Giving quality service to patients coming in the hospital is another way to increase patient flow because if they get proper care then they will disseminate positive message of hospital in the community and will encourage others to go there while becoming ill." (An interviewee of a central level hospital)*

According to the participants of FGDs, access to the hospital services can be increased with better quality services with fully staffed and equipped hospitals.

Outreach programmes

Participants of a focus group discussion at zonal hospital had a view that the service utilization is not satisfactory as community prefer to go to other easily accessible hospitals. This might be a hospital specific scenario and might not represent the situation for overall zonal hospitals. Mobile clinics were financially and managerially supported by other organizations and the hospital contributed with technical staffs for those clinics.

In most of the cases, hospitals do not conduct outreach facilities on budget of their own but they provide technical support as well as available medicines to camps organized by ministry of health and other organizations.

Efficiency of hospital services

Bir Hospital and Western Regional Hospital have very good bed occupancy rate (94% and 92.8% respectively). Bheri Zonal Hospital and Ilam Hospital have medium bed occupancy rate (77.4% and 73.1% respectively). Other hospitals had bed occupancy rate

lower than 70%. Bhim, Dadeldhura, Hetauda, Mustang, Rasuwa and Solu Hospital had extremely poor bed occupancy rate (lower than 50%).

Table 15: Hospital service indicators (efficiency measurement)

SN	Name of hospital	Hospital service indicators, 2002*					
		Beds available	No. of patients discharged	Inpatient days	Average length of stay	Bed occupancy rate	Bed turnover rate
1	Bir Hospital	350	10228	0	0	94	NA
2	BP Koirala Memorial Cancer Hospital	NA	NA	NA	NA	NA	NA
3	Sahid Gangalal National Heart Centre	NA	NA	NA	NA	NA	NA
4	Western Regional Hospital	200	18675	66814	3.5	92.8	6.8
5	Bheri Zonal Hospital	150	6138	41485	6.8	77.4	40.4
6	Koshi Zonal Hospital	200	12483	47591	3.8	66.1	11.1
7	Mahakali Zonal Hospital	50	5118	10509	2	58.3	14.3
8	Baglung District Hospital	25	3058	5521	1.8	61.3	21.5
9	Bardiya District Hospital	22	1537	4603	2.9	58.1	68.9
10	Bhim Hospital	33	2771	5699	2	47.9	26.3
11	Dadeldhura District Hospital	15	246	873	3.5	16.1	519.3
12	Hetauda Hospital	50	2181	5008	2.3	27.8	38.5
13	Ilam Hospital	25	1385	6038	4.3	73.1	113.3
14	Mustang Hospital	15	246	839	3.4	15.5	504.5
15	Rasuwa District Hospital	13	256	458	1.7	9.7	242.4
16	Solu Hospital	15	880	0	0	0	0.0

** Source: Annual Report. Department of Health Service, 2002/03*

Participants of interviews also had a view that the hospital services can be made more efficient with the existing resources. Some of the options given were strong management of the hospital, staff commitment, team spirit and good coordination among staffs, along with regular training and incentives to staffs, fulfilling all vacant posts.

> *"If all staffs become more committed towards their responsibilities, then we can provide services more efficiently." (An interviewee of a district hospital)*

Efficient running of the hospital can be achieved with regular capacity strengthening of the available human resources with a fully autonomous HDC. Participants of the interview also emphasized the need of local representatives on HDC as they know the real

situation and problem of their community. Implementation of research findings was another major issue they raised for the betterment of hospitals.

> One participant of a district hospital told:
> *"This hospital is not being able to win the confidence of community people due to the unavailability of technical manpower at different times e.g. radiographer, lab technician, doctor and unusable equipments as well. Therefore they go to alternative healers like Jhankri/Dhami and to other institutions".*

Assurance of more efficient use of resources in the hospital needs different facets of steps like increased autonomy to hospital development board, inclusion of bio-medical engineering courses in medical education to ensure full use of existing and recent advancements in medical equipments and managerial and associated technical training to the personnel of hospital management committee. In addition, it is necessary to conduct comparative study in the hospitals with good and poor efficiency indicators so that the best practices can be replicated in other hospitals.

Level of User Charges

User charges varied from hospital to hospital as per the decision of the Hospital Development Board. The types of services provided through district, zonal, regional to central hospital varies from case to case hence, it found to be useful to see from the users' view point. The study analyzed the expenditure incurred for treatment under different headings from the patient interview.

Information on income level showed that the respondents visiting central, zonal and district level hospitals had almost similar stats of average yearly income (median income of about NRs. 50,000)[2]; where as the patients attending regional level hospitals had lower average income (median income of NRs. 37,000) as compared to the patients attending other levels of hospitals (Table 17).

[2] Since the huge variation between mean and median, and may be the data is skewed; the estimates for average yearly income are preferably presented in the median values, and interpreted accordingly.

As shown in Table 18, average expenditure on current health problem revealed the fact that those patients who had reached central level hospital to seek treatment had higher expenses as compared to those patients who were receiving treatment from district, zonal and regional level hospitals. The difference was found to be very high as it was Rs. 10,000 at central level hospital in contrast to Rs. 600 or below in other levels of hospitals. On an average, the number of visits to the health institution for the prevailing health problem ranged from one at district and zonal level hospitals and five at central level hospitals (Table 19).

Looking into the Table 17, 18 and 19 at a time, it shows that the expenditure on hospital services is huge at the central level hospitals as compared to the rest of the hospitals; despite the income status of patients attending the hospitals is equal. The huge cost of hospital services as central level is because of the more number of visits to these services and huge cost on diagnosis and treatment as well (Table 16). However, the current study can say nothing about the rationale use of diagnostic and treatment services that increased the costs at national level. It could be because of the availability of diagnostic and treatment services are more readily available at central level hospitals or a big question about the rationale use. From the health economics point of view, this study recommends further analysis of rationale of prescribing hospital services to the clients. Nevertheless, since the expenses incurred in the central hospital and before consulting central hospital, though the income level is not much higher compared to the people consulting other hospitals, it could be reasonable to recommend reduce user charges in the central hospital, which is contradictory to the situation of other countries where tertiary hospital is considered the place to start user fee rather than lower ones.

Table 16 shows the details of expenditure for the existing health problem for a patient at different levels of hospitals. The cost for registration varied between Rs. 5 at zonal level hospital to Rs. 15 at central level hospital. Diagnosis cost of a patient was found lower among different levels of hospital whereas it was the highest at central level hospital. Other costs such as treatment cost, transportation cost, cost on food, accompany cost, opportunity cost as well as other costs like communication cost was also high at central level hospitals. The burden of cost seemed high for the patient attending central level hospitals in comparison with district, zonal and regional level of hospitals.

Table 16: Total expenditure incurred for the current health problems in the hospitals by type of hospitals (NRs.)

Expenditure incurred in hospital services for patients of which:	Hospitals							
	Central hospital		Regional hospital		Zonal hospital		District hospital	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Registration fees	15.2	15.0	9.2	10.0	23.6	5.0	11.9	10.0
Doctors' fee	2,916.7	500.0	NA	NA	19.0	10.0	NA	NA
Diagnosis costs	25,937.0	3,250.0	1,174.0	440.0	588.2	200.0	424.2	122.5
Treatment cost	60,499.6	7,200.0	2,619.1	1,000.0	1,526.9	400.0	819.8	260.0
Transportation	1,929.3	800.0	249.2	175.0	445.4	200.0	505.3	100.0
Food	9,459.9	1,600.0	469.1	312.5	542.4	200.0	363.0	200.0
Other (communication etc.)	50,152.9	164.0	195.0	100.0	89.4	50.0	500.0	500.0
Accompany cost	6,451.3	10,761.5	183.3	150.0	710.9	300.0	443.9	300.0
Opportunity costs	11,794.3	3,200.0	936.8	800.0	1,940.3	800.0	1,088.2	400.0

Source: Field Survey, 2006

Note: The number of study subjects for each cost items by types of hospitals is different in each estimate of mean and median. The purpose of this table is to depict the total recurrent expenditure par patient for hospital services for different cost items.

Table 17: Income level of patients coming for hospital services (family income) by hospitals

Hospitals	Annual family income (NRs.)		
	Mean	Median	Std Dev
Central hospitals	53,043.5	50,000.0	31,570.7
Regional hospitals	61,359.6	37,000.0	64,472.0
Zonal hospitals	58,896.6	48,000.0	42,219.8
District hospitals	68,997.7	49,407.0	69,548.7

Source: Field Survey, 2006

Table 18: Expenditure for current health problems before coming to the hospitals

Hospitals	Expenditure (NRs.)		
	Mean	Median	Std Dev
Central hospitals	23,149.3	10,000.0	38,465.0
Regional hospitals	815.8	500.0	702.6
Zonal hospitals	5,731.4	600.0	16,562.4
District hospitals	8,037.9	300.0	35,542.7

Source: Field Survey, 2006

Table 19: Number of visits to the hospitals for the current health problem

Hospitals	Number of visits				
	Mean	Median	Std Dev	Min	Max
Central hospitals	8.7	5.0	11.5	1	61
Regional hospitals	3.2	3.0	2.6	1	13
Zonal hospitals	2.3	1.0	2.9	1	21
District hospitals	2.6	1.0	3.8	1	36

Source: Field Survey, 2006

All types of the costs are highest in central hospitals as it is the last resort of treatment and are located far from the residence of the patients coming for treatment and is equipped with highest level of available diagnostic equipments and treatment procedures.

Financial sustainability

Regarding the financial sustainability of the hospital some participants in the district hospital level FGD believed that if the community becomes richer then it will increase the

hospital income which is collected as a user fee. However, many participants opinioned that the better quality of services through better staff availability, functioning equipments and proper use of available resources will be helpful in making a financially sustained hospital. At the same time, support form other organizations should not be forgotten. Increasing user fee was also suggested by some participants however there were some contrasting statements as well –

> *"...increasing user fee is not a possible option because we are here to provide service to the poor rather than to make profit."*

In focus group discussion in district level hospital resource allocation on the basis of the geographical location of the hospital was the most discussed issue for the financial sustainability. It is imperative to mention here that there were some views which did not find it possible to be financially sustainable –

> *"It is impossible in this condition for the hospital to be financially self sustained".*

Most of the respondents of in-depth interview were of the view that it is impossible for hospitals to sustain on their own where affordability of people is very low. Therefore they were emphasizing the need of increasing government budget.

> One of the interviewees of a central level hospital explained the situation saying:
> *"It is very difficult for this hospital to sustain on its own because most of the patients coming here are very poor, neither can we squeeze them to generate money nor we can let them die for not getting treatment."*

However the participants of interview at different levels of hospital suggested some alternatives. Some of the options were to expand services like CT scan, MRI, USG, paying clinic, maternity/gynecological services etc, giving certain units of hospital like CT scan, MRI to private sector to operate on contract, building more shopping complexes and giving them on rent., increasing user's fee to some extent, making HDC more autonomous and making all the staffs more punctual and dedicated towards their work.

"We can increase user's fee to some extent but at the same time we should not forget to give subsidy to those who cannot pay." (An interviewee of a district hospital)

Some views suggested that the government should take consideration about the socio-geographical context of the hospital while allocating resources.

In focus group discussion at zonal hospital almost all participants' opinion for the financial sustainability of the institute was through better staffing, better equipment, better services and better use of available resources such as lands and buildings. They believed that these factors will also ensure greater efficiency in hospital with the existing resources. They also emphasized on community participation, formation of hospital development committee along with municipality and DDC support as some measures to make hospital a financially sustained institution.

Criteria for deciding user fee

Hospital Management and Operation Committee/Hospital Development Committee/ Hospital Co-Ordination Committee decide the level of user fee in most of the cases by considering the financial status of hospital, affordability of community people, market price and amount to be deposited to the government. But most of the respondents complained that they were not allowed to participate on such meetings. In many hospitals some charges were higher than the market price like higher pregnancy test charge in hospital and some were not in line with the government health strategy policies and strategies like taking charges for delivery whatever may be the parity. In many hospitals, service charges were not revised frequently enough to address the changes in market price because of problem in organizing meeting of the committees due to vacant politically assigned posts, lack of time to authority personnel due to higher work burden in the time of conflict and crisis and difficulty in movement due to blockades and strikes.

None of the hospitals charged the fees for the services based on any logical ground for cost recovery.

Advantages and disadvantages of user fee

Most of the respondents were of the view that certain level of charge is imperative for the smooth running of the hospital as the government is unable to provide sufficient financial resources to meet the hospital expenditures. At the same time the participants of interviews emphasized that there must be subsidy to those people who cannot pay.

> A respondent of a central hospital gave a view:
> *"It is good to take charge from patients who can pay because it helps hospital to compensate expenditure and it is better to provide care free of charge to those who cannot pay".*

> Similarly an interviewee of a district hospital said:
> *"It is for the benefit of community people themselves and not for doctors and nurses. Once we take charge from patients the hospital can provide quality service and it also helps the hospital for self sustainability. If services are provided free of cost there are also chances of misuse."*

Focus group discussions conducted with staffs of different district hospitals revealed the fact that service utilization of those hospitals was not satisfactory. Poor people could not even afford user fees and people are also not willing to pay at public health institutions. However, a district hospital was found to be utilized mainly by the poor people.

> *"Those who are able to pay and rich enough, go to Pokhara for treatment, and people who are poor and from remote areas come to this district hospital".*
> - Participants of a FGD in a district hospital

Policy options for introducing user charge

In government health policies in Nepal, it has been a problem for years to devise appropriate financing options in the reform progammes and its timely implementation. However, the initiation of this kind of study from the Ministry of Health and Population level disclosed the government intention of introducing a cost recovery system in the

hospitals, but more importantly indicates the types of costs it wished to see recovered. Thus, while looking for an appropriate system of recovery that takes account of the structure of costs in health facilities, it is important to see the constraints related to the supply of services, the socio-economic, administrative and political constraints that makes it extremely difficult to define a national policy on charges for health services in the hospitals.

Considering the characteristics of public hospitals in Nepal, it is very much essential that the charges that are introduced should be dynamic in character, i.e. structured in such a way that they can be changed as time goes on in the light of the evolution of certain socioeconomic parameters (also suggested for similar settings, Carrin G and Evlo, 1995).

It is nevertheless true to say that the recover of certain types of costs is already possible in public sector hospitals, for at least two reasons:

(i) the evident willingness to pay, as seen from experience in some hospitals for its extended hospital services (EHS), and

(ii) the Government seems strongly motivated to recover costs, especially for curative hospital services; and thus, planning and looking for effective methods of making public sector hospitals autonomous.

Thus, the issue seems to be no longer to decide whether costs can be recovered but to determine how to charge for the services. To ensure the system of cost recovery is fair and the access of the people, particularly the poor, to the services is not minimized but improved, policy need to be devised in such a way that element of flexibility and dynamism is there and charges are differentiated based on the region, types of services, and people's ability to pay.

Many studies (Gilson L, 1997; Blas E and Limbambala M, 2001) have shown that level and structure of user fees may affect access and use of services and represent unfair mechanism of financing for health services because they exclude the poor and the sick. To mitigate this effect, flat rates and lower fees for the most vulnerable users can be introduced to replace the fee-for-service system in some hospitals, but after survey. Evidence is available from study (Amone J et al, 2005) that a more equitable user fees system is also possible.

The findings of the current study are inadequate and evidence is not fully sufficient to start any particular cost recovery systems in public sector hospital in the current situation. However, it wise to recommend allow hospitals enjoy its autonomy and pilot most appropriate and feasible scheme for recovering costs in few (one or two) hospitals, and scale-up based on the lesson learned.

Autonomy of Hospital Development Committee Regarding Resource Management

Autonomy of Hospital Development Committee (HBC) regarding resource management is an important aspect of increasing allocative efficiency of the hospitals. Autonomy has to provide them enough room for taking appropriate decision in their local context for better hospital performance and higher patient satisfaction.

One of the most important decisions made by all the hospitals studied was user fee determination and revision in their own. The decision has made hospitals able to raise alternate financing source for making the hospital financing sustainable.

In addition, it is found that they also contracted the required staffs under hospital development committee in contract for certain periods. The decision has saved the hospital from serious crisis and overload among staffs leading to deteriorated quality of services.

Examples from few hospitals found that they also used outsourcing for effective and efficient utilization of resources. For example some of them have contracted out the services of repair and maintenance of buildings and electricity and maintaining sanitation in the hospital. The direct benefit of such outsourcing is found to be the drastically improved sanitation condition of the hospitals and on top of that the indirect benefit of such outsourcing have found to be the less stressful working environment due to reduced administrative roles of hospital in-charges and administrators.

Many hospitals have made decision to provide incentives from the services provided during off-hours from the hospital. Such incentives have raised the motivational level of staffs working in night shifts and off-hours. On other hand patients and patient parties are getting the services like x-ray, lab report and other required services even during off-hours from the hospital.

Some hospitals are considering similar outsourcing in case of ambulance facility.

Specially in district hospitals, HDC were found to have given full autonomy in managing and mobilizing available resources –

> *"Our committee has full autonomy regarding resource management".*

However, the interview findings from a zonal hospital showed that the HDC did not have full autonomy in the management of available resources. This is justified by this statement made by a respondent of a zonal hospital –

> *"Committee has not been given full autonomy in resource mobilization. It needs to take approval from ministry for financial matters requiring more than Rs 100,000. We can not mobilize even our own resources."*

To ensure the improved cost recovery status of public hospitals, and quality hospital services are accessible to the people, hospitals' overall status need to be enhanced; and acute need of autonomy is on manpower recruitment and investment decisions to the hospital development boards. However, before doing so, it needs to enhance capacity of the hospital development boards in managerial and necessary technical aspects. Ultimately, considering the competitive health care market and changing roles of government to devise and reform policy and monitor and regulate the services delivery mechanism, autonomy of public hospitals is inevitable.

In the current status of regulation of public sector hospitals in Nepal, it is very critical to decide and define the extent of autonomy of public sector hospitals, a national framework for autonomy of hospital (Annex III) needs to be defined and the practiced depending on the level of hospitals, particularly the types of hospital management functions.

The autonomy of the public hospitals in Nepal is possible only by devising and implementing appropriate policy and interventions in at least five major domains: Governance and administration, Finance, Human resource management, Procurement and Hospital information system (Annex IV).

Existing Hindrances

According to the discussions made in FGDs in district level hospital lack of clear policy regarding hospital development board, unavailability of sufficient staff and functioning medical equipments are the major obstacles in providing quality services to the people.

> *"There is never more than one doctor although there is a provision for three doctors in this hospital"* , *"government has sanctioned 3 posts for emergency department (1 HA & 2 AHW) in district hospital but that number is not sufficient to provide 24 hour service."*

The above stated statement indicates the hindrances that the district hospitals are facing.

Interview findings suggested that the unavailability of clear policies regarding HDC had created problems in administrative activities. They considered a fully autonomous HDC as a means to remove much of the hindrances in providing quality services to the people.

> One of them complained and other agreed:
> *"Ministry takes decisions regarding hospitals even without informing the concerned hospital e.g. transferring staff. Doctors are transferred from this hospital to others but committee used to be unaware of that."*

Difficult for a hospital to sustain financially, poor maintenance of equipments, unavailability of adequate manpower, inadequacy of medicines supplied by government, insensitivity of ministry towards hospital needs, political pressure etc were some of the other hindrances identified by participants of interview in all levels of hospital. The

following two statements made by interview participants show some of the existing realities.

> *"Medicines supplied by government do not last for more than 2-3 months and more than 40% of the sanctioned posts are vacant." (An interviewee of a district hospital)*

> *"Medical superintendent is responsible for administrative as well as clinical matters which are not possible in hospitals like this where patient load is so high." (An interviewee of a zonal hospital)*

4. Conclusions and Recommendations

Conclusions

The current study has shown different status of different levels of hospital running under the Government of Nepal. Some of the hospitals are functioning quite satisfactorily while some are facing problems for the smooth functioning of their services. All government hospitals' major source of income is the budget allocated by the Government of Nepal on annual basis. User fees and rent from the hospital shopping complex are also other major sources of income for some of the hospitals which are situated in urban centres.

All classes of people, irrespective of their socio-economic status, are getting services from these governement hospitals. Central level hospital services are found more satisfactory for the patients as compared to other levels of hospital in the country. However, it does not mean that people are not using hospital services at regional, zonal or district level hospitals. These hospitals are also equally being utilized. Although there are some people who cannot even afford to pay user fee at district hospitals, services from district level hospital are mostly used by poor people themselves. It can be said that the government hospitals are providing services which are affordable to all classes of people.

Although regular services are being provided from the government hospitals, their sustainability cannot be assured. These hospitals are facing a lot of problems which are not yet dealt by the government. Government allocated budget had never been sufficient for these hospitals. It is true that some of the hospitals located in major cities are earning money from rent and even from vehicle parking, but those hospitals which are in remote districts of Nepal do not have any other sources of income. Instead, these hospitals are providing services to the poor people with subsidy which has further deteriorated the financial situation of those hospitals and have raised a question on their sustainability. There is a need for the improvement of cost recovery status of many hospitals in the country. A lot of vacant positions at different levels of health institutions are another crisis these hospitals are facing in the present context. Insufficient medical supplies and equipments, mainly in district hospitals, are the major obstacles in delivering quality

services to the needy people. Unless these positions are completely filled and fully equipped with required supplies, hospitals cannot function on its full capacity.

The issue is no longer to decide whether costs can be recovered but to determine how to charge for the services. To ensure the system of cost recovery is fair and the access of the people, particularly the poor, to the services is not minimized but improved, policy need to be devised in such a way that element of flexibility and dynamism is there and charges are differentiated based on the region, types of services, and people's ability to pay.

Hospital Development Committees (HDCs) exist and are functioning in many hospitals but the issue of autonomy and managerial skills with technical knowledge of these HDCs are still forgotten. Lack of clear policies and guidelines regarding the functions, roles, responsibilities and authorities of these HDCs has made the situation further difficult. Hospital Development Committees are not able to allocate and manage their own resources according to their local need. Therefore the current need will be a fully functioning and autonomous hospital development committee which can manage its own resources according to the need of the hospital. Development committee should be given right for the overall management of the hospitals.

Recommendations

The key message of the study is hospitals could grow to gain cost recovery status and financial sustainability if the hospital development boards are provided with adequate managerial skills with technical knowledge and decision space for its autonomy. The role of government should be facilitating and monitoring the quality of hospital services rather controlling the hospital management activities directly.

Also the allocative efficiency of public hospital can be achieved if:

- The hospital development boards are allowed more decision space to take necessary actions for ensuring better service provision and its utilization;
- The hospital development boards are allowed to take decision for ensuring the effective human resource planning and its use. Most of the hospital management boards have the problem of frequent transfer of stall (the government ones) and

lack of necessary incentive and upgrading trainings for the staff. Provided the staffs are well trained and their skills are upgraded according to the demands of health care market, public hospitals can do achieve better cost-effective ratios for hospital services and so the improved allocative efficiency.

- Practically, to improve the allocative efficiency of public hospitals in Nepal, resources should always be used to produce the most cost-effective interventions. The cost-effectiveness of interventions can be ensured through: (a) providing a mix of health interventions that reflects people's need and has a potential to yield the highest return on health, (b) delivering and using the produced health interventions by the people who need them the most and get maximum health gain, and (c) providing health interventions, ensuring that the people who need hospital services, are accessible physically (geographically), culturally and economically.
- It is by having the reform in the overall management of hospital in public sectors that can help in achieving efficiency. For example, extending the hospital services according to the needs of such services in the health care market; allowing hospital generating revenues for improved cost recovery based on the service components and people's ability to pay but fairly; having competent staff and providing necessary training according to the needs, etc.
- The public hospitals need to gain its autonomy.

The autonomy of the public hospitals in Nepal is possible only by devising and implementing appropriate policy and interventions in at least five major domains: Governance and administration, Finance, Human resource management, Procurement and Hospital information system.

This leads public sector hospitals recover the costs of services and make the hospital services quality-assured, sustainable and also improve the access to the services, in true. This can be done through piloting in few sites, initially and scaling-up the scheme in other hospital incorporating the lessons learned.

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Annexes

Annex I: Research instruments

Annex Ia: Observation Record Sheets for Review of Available Hospital Records (in Nepali)

अस्पतालमा उपल्बध अभिलेखहरु (Observation Record Sheets for Review of Available Hospital Records)

मिति : २०६..../......../....... (साल/गते/महिना)   तथ्याङ्क क. सं.: ....

अस्पतालको नामः ....

अस्पतालको ठेगानाः
जिल्ला : ....
गा.वि.स. /नगरपालिकाः ....
वडा नं. : ....

अस्पतालको तहः
☐ केन्द्र ☐ विकास क्षेत्र
☐ अञ्चल ☐ जिल्ला

तथ्याङ्क संकलन कर्ताको नाम : ....

१. विभाग/ईकाई र सेवा विवरण (Departments/Units, and Services available)

क.सं.	विभाग/ईकाई	ओगटेको क्षेत्र	२०५७/५८	२०५८/५९	२०५९/६०
१.	प्रशासन/आर्थीक		☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
२.	प्रयोगशाला		☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
३.	रेडियोग्राफी		☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
४.	आकस्मीक		☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
५.	बहिरंग		☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
६.	सर्जरी		☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
७.	अन्तरंग (Ward)		☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
८.	ओ.टि. (OT)		☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
९.	....		☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
१०.			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
			☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन

२. आर्थिक तथ्याङ्क (Financial information):

२.१ अस्पतालको आम्दानीका स्रोतहरु (Sources of Hospital Income):

स्रोत विवरण/वर्ष	२०५७/५८	२०५८/५९	२०५९/६०
● सरकारी - केन्द्रीय सरकार			
- स्थानीय			
● बाह्य सहयोग			
● अनुदान (Donations)			
● अन्य स्रोतहरु :			
- सेवा शुल्क			
- विमा (Health Insurance)			
- क्यान्टिन (Canteen)			
- फार्मेसी (Pharmacy)			
- शपिङ्ग कम्पलेक्स/सेन्टर (Shopping Complex/Centre)			
- हेल्थ क्लब (Health Club)			
- पार्किङ्ग (Parking)			
- अन्य (उल्लेख गर्नुहोस)			

२.२. अस्पतालको खर्चहरु (Hospital Expenditures):

खर्च विवरण	२०५७/५८	२०५८/५९	२०५९/६०
● कर्मचारी			
- मेडिकल			
- नर्सिङ्ग			
- प्रशासन/आर्थिक			
- फार्मेसी			
- रेडियाग्राफी			
- cGo -uf8{, 8«fO{e/, dfnL, s'rLs/===_			
● औषधी/रसायन (Drugs/Reagents) - औषधी - रसायन			
● मेडिकल सामाग्री			
● सर-सफाईका सामाग्री			

● भवन मर्मत			
खर्च विवरण	**२०५७/५८**	**२०५८/५९**	**२०५९/६०**
● यातायात (इनधन) - दूरी/समय			
● खाना			
● ओभरहेड Utilities / (प्रशासकीय खर्च)			
- बिधुत			
- फोन/फ्याक्स/ई-मेल			
- खानेपानी			
- पत्रपत्रिका			
- अन्य (उल्लेख गर्नुहोस्)			
● अनुसन्धान तथा तालिम			
- अनुसन्धान (प्रकार/अवधि)			
- तालिम (छोटो अवधि)			
- तालिम (लामो अवधि)			
● च्यारिटी			
● प्रतिरोधात्मक (सेवाहरु) कार्यक्रम/रोकथाम			
● घुम्ती शिविर			
● प्रशासन			
● अन्य (उल्लेख गनुहोस्)			

२.३. सरसामाग्री (पूँजीगत, Capital items) तथ्याङ्क :

विवरण	खरिद वर्ष	खरिद मूल्य	जडान खर्च	Useful life years	प्रतिस्थापन मुल्य		
					२०५७/५८	२०५८/५९	२०५९/६०
भवन							
जग्गा/जमिन							
फर्निचर							
उपकरण सामाग्रीहरु							
सवारी साधन (vehicles)							
अन्य (उल्लेख गर्नुहोस)							

३. कर्मचारी विवरण (Staff):

३.१ कर्मचारीको दरबन्धी र पदपुति सम्बधि विवरण (Staffs Sanctioned, Manned and Vacant):

विवरण	२०५७/५८	२०५८/५९	२०५९/६०
जम्मा कर्मचारी संख्या			
जम्मा दरबन्दी संख्या			
जम्मा Manned संख्या			
जम्मा खाली संख्या			
जम्मा पुर्ण समय कार्यरत डाक्टर			
जम्मा पूर्ण समय कार्यरत नर्स			
जम्मा प्यारामेडिक/स्वास्थ्यकर्मी			
जम्मा ओभरहेड कर्मचारी			

३.२. कर्मचारीको विस्तृत विवरण (*) (Details of Staffs)

(To be continued from page : …..)

कर्मचारी	तह	ग्रेड	तलब स्केल	भत्ता/सुबिधा			खर्चिएको समय				
				कपडा	जोखिम	अन्य	ओपिडि	आकस्मीक	वार्ड	प्रशासन	अन्य
१. मे.सु											
२. डाक्टर											
३. नर्स											
४.											
५.											

* नोटः अध्ययन वर्ष २०५७/५८, २०५८/५९ र २०५९/६० को तथ्याङ्क लिने । *(To be continued on page : ……)*

४. बेड र सेवा विवरण (Beds and Services Statistics):

विवरण	२०५७/५८		२०५८/५९		२०५९/६०	
	पुरुष	महिला	पुरुष	महिला	पुरुष	महिला
• जम्मा बेड संख्या						
• बेडका प्रकार - सामान्य - क्याविन (Cabin) - VIP - अन्य (उल्लेख गर्नुहोस्)						
• बेड शुल्क - सामान्य - क्याविन (Cabin) - VIP - अन्य (उल्लेख गर्नुहोस्)						
• जम्मा बहिरंग विरामी संख्या (*)						
• जम्मा भर्ना संख्या (*)						
• जम्मा डिस्चार्ज संख्या (*)						
• जम्मा आकस्मीक विरामी संख्या (*)						
• भर्ना अवधी/**बेड-डेज (bed-days)** (*)						

(*) नोटः महिना अनुसार तथ्याङ्क लिने ।

बेड-डेज (bed-days) को तथ्याङ्क लिंदा, अस्पताल अनुसारको विधि, तँपाईलाई दिए बमोजिम गर्ने ।

४.१ अस्पतालबाट उपलब्ध सेवाहरुको मुल्य सूची अध्ययन वर्ष २०५७/५८, २०५८/५९ र २०५९/६० को लिने ।

५. अन्य जानकारी

५.१ अस्पतालको क्षेत्र

विवरण	२०५७/५८	२०५८/५९	२०५९/६०
अस्पताल स्थापना मिति			
अस्पताल क्षेत्रले ओगटेको क्षेत्र			
अस्पताल र मुख्य बजारको दूरी			
जम्मा भवन संख्या			
अस्पताल भवनले ओगेटेको क्षेत्र :			
क्याचमेन्ट (Catchment) जनसंख्या :			
शैक्षिक अभ्यास स्थिति :	☐ छ ☐ छैन	☐ छ ☐ छैन	☐ छ ☐ छैन
अभ्यासरत विद्यार्थीहरु छन् भने,			
कोर्ष :			
पूर्ण समय कार्यरत विद्यार्थी संख्या-विद्यार्थी डेज (Days)			

५.२ अस्पतालमा खर्चेको समय (विभाग/इकाई)*

कोर्स	विभाग/इकाई (समय/घण्टा)				जम्मा
	ववार्ड	बहिरंग	आकस्मीक	अन्य (उल्लेख गर्नुहोस्)	

*नोट: अध्ययन वर्ष २०५७/५८, २०५८/५९ र २०५९/६० को तथ्याङ्क लिने ।

५.३ स्वयंसेवक (स:शुल्क/नि:शुल्क)

कोर्स	२०५७/५८		२०५८/५९		२०५९/६०	
	आम्दानी	खर्च	आम्दानी	खर्च	आम्दानी	खर्च

५.४ स्थानिय बजारमा प्रतिस्पर्धा :

उपलब्ध अन्य स्वास्थ्य सुबिधाहरुको विवरण	२०५७/५८	२०५८/५९	२०५९/६०
अस्पताल/नर्सिङ्ग होम: - क) पब्लिक (Public) - ख) प्राईभेट (Private) - ग) एन.जी.ओ. (NGO) - घ) मिश्रित (Mix)			
प्राईभेट प्रयोगशाला			
प्राईभेट रेडियोग्राफी			
प्राईभेट फार्मेसी			
डाईग्नोष्टिक सेन्टर (CT Scan/MRI Centres)			

"अध्ययनको लागि सहयोग गरी दिनु भएकोमा धन्यवाद" ।

Annex Ib: Guidelines for Focus Group Discussion (in Nepali)

समूह केन्द्रित छलफलको लागि निर्देशिका (Guidelines for Focus Group Discussion)

परिचय: नमस्कार । मेरो नाम ..... हो । म नेपाल स्वास्थ्य अनुसन्धान परिषद, काठमाण्डौमा स्थलगत अधिकृत/अनुसन्धान सहायकका रुपमा कार्यरत छु । म अस्पतालहरुको सेवा, सुविधा तथा आर्थिक स्थितिबारे अनुसन्धानको लागि तथ्याङ्क संकलन गर्न आएको हुँ । तपाईहरुलाई यस अनुसन्धानमा सहभागी भए वापत प्रत्यक्ष रुपमा फाईदा त हुने छैन तर यस अस्पताललाई भने अवश्य फाईदा हुनेछ । छलफलको क्रममा तपाईंहरुले दिनु भएका सम्पूर्ण जानकारीहरु पूर्ण रुपमा गोप्य रहने छन् । यहाँहरुको अनुमति भएमा हामी १-१$^{१/२}$ घण्टा सम्म छलफल गर्ने छौं ।

सहजकर्ताको लागि: समूह केन्द्रित छलफलमा ६ जना देखी ११ जना सम्म सहभागीहरु एउटा शान्त स्थानमा सहज तरिकाले राख्नुपर्ने छ । तल दिएको फारम अनुसार सहभागीहरुहको विवरण भएको टेवल भर्नुहोस, हस्ताक्षर आवश्यक छैन । सवैको परिचय बाट कार्य शुरु गर्नुहोस । तपाईलाई एकजना टिपोट गर्ने व्यक्तीको आवश्यकता पर्ने छ । छलफल समाप्त भएपछि सवैलाई धन्यवाद दिन नविर्सिनुहोला ।

मिति : २०६..../...../..... (साल/गते/महिना)	समूह केन्द्रित छलफलको तथ्याङ्क क्र. सं.: .....
अस्पतालको नाम: ..... अस्पतालको ठेगाना: जिल्ला : ..... गा.वि.स./नगरपालिका: ..... वडा नं. :	अस्पतालको तह: ☐ केन्द्र ☐ विकास क्षेत्र ☐ अञ्चल ☐ जिल्ला
छलफल गरेको स्थान : ..... छलफल शुरु गरेको समय :	छलफल सकिएको समय : .....
टिपोटकर्ताको नाम : ..... हस्ताक्षर :	

सहभागीहरुको नामावली :

क.सं.	नाम	कार्यालय	पद
१.			
२.			
३.			
४.			
५.			
६.			
७.			
८.			
९.			
१०.			
११.			

छलफलको ऐजेण्डाहरु (मुद्दाहरु)

१. सामान्य परिचय

२. अस्पतालमा उपलब्ध सेवा र त्यसको उपयोग

३. आम्दानीका स्रोतहरु

४. अन्य स्रोतहरु (मानवीय, साधन)

५. स्रोतमा हुन आएको कमी र त्यसका समाधानका उपायहरु

६. सेवाको लागि स्रोतको पर्याप्तता (विभाग/इकाई/र सम्पूर्ण अस्पताल अनुसार)

७. स्रोत बाँडफाँडका आधारहरु (विभाग/इकाई अनुसार)

८. सेवा सुविधाको आधारहरु

९. सेवा शुल्कको फाईदा/बेफाईदा

१०. Cost Recovery को हालको अवस्था

११. अस्पतालले संचालन गर्ने घुम्ती शिविर

१२. स्रोत व्यवस्थापनमा अस्पतालको स्वायत्वता

१३. सेवा प्रदान, आर्थिक स्वायत्तता, गुणस्तरमा आइपरेका बाधा अड्चनहरु

१४. सेवाको पहुँच बढाउने उपायहरु

१५. अस्पताललाई आर्थिक रुपले स्वायत्तता बनाउने उपायहरु

१६. उपलब्ध भएको स्रोतबाट सेवालाई अझ बढी प्रभावकारी बनाउने उपायहरु

"अध्ययनको लागि सहयोग गरी दिनु भएकोमा धन्यवाद"।

Annex Ic: Guidelines for In-depth Interview (in Nepali)

विषय केन्द्रित अर्न्तवार्ता निर्देशिका (Guidelines for In-depth Interview)

परिचय: नमस्कार । मेरो नाम ..... हो । म नेपाल स्वास्थ्य अनुसन्धान परिषद, काठमाण्डौमा स्थलगत अधिकृत/अनुसन्धान सहायकका रुपमा कार्यरत छु । म "अस्पतालहरुको सेवा, सुविधा तथा आर्थिक स्थिति" बारे अनुसन्धानको लागि तथ्याङ्क संकलन गर्न आएको हुँ । तपाईंलाई यस अनुसन्धानमा सहभागी भए वापत प्रत्यक्ष रुपमा फाईदा त हुने छैन तर यस अस्पताललाई भने अवश्य फाईदा हुनेछ । अन्तरवार्ताको क्रममा तपाईंले दिनु भएका सम्पूर्ण जानकारीहरु पूर्ण रुपमा गोप्य रहने छन् । तपाईंको अनुमति भएमा हामी १ - १ $^{१/२}$ घण्टा सम्मको अन्तरवार्ता गर्ने छौं ।

मिति : २०६..../...../..... (साल/गते/महिना)	विषय केन्द्रित अर्न्तवार्ता तथ्याङ्क क्र. सं.: .....
अस्पतालको नाम: ..... अस्पतालको ठेगाना: जिल्ला : ..... गा.वि.स./नगरपालिका: ..... वडा नं. :	अस्पतालको तह: ☐ केन्द्र ☐ विकास क्षेत्र ☐ अञ्चल ☐ जिल्ला
अर्न्तवार्ता गरेको स्थान : ..... अर्न्तवार्ता शुरु गरेको समय :	अर्न्तवार्ता सकिएको समय : .....
अर्न्तवार्ता दिने व्यक्तिको नाम : ..... उमेर : ..... वर्ष । कार्य अनुभव (वर्षमा) : - जम्मा : ..... - हालको कार्यालयमा :	कार्यस्थल : .....
अर्न्तवार्ता लिने व्यक्तिको नाम : ..... हस्ताक्षर :	

छलफलको ऐजेण्डाहरु (मुद्दाहरु)

१. अस्पतालमा उपलब्ध सेवाहरु र यसको उपयोगिता

२. अस्पतालको आम्दानीको स्रोतहरु

३. अन्य स्रोतहरु (मानवीय, साधन)

४. स्रोतमा हुन आएको कमी र त्यसका समाधानका उपायहरु

५. अस्पताल/विभाग इकाई अनुसार सेवाको लागि स्रोतको पर्याप्तता ।

- यदि छैन भने कमी पूरा गर्न अस्पतालले अपनायका उपायहरु
- अस्पतालको स्रोत बढाउनका लागि अपनाउन सकिने उपायहरु

६. अस्पतालको विभाग र इकाईमा स्रोत बाँडफाँडका आधारहरु

७. सेवा शुल्क कुन आधारमा निर्धारण गर्नुहुन्छ ।

८. सेवा शुल्कबाट उठेको रकम कसरी सदुपयोग गर्नुहुन्छ ?

९. सेवा शुल्कका फाई/बेफाईदा के-के छन् (तपाईंको अनुभवको आधारमा) ?

१०. तपाईंको विचारमा सेवा शुल्कको माध्यमबाट अस्पताललाई कसरी दिगो रुपमा संचालन गर्न सकिन्छ ?

११. सेवा शुल्कलाई कसरी निष्पक्ष र समतामूलक बनाउन सकिन्छ ?

१२. तपाईंको अस्पतालको हालको Cost Recovery को अवस्था कस्तो छ ?

१३. तपाईंको अस्पतालबाट घुम्ति शिविर संचालन भईरहेको छ की छैन ?

- यदि छ भने, कति-कति समयमा र कति खर्चमा संचालन भईरहेको छ ?
- त्यसको खर्च कसरी व्यवस्थापन गर्नुहुन्छ ?
- यस प्रकारका सेवाहरुबाट कसरी अस्पतालको उपयोगिता र Cost Recovery बढाउन सकिन्छ?

१४. स्रोत परिचालनमा अस्पतालको स्वायत्तता कस्तो छ ?

१५. सेवा प्रदान गर्न र आर्थिक स्वायत्ततामा के कस्ता बाधा अड्चनहरु छन् ?

१६. सेवाको पहुँच बढाउन के कस्ता उपायहरु हुन सक्छन् ?

१७. अस्पताललाई आर्थिक रुपमा दिगो बनाउन के कस्ता उपायहरु हुन सक्छन् ?

१८. उपलब्ध भएका स्रोतबाट सेवालाई अझ बढी प्रभावकारी बनाउने उपायहरु के हुन सक्छन् ?

"अध्ययनको लागि सहयोग गरी दिनु भएकोमा धन्यवाद" ।

Annex Id: Questionnaire for Interview (in Nepali)

अर्न्तवार्ता प्रश्नावली (Questionnaire for Interview)

सु–सुचित मञ्जुरी फारम

नमस्कार । मेरो नाम ..... हो । म नेपाल स्वास्थ्य अनुसन्धान परिषद, काठमाण्डौमा स्थलगत अधिकृत☐अनुसन्धान सहायकका रुपमा कार्यरत छु । म ☐अस्पतालहरुको सेवा, सुविधा तथा आर्थिक सिथिति☐ बारे अनुसन्धानको लागि तथ्या☐ संकलन गर्न आएको हुँ । यहाँलाई म यो राष्टि☐य स्तरको अनुसन्धानमा सहभागी भईदिनु हुन हार्दिक अनुरोध गर्दछु । यसको लागि २०☐३० मिनेट लाग्न सक्छ । तपाईंलाई यस अनुसन्धानमा सहभागी भए वापत प्रत्यक्ष रुपमा फाईदा त हुने छैन तर यस अस्पताललाई भने अवश्य फाईदा हुनेछ । यदि तपाईलाई कुनै बेला पनि चित्त नबुझेमा यो अर्न्तवार्ता छोड्न सक्नु हुनेछ । तर हामी पूर्ण विश्वस्त छौं की यहाँले यस अर्न्तवार्तामा सहभागी भई हामीलाई सहयोग पुऱ्याउनु हुनेछ । अन्तरवार्ताको क्रममा तपाईंले दिनु भएका सम्पूर्ण जानकारीहरु पूर्ण रुपमा गोप्य रहने छन् ।

यदि तपाई मञ्जुर हुनुहुन्छ भने म तपाईसँग अर्न्तवार्ता लिन चाहन्छु ।

तपाईको सहयोगको लागि धन्यवाद ।

अन्त्यमा तपाईलाई केही सोध्न मन लागेको छ की ? के म अब अन्तरवार्ता लिन शुरु गरौं ?

प्रश्नकर्ताको सही :..... मिति : .....
(गते, महिना, साल)

☐ अन्तरवार्ता दिने व्यक्ति अन्तरवार्ता दिन अनिच्छुक ..... १. (अन्तरवार्ता टुङ्ग्याउने)
☐ अन्तरवार्ता दिने व्यक्ति अन्तरवार्ता दिन इच्छुक ..... २. (अन्तरवार्ता शुरु गर्ने)

परिचयात्मक विवरण	
मिति : २०६..../...../..... (साल/गते/महिना)	अन्तरवार्ताको तथ्याङ्क क्र. सं.: .....
	बिभाग :
अस्पतालको नाम:	☐ वाड ☐ ओपिडि
	अस्पतालको तह
अस्पतालको ठेगाना:	☐ केन्द्र ☐ विकास क्षेत्र
जिल्ला :	☐ अञ्चल ☐ जिल्ला
गा.वि.स./नगरपालिका:	
वडा नं. :	
छलफल गरेको स्थान :	
उत्तरदाताको विबरण	उमेर : ..... वर्ष
नाम, थर:	लिङ्ग : ☐ पुरुष ☐महिला
अन्तरवार्ता शुरुगर्दाको स्थानिय समय :	प्रश्न शुरु गर्दाको समय टिपोट गर्नुहोस् ।
अन्तरवार्ता सकिंदाको स्थानिय समय :	अन्तरवार्ता समाप्त गर्दाको समय टिपोट गर्नुहोस् ।
अन्तरवार्ता लिनेको नाम : ..... हस्ताक्षर :	

अन्तरवार्ताको परिणाम*	परिणाम*	☐ अन्तरवार्ता दिने नचाहेको ..... १ ☐ बीचैमा टुङ्गयाईएको ..... २ ☐ अन्तरवार्ता पुरा भएको ३

खण्ड १ : जनसांखिक विवरण/पारिवारिक विवरण

१. हालको ठेगाना :

जिल्लाः .....

गा.वि.स./नगरपालिका : ..... वडा नं. : ..... टोल : .....

२. स्थायी ठेगाना :

जिल्लाः .....

गा.वि.स./नगरपालिका : ..... वडा नं. : ..... टोल : .....

३. lzlff : .....

) ≠ c;flf/, !,@,#,$,%,^,&,*,(,!),!!,!@ slff plt[0f u/]sf],

१३ ≠ स्नातक तह उतिर्ण गरेको, १४ ≠ स्नाकोत्तर वा सो भन्दा माथिको तह उतिर्ण गरेको ।

४. अस्पताल सम्मको दूरी :

४.१ (क) स्थायी ठेगाना देखिको दूरी - (एकतर्फी) :

(क) .....कि. मी.....मिटर

(ख).....घण्टा.....मिनेट

४.२ (ख) हालको ठेगाना देखिको दूरी - (एकतर्फी) :

(क) .....कि. मी .....मिटर

(ख).....घण्टा.....मिनेट

५. परिवार संख्या : .....

६. धर्म : ☐ = १ हिन्दू ☐ = २ बौद्ध ☐ = ३ मुस्लिम

☐ = ४ क्रिश्चियन ☐ = ९ अन्य (उल्लेख गर्नुहोस्) .....

७. परिवारको मुख्य आयस्रोत : (एक भन्दा बढीमा चिन्ह लगाउन सकिने)

☐ = १ कृषि ☐ = २ चौपाया पालन ☐ = ३ व्यापार

☐ = ४ नोकरी ☐ = ५ ज्यालादारी ☐ = ९ अन्य (उल्लेख गर्नुहोस्) .....

८. आयस्रोत :

८.१ कृषिबाट आम्दानी

बालीको नाम	उत्पादित परिमाण (एकाई)	स्थानीय बिक्री मूल्य	कुल आय
धान			
मकै/कोदो			
गहुँ/जौ			
आलु			
तेलीय बीज			
दाल			
फलफूल			
उखु			
अन्य तकारी र फलफूल			
जम्मा आम्दानी			

८.२ चौपाया पालनबाट आम्दानी :

८.२.१ चौपाया बिक्रीबाट आउने वार्षिक आम्दानी ने रु. .....

८.३. अण्डा र दुग्धजन्य पदार्थ बिक्रीबाट हुने आम्दानी ने रु. .....

८.४. तलब तथा ज्यालाबाट आउने वार्षिक आम्दानी

८.४.१ वार्षिक तलबबाट आम्दानी ने रु. .....

८.४.२ वार्षिक ज्यालाबाट आम्दानी ने रु. .....

८.५ ब्याजदर हुने वार्षिक आम्दानी ने रु. .....

८.६. अन्य व्यवसायबाट हुने आम्दानी (माछा पालन, मौरी पालन)

..... ने रु. .....

..... ने रु. .....

८.७. अन्य स्रोत (उल्लेख गर्नुहोस्).....

..... ने रु. .....

..... ने रु. .....

९. घरायसी खर्च :

क्र. सं.	विवरण	रकम (ने. रु.)	समयावधि - (मासिक/ वार्षिक)	कैफियत
१.	खाना			
२.	लत्ता कपडा			
३.	lzlff			
४.	स्वास्थ्य/औषधी उपचार			
५.	घर भाडा			
६.	धार्मिक काम			
७.	इन्धन			
८.	विजूली			
९.	संचार			
१०.	यातायात			
११.	अन्य (उल्लेख गर्नुहोस्)			

१०. तपाईंको आम्दानीबाट घरको खर्च चल्छ ?

☐ = १ चल्छ ☐ = २ चल्दैन

यदि चल्दैन भने कसरी खर्च मिलाउनु हुन्छ ?

क्र. सं.	विवरण	अतिरिक्त स्रोत	रकम (ने. रु.)	समयावधि - (मासिक/ वार्षिक)	कैफियत
१.	खाना				
२.	कपडा				
३.	lzlff				
४.	स्वास्थ्य/औषधी उपचार				
५.	घर भाडा				
६.	धर्मिक काम				
७.	इन्धन				
८.	बिजूली				
९.	संचार				
१०.	आवत-जावत/यातायात				
११.	अन्य (उल्लेख गर्नुहोस्)				

११. खेतीपातीको लागि आफ्नो जग्गा छ ?

☐ = १ छ ☐ = २ छैन

यदि छ भने आफ्नो जग्गाबाट हुने उत्पादनले कति महिनालाई खाना पुग्छ
.....।

खण्ड २ : स्वास्थ्य समस्या र खर्च विवरण

१२. हालको स्वास्थ्य समस्या : .....।

१३. निरुपण र निदान :
☐ = १ निरुपण भईरहेको ☐ = २ निरुपण भईसकेको र निदान भईरहेको

१४. **<u>हालको स्वास्थ्य समस्याको उपचार गराउँदा</u>** यस अस्पतालमा आउनु भन्दा पहिला गरेको उपचार र खर्च विवरण :

क्र. सं.	एपचारको किसिम	भ्रमण गरेको पटक	खर्च भएको रकम (ने.रु.)
१.	धामी/झाक्री		
२	आर्यूवेद		
३.	स्वा.चौ./उ.स्वा.चौ.		
४.	प्र.स्वा.के.		
५.	अस्पताल		
६.	नीजि अस्पताल/नर्सिङ्ग होम		
७.	क्लिनिक		
८.	फार्मेसी		
९.	अन्य (उल्लेख गर्नुहोस्)		

१५. यस अस्पतालमा **<u>हालको स्वास्थ्य समस्याको उपचार गराउँदा</u>** अहिले सम्मको खर्च :

१५.१ यस अस्पतालमा हालको स्वास्थ्य समस्याको उपचारको लागि हाल सम्म भ्रमण गरेको जम्मा पटक :
.....

१५.२ **यस पटक भन्दा पहिले हालको स्वास्थ्य समस्याको उपचारको लागि** भ्रमण गरेको जम्मा पटक :
.....

१५.३ **यस पटक भन्दा पहिले हालको स्वास्थ्य समस्याको उपचारको लागि** भएको जम्मा खर्च: ने.रु. :
.....

१५.४ **यस पटक** भएको जम्मा खर्च (ने.रु.) विवरण :

क्र. सं.	विवरण	परिमाण	एकाई मूल्य	जम्मा मूल्य (रु.)
१.	दर्ता शुल्क			
२.	जाँच शुल्क (डाकटरको शुल्क)			
३.	निरोपण शुल्क - प्रयोगशाला - रेडियाग्राफी - औषधी - अन्य (उल्लेख गर्नुहोस्)			
४.	उपचार खर्च - औषधी - औजार			

	- अन्य (उल्लेख गर्नुहोस्)			
५.	यातायात शुल्क (दुईतर्फी)			
६.	खाना खर्च			
७.	अन्य (संचार, आदि)			
८.	कुरुवा खर्च - संख्या - वर्ष - लिङ्ग - lzlff			
९.	खर्चित उत्पादन मूलक दिन (संख्या) (Number of Economic days lost) - विरामी - कुरुवा			

१६. हालको औषधी उपचारमा भएको खर्चको श्रोत (क्रमैसँग लेख्नुहोस्) :

१) .....

२) .....

३) .....

खण्ड ३ : स्वास्थ्यको लागि खर्च गर्ने तत्परता :

!&= tkfO{sf] kl/jf/df, o; c:ktfnsf ;]jfx?sf] vr{x? ltg{ ;Sg] lfdtf 5 ls 5}g <

☐ = १ छ ☐ = २ छैन

यदि **छैन भने**, अहिलेको खर्चको कति प्रतिशत तिर्न चाहानु हुन्छ ? ..... (प्रतिशत)

१८. तपाईको परिवारको कुनै सदसयलाई हालको जस्तो स्वास्थ्य समस्या भएमा कति सम्म तिर्न चाहानु हुन्छ ?

सदस्य (कुन सदस्य ?)	**तिर्ने चाहना**	
	सामान्यतः सरदर (ने.रु.)	**अधिकतम (ने.रु.)**
बच्चा (१५ वर्ष मुनी)		
व्यस्क पुरुष (१५-६० वर्ष)		
व्यस्क महिला (१५-६० वर्ष)		
बृद्ध (६० वर्ष देखि माथि)		

खण्ड ४ : अन्य अस्पतालका सेवाहरु सम्बन्धि विवरण:

१८. यहाँको सेवाको गुणस्तरबाट कत्तिको सन्तुष्ट हुनुहुन्छ ?

☐ = १ उत्तम ☐ = २ राम्रो ☐ = ३ मध्यम ☐ = ४ = नराम्रो

१९. तपाईंले गरेको खर्च अनुसार सेवा प्रति कत्तिको सन्तुष्ट हुनुहुन्छ

☐ = १ उत्तम ☐ = २ राम्रो ☐ = ३ मध्यम ☐ = ४ = नराम्रो

२०. यस अस्पतालका स्वास्थ्य कर्मीको व्यवहारबाट सन्तुष्ट हुनुहुन्छ ?

☐ = १ छ ☐ = २ छैन

२१. यस अस्पतालका सेवाहरुलाई अझ प्रभावकारी बनाउन तपाईंका केही सुझावहरु छन् ?

☐ = १ छ ☐ = २ छैन

यदि छ भने, के-के छन् ? (क्रमैसँग लेख्नुहोस्)
१. .....
२. .....
३. .....

"अध्ययनको लागि सहयोग गरी दिनु भएकोमा धन्यवाद" ।

Annex II: Number of hospital and estimated number of population served by the public hospitals in different districts, FY 2005/06

DISTRICT	Eco Region	No. of public hospitals	Population per hospital in the district				
			Total Population	6-35 months	25-59 months	Under 5 years ARI/CDD	Expected Pregnancies
BHOJPUR	HILL	1	219,698	14,385	16,632	29,061	7,767
DHANKUTA	HILL	1	182,230	12,081	13,848	24,314	6,573
ILAM	HILL	1	314,755	22,204	25,486	44,680	11,395
JHAPA	FLAT	1	762,187	44,684	54,140	91,901	29,861
KHOTANG	HILL	1	249,908	17,863	20,170	35,754	8,644
MORANG	FLAT	2	468,167	28,852	35,244	59,355	17,942
OKHALDHUNGA	HILL	1	169,187	11,560	13,318	23,171	5,909
PANCHTHAR	HILL	1	221,458	16,945	18,920	33,753	7,817
SANKHUWASABHA	MOUNTAIN	1	173,635	11,875	13,662	23,924	7,350
SAPTARI	FLAT	1	631,080	41,760	52,101	86,083	23,309
SIRAHA	FLAT	2	316,675	21,342	26,720	44,014	11,486
SOLUKHUMBU	MOUNTAIN	1	117,512	8,392	9,292	16,693	4,972
SUNSARI	FLAT	1	700,364	46,432	55,502	94,614	26,583
TAPLEJUNG	MOUNTAIN	1	145,071	10,296	11,736	20,695	5,975
TEHARTHUM	HILL	1	123,596	8,493	9,658	17,058	4,389
UDAYPUR	HILL	1	323,241	23,643	27,274	47,640	11,166
EASTERN		**18**	**327,978**	**21,722**	**25,870**	**44,227**	**12,254**
BARA	FLAT	1	623,350	44,898	54,087	91,433	22,307
BHAKTAPUR	HILL	1	248,651	15,191	17,366	30,616	9,048
CHITWAN	FLAT	1	529,412	35,900	41,277	72,370	19,841
DHADING	HILL	1	372,592	26,879	30,456	53,815	13,168
DHANUSA	FLAT	1	745,755	51,170	62,980	104,928	26,967
DOLKHA	MOUNTAIN	1	224,478	15,748	18,079	31,664	9,403
KATHMANDU	HILL	5	247,285	12,740	14,868	25,905	6,321
KAVRE	HILL	1	419,866	29,661	33,955	59,619	14,944
LALITPUR	HILL	2	187,996	9,589	11,408	19,622	7,241
MAHOTTARI	FLAT	1	611,077	40,530	51,663	84,094	21,876
MAKAWANPUR	HILL	1	437,226	33,085	37,647	66,313	15,021
NUWAKOT	HILL	1	317,032	23,268	26,502	46,633	10,904
PARSA	FLAT	1	554,697	40,078	48,438	81,681	19,649
RAMECHHAP	HILL	1	233,049	16,566	18,906	33,242	8,301
RASUWA	MOUNTAIN	1	49,426	3,351	3,789	6,706	2,002
RAUTAHAT	FLAT	1	604,199	38,830	49,152	80,459	21,513
SARLAHI	FLAT	1	703,915	48,288	59,339	99,058	24,940
SINDHULI	HILL	1	309,300	22,377	26,021	45,209	10,583
SINDHUPALCHOWK	MOUNTAIN	1	334,103	23,127	26,362	46,379	13,822
CENTRAL		**24**	**372,106**	**24,659**	**29,299**	**50,125**	**12,932**
ARGHAKHANCHI	HILL	1	228,522	19,371	21,066	38,276	10,066
BAGLUNG	HILL	1	292,561	22,264	24,681	44,313	10,869
GORKHA	HILL	2	156,941	10,840	12,232	21,706	5,192
GULMI	HILL	1	324,160	25,837	28,556	51,355	11,921
KAPILVASTU	FLAT	2	270,398	18,862	22,719	38,446	9,481
KASKI	HILL	1	424,852	27,490	31,791	55,521	15,776
LAMJUNG	HILL	1	190,970	12,111	14,057	24,495	7,142
MANANG	MOUNTAIN	1	9,971	430	552	895	406

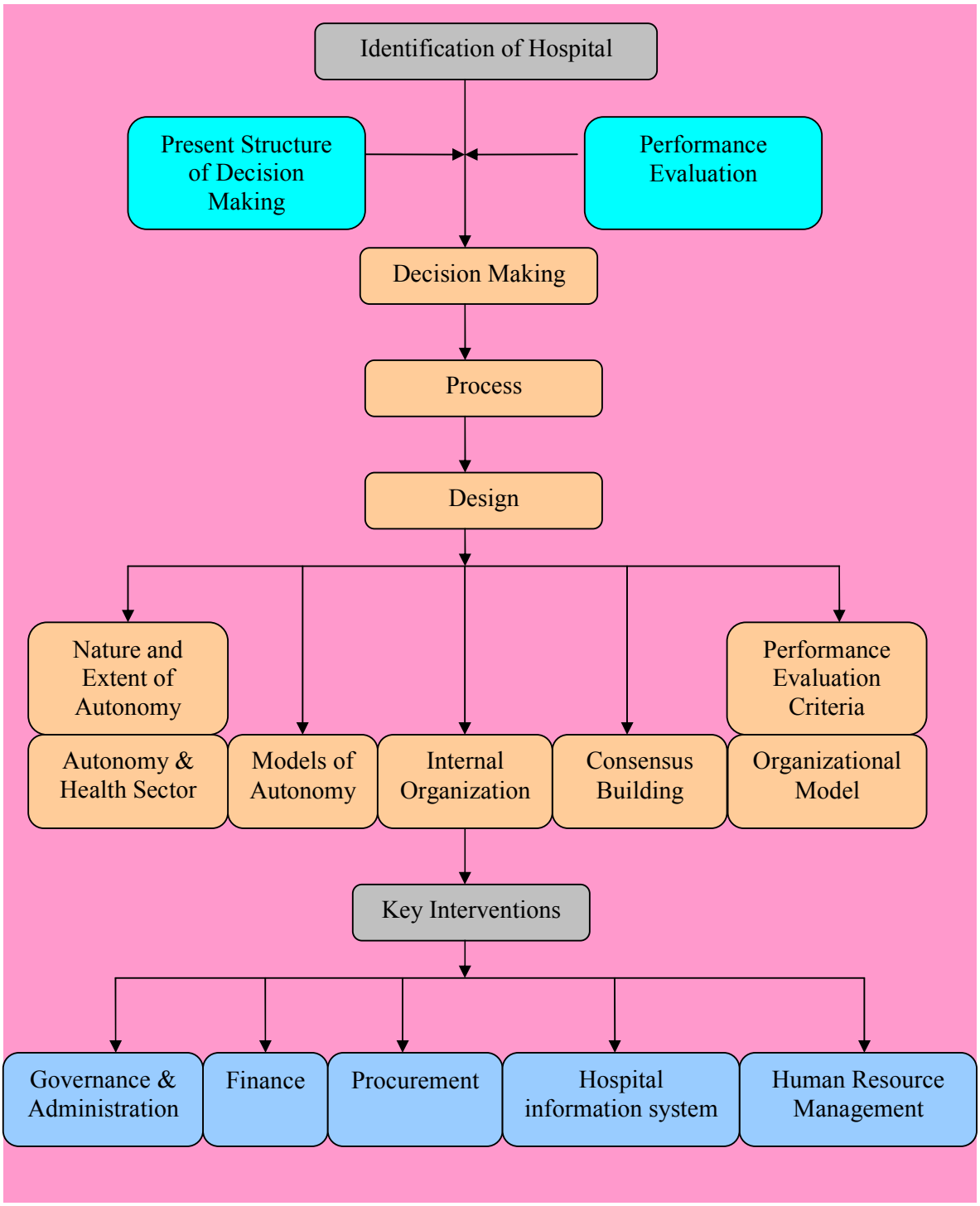
DISTRICT	Eco Region	No. of public hospitals	Population per hospital in the district				
			Total Population	6-35 months	25-59 months	Under 5 years ARI/CDD	Expected Pregnancies
MUSTANG	MOUNTAIN	1	16,341	907	1,036	1,818	625
MYAGDI	HILL	1	123,864	8,760	9,600	17,370	4,608
NAWALPARASI	FLAT	1	633,633	44,813	53,038	91,060	23,020
PALPA	HILL	2	146,449	11,705	12,836	23,198	5,322
PARBAT	HILL	1	172,453	12,069	13,804	24,294	6,350
RUPENDEHI	FLAT	2	397,466	26,758	32,200	54,636	14,379
SYANGJA	HILL	1	345,189	25,473	28,513	50,879	13,028
TANAHU	HILL	2	173,783	12,132	13,920	24,443	6,462
WESTERN		**21**	**240,599**	**17,148**	**19,738**	**34,530**	**8,832**
BANKE	FLAT	1	435,772	31,871	37,192	64,320	15,777
BARDIYA	FLAT	1	432,454	32,269	38,178	65,524	15,509
DAILEKH	HILL	1	246,325	19,602	21,555	38,853	10,049
DANG	FLAT	1	516,321	40,482	45,984	81,142	18,818
DOLPA	MOUNTAIN	1	32,327	2,278	2,503	4,503	1,528
HUMLA	MOUNTAIN	1	44,728	3,354	3,580	6,573	1,928
JAJARKOT	HILL	1	147,781	12,171	13,099	23,956	6,365
JUMLA	MOUNTAIN	1	97,511	7,938	8,538	15,589	4,373
KALIKOT	MOUNTAIN	0	NA	NA	NA	NA	NA
MUGU	MOUNTAIN	1	47,488	3,815	4,023	7,442	2,102
PYUTHAN	HILL	1	231,924	20,039	21,742	39,528	10,383
ROLPA	HILL	1	228,009	18,218	19,437	35,778	9,628
RUKUM	HILL	1	207,095	17,407	18,222	33,979	8,474
SALYAN	HILL	1	233,513	19,068	20,878	37,753	9,511
SURKHET	HILL	1	322,814	25,959	29,071	51,793	11,420
MID-WESTERN		**14**	**238,522**	**18,835**	**20,996**	**37,490**	**9,350**
ACHHAM	HILL	1	250,830	20,251	21,673	39,798	11,093
BAITADI	HILL	1	255,868	20,088	22,143	39,853	9,463
BAJHANG	MOUNTAIN	1	182,334	13,758	15,229	27,320	7,986
BAJURA	MOUNTAIN	1	118,793	9,921	10,431	19,362	5,234
DADELDHURA	HILL	2	69,495	5,601	6,230	11,144	2,547
DARCHULA	MOUNTAIN	1	133,261	9,682	10,947	19,383	5,815
DOTI	HILL	1	225,290	16,763	18,689	33,388	9,586
KAILALI	FLAT	2	352,737	28,747	33,593	58,026	12,456
KANCHANPUR	FLAT	1	429,070	33,404	38,437	67,181	15,379
FAR WESTERN		**11**	**221,810**	**17,506**	**19,745**	**34,966**	**8,596**

Note: NA = Not applicable (as there is no hospital in Kalikot, the indicator can not be calculated)

Annex III: Conceptual Framework for Hospital Autonomy

Policy and Management Functions	Extent of Autonomy				
	Fully Centralized	……→			Fully Decentralized
	Low Autonomy	Some Autonomy			High Autonomy
		a	b	c	
A. Health Domain					
Overall Health Goals	All decision making entirely by owner	Decision making jointly by owner and hospital management			
Hospital Specific Goals	All decision making entirely by owner	Decision making jointly by owner and hospital management			Decision making entirely by hospital Management
B. Hospital Domain					
Strategic Management	Direct control by owner: government, parastatal, or private	Governance through a board appointed by owner, and guided by owners, but not subservient to owner			Independently constituted Board, making independent Decisions
Administration	Direct management by owner, who also sets the rules for management of the hospital	Limited powers decentralized to Hospital management; owner still weilds some influence over management decisions			Independent management operating under Board's directions, with significant independent decision-making Capacity
Procurement	Centralized procurement, with owner deciding on quantities and total financial outlay	Combination of centralized and decentralized procurement			Procurement completely under control of hospital management
Financial Management	Full funding by owner; owner has financial control	Owner subsidy plus funds through other sources, some owner influence but finances generally under Board's control			Self-financing; no owner subsidy; funds entirely under Board control; significant independent decision-making capacity for managers
Human Resource Management	Staff appointed by owner; completely under owner's regulatory control	Staff employed by Board, and subject to the Board's regulations, but also subject to owner's regulations			Staff employed by Board; all conditions and regulation set by Board; managers have significant decision-making Capacity

Annex IV: Hospital Autonomy: Implementation Guidelines



Source:

Chawla M and Govindaraj R (1996). Improving Hospital Performance through Policies to Increase Hospital Autonomy: Implementation Guidelines. Data for Decision Making Project. August 1996.