

FINAL REPORT

District Health Assessment: To Guide the Design of the National Health Insurance Scheme

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Research Report

District Health Assessment: To Guide the Design of the National Health Insurance Scheme

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Acronyms

AHW	auxiliary health worker
BS	Bikram Sambat (Nepali calendar)
CBHI	community-based health insurance
DDC	district development committee
DHO	District Health Office
D(P)HO	District (Public) Health Office
ECG	electrocardiograph
FCHV	female community health volunteers
FHCS	Free Health Care Services
GDP	gross domestic product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HA	health assistant
HDI	Human Development Index
HFOMC	Health Facility Operation and Management Committee
HMIS	Health Management Information System
HP	health post
IP	inpatient
LMD	Logistics and Management Division
MCHW	maternal and child health worker
MIS	management information system
MoF	Ministry of Finance
MoHP	Ministry of Health and Population
MoLD	Ministry of Local Development
NGO	non-governmental organisation
NHI	National Health Insurance
NHRC	Nepal Health Research Council
NPR	Nepalese rupees
OPD	outpatient department
PHCC	primary health care centre
PPP	purchasing power parity
SAHW	senior auxiliary health workers
SHP	sub health post
VDC	village development committee
VHW	village health worker
WHO	World Health Organization

Chapter 1 Introduction

Background and rationale

The health system in Nepal is largely financed by out-of-pocket expenditure by private households. In 2008/09, out-of-pocket expenditure amounted to approximately 55% of total health expenditure (MoHP 2012) and is generally paid directly to the health facility at the time of service utilisation. Prepayment and resource pooling are comparatively less common in Nepal. In order to reduce out-of-pocket expenditure, the Ministry of Health and Population (MoHP) of Nepal is in the process of improving the current health financing system. It has extended social health protection to citizens by introducing, among other things, free primary health care and maternal health care for all. Furthermore, the MoHP, with the assistance of the development partners and civil society actors, has developed a policy for National Health Insurance (NHI) with the overall objective of providing universal health coverage to the people of Nepal by improving access to, and utilisation of, quality health care services.

While discussion on the actual design of the NHI scheme is ongoing, the MoHP has decided to implement the health insurance scheme in five districts – Ilam, Sarlahi, Baglung, Banke and Kailali – as part of the first phase roll out. However, in order to design a tailor-made NHI to suit the context of Nepal, it is crucial to fully understand the current situation of the health system in these first phase districts. Accordingly, the objective of this district assessment is to guide the NHI design and implementation process by analysing the current situation of the health system in the selected districts.

The assessment focused on the following five areas as areas of great importance in the design of NHI:

- Service delivery mechanism
- Financing structure
- Human resources
- Health Management Information System (HMIS)
- Pharmaceutical services

This assessment was carried out by the Nepal Health Research Council (NHRC) with support from the World Health Organization (WHO), GIZ and the Karuna Foundation.

Methodology

Although some parts of this assessment build on existing studies and research, the majority of the qualitative and quantitative information was gathered through a health facility survey. The technical working group, which consisted of representatives from the MoHP, the NHRC, GIZ, Karuna Foundation and WHO, identified a framework of areas that are particularly relevant to designing an NHI scheme in Nepal. Based on this framework, the technical working group developed questionnaires for the health facility survey in the five districts.

Responding to the diversity of health facilities in terms of size and services offered, the technical working group developed different questionnaires for public hospitals (district, regional and zonal), peripheral health facilities (primary health care centres [PHCCs], health posts [HPs], and sub-health posts [SHPs]) and private health facilities. An additional questionnaire was designed for District (Public) Health Offices (D[P]HOs). Despite the semi-structured nature of the questionnaire, several open-ended questions were included. Before conducting the survey, all the questionnaires were pretested on 3 April 2013 on various health facilities in Dhading district.

Once the questionnaires were finalised, health facilities were selected for the actual survey. Facilities were selected using a mixed sampling method within each district. All public hospitals in each district were included in the survey; hence, no selection mechanism was necessary for public hospitals. In the case of private hospitals, PHCCs, HPs and SHPs were selected randomly from a list of all health facilities in the study districts. The number of such health facilities to be selected was predetermined by the technical working group. In the case of private hospitals, one was chosen with less than 50 beds and another with at least 50 beds. In addition, one hospital run by a non-governmental organisation (NGO), cooperative or other non-profit organisation was included in the list of private hospitals, where possible. Regarding the peripheral health facilities, the technical working group decided to take two PHCCs, two HPs and three SHPs. These were selected following a simple random sampling method based on the list of health facilities in the district. Lastly, an interview was conducted with the D(P)HO in each of the study districts.

The survey was conducted by a team consisting of staff from NHRC, the Karuna Foundation and GIZ during field trips to the surveyed districts from 24 April to 4 May 2013. In each of the districts, the interviewers visited one public hospital (but two in Kailali district), three private hospitals (except for in Kailali and Baglung, where only two were visited as there were no hospitals run by non-profit organisations; and Ilam, where two non-public hospitals were visited, 1 private and 1 non-profit), two PHCCs, two HPs, three SHPs and the D(P)HO. A total of 58 interviews were conducted out of the original 68 planned.

During the facility visits, interviews were held with various staff members, depending on the type of information to be gathered. In order to avoid misunderstandings and to guide the interviewees, all survey tools were filled out by the interviewers themselves during the facility visits. The dataset was developed in Microsoft Excel 2007 and finalised by the technical working group before visiting the district.

In addition to the survey, a desk review was conducted to gather information on the geographic, demographic, socioeconomic and epidemiological characteristics of the study districts and to support the regulatory framework for institutionalising the NHIS. The list of facilities, institutions and companies visited is provided in Annex 2.

Limitations

This assessment is based mainly on a survey of various health facilities in five districts. Because of the relatively small size of the sample it is not representative and, hence, does not paint a complete picture of the health system in Nepal. Rather, it provides an indicative picture of the current situation of health service delivery in terms of service availability, health financing, the human resource situation, the Health Management Information System and availability of drugs, as well as some issues related to social health protection systems, in the districts of Ilam, Sarlahi, Baglung, Banke and Kailali. Furthermore, the study focuses on areas that are of relevance to health insurance, making it of limited use for other purposes.

Structure of the report

Chapter 1 gives the background to the district health assessment including the rationale for the assessment, its methodology and limitations. Chapter 2 gives a brief overview of the health system in Nepal to contextualise the findings of the assessment in the country and system context. It outlines how the fund flow is organised, how different types of health facilities are distributed and how facilities at different levels are governed. Chapter 3 gives an overview of the districts surveyed including their geographic, demographic and socio-economic characteristics as well as their epidemiological profile and the distribution of health facilities by level of health provision. Chapter 4 deals with the volume and type of services provided by the different health facilities, as well as the fees charged for the various services. Chapter 5 looks at the sources of income in the health sector, the composition of expenditure, and the average fees charged for medical services and surgeries by health facilities. Chapter 6 examines the human resources status at the selected health facilities, both in absolute and relative terms. Chapter 7 looks at the Health Management Information System in Nepal. Chapter 8 presents the pharmaceutical profile of the different facilities and looks at the drugs available under the Free Health Care Service (FHCS) programme. Finally, Chapter 9 looks at the regulatory framework in Nepal for establishing national health insurance, including the options for structuring the purchasing agent.

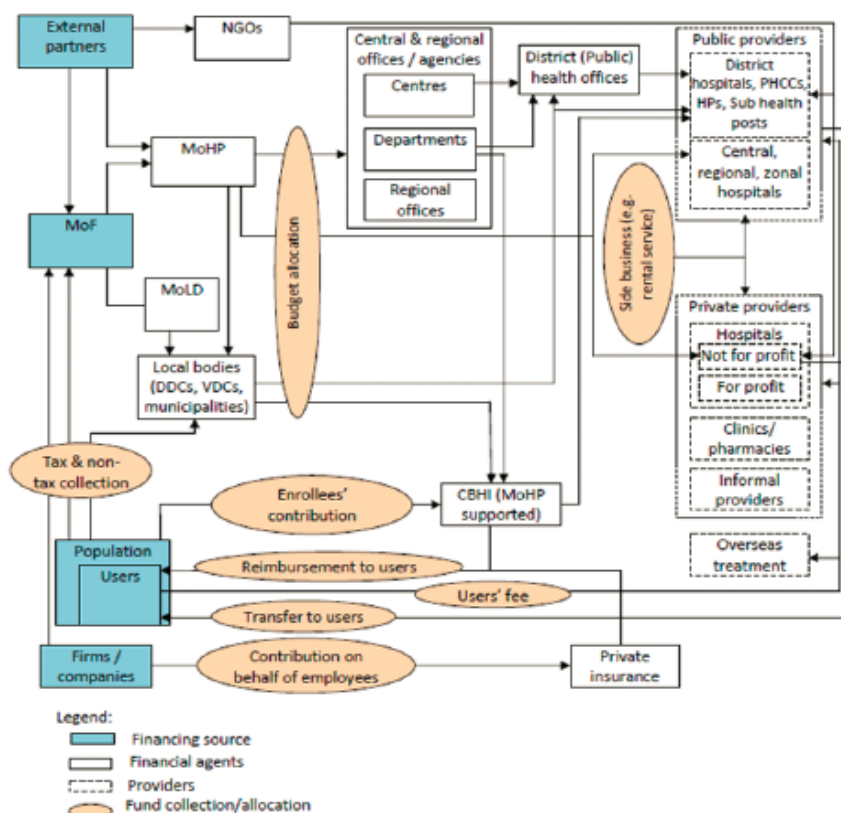
Chapter 2 Health System Context

Overview of health financing system

The health care system in Nepal is heavily financed by the private sector and out-of-pocket spending plays a prominent role. According to Nepal's National Health Accounts, in 2008/09 the private sector financed 55.8% of total health expenditure. An estimated 90.6% of this was paid directly by households at the time of health care utilisation. Moreover, 21% of spending in the health sector was financed by the Government of Nepal and the remaining 18.5% was financed by external agencies, grouped under the category 'rest of the world' (MoHP 2012).

The main provider payment mechanism in Nepal is payments directly to health providers by the general public, i.e., 'fees for services/out-of-pocket payments'. The next main provider payment mechanism is line item budgeting, which is used by the Government of Nepal and channelled mainly through the MoHP and its subordinates (Figure 1).

Figure 1 Financial flows in the health financing system in Nepal



Note: The lines connecting the parts of the figure do not give any indication of the size of fund flows.

Source: Torres et al., 2011

The planning and budgeting processes in Nepal are guided by a top-down approach rather than a bottom-up, needs-based approach (Torres et al. 2011). Semiautonomous hospitals

receive block grants for the operation of the hospital as well as salaries and allowances for government employees. Lower-level facilities receive mostly in-kind support, except for some funds generated through the FHCS programme and Aama (Safe Motherhood) programme.

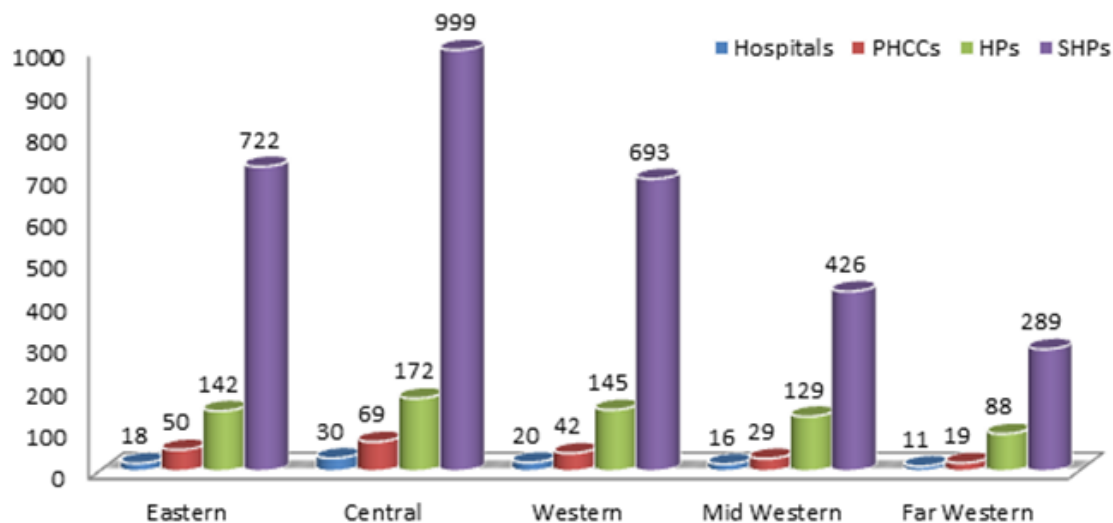
Distribution of health facilities

Public health facilities are uniformly spread across the country up to the lowest administrative unit of the government, the village development committee (VDC). There are 4,109 public health facilities (public service delivery outlets) in Nepal: 95 hospitals (including 65 district level hospitals), 209 PHCCs, 676 HPs and 3,129 SHPs (Department of Health Services 2012). PHCCs, HPs and SHPs provide preventive and basic primary care at the VDC level under the jurisdiction of the concerned D(P)HO. Peripheral facilities, PHCCs, HPs, SHPs mainly provide basic primary care, both preventive and curative. In addition to the primary care, most of the PHCCs and a very few HPs provide investigative services as well obstetric care services. While hospitals on the other hand provide secondary and tertiary care services with inpatient (IP) services in addition to the primary care, which also makes up a major portion of the services provided. Investigative services in hospitals range from routine blood and urine examinations to sophisticated magnetic resonance imaging (MRI).

In terms of capacity, HPs and SHPs only provide outpatient care and are staffed with health assistants (HAs), auxiliary health workers (AHWs), maternal and child health workers (MCHWs) and village health workers (VHWs). District hospitals are 25-bed facilities. A range of specialty services are offered by zonal, regional, sub-regional, central and specialty hospitals. Except for one national laboratory, all government laboratories are located within health facilities and are not free standing. These government-owned laboratories offer a package of tests depending on their level in the hierarchy of services, ranging from a few elementary tests to all imaginable tests.

In addition to the modern allopathic system of medicine, health services are also delivered through ayurveda and other traditional medical systems.

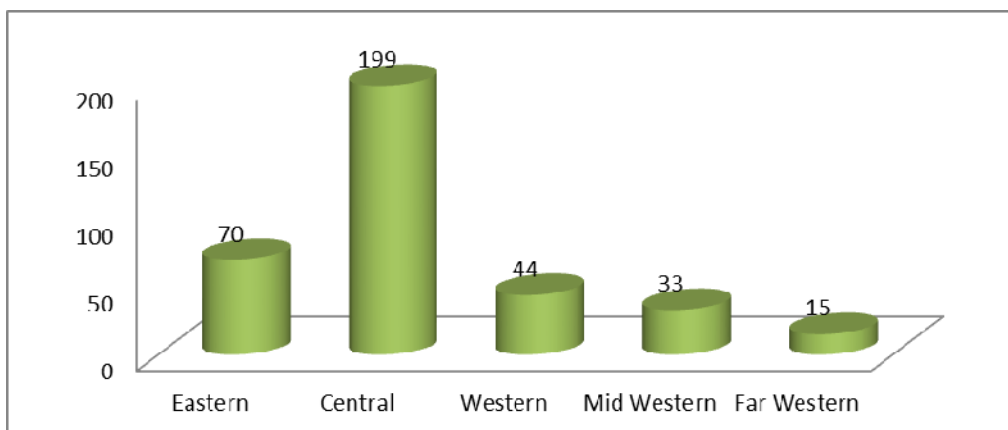
Figure 2 Distribution of public health facilities by development region



Source: Department of Health Services (2012)

While the number of public health facilities has remained stable for the last two decades, the private sector has grown rapidly, particularly in the last few years. In 2005/06, two-thirds of hospital beds (13,400) were private, compared to 6,796 government hospital beds. The NHSP-IP 2 reports that the for-profit private sector also trains 90% of doctors (MoHP 2011). According to MoHP records, there are a total of 361 private hospitals, nursing homes and medical colleges in Nepal (see Figure 3 for distribution).

Figure 3 Distribution of private health facilities by development region



Source: Official records of MoHP, Department of Health Services and Regional Directorates

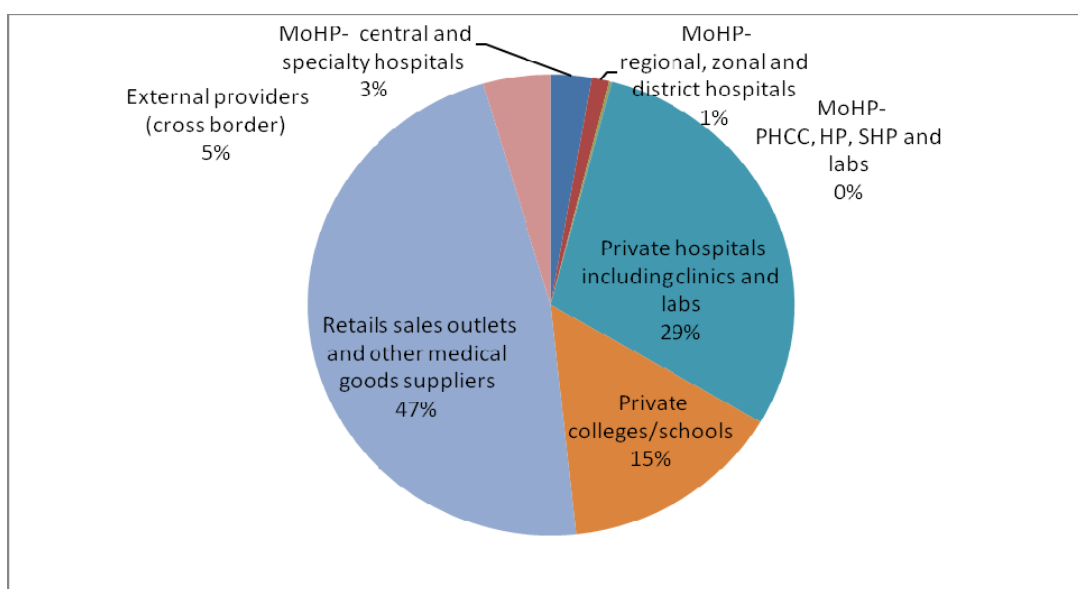
According to the availability of data from a limited health facility mapping survey, out of a total of 147 hospitals found in 27 districts, 33 were government hospitals and 114 were non-government hospitals (South Asian Institute for Policy Analysis and Leadership, et al. 2010). The private sector is also heavily involved in the provision of laboratory services. According to the annual report of the Department of Health Services, 1,284 laboratories are operated

by the private sector compared to 290 by the government (Department of Health Services 2012).

The type and volume of services provided by private laboratories and their financial turnover are not known. It is also not known how many private laboratories are owned by doctors working in public institutions. Such ownership would create the risk of collusion, i.e., public doctors referring patients to their private laboratories and ordering unnecessary tests for private financial gain.

The increasing role of the private sector in health care provision is shown in the Nepal Living Standard Survey, which found that 63% of consultations for acute illnesses take place at private facilities, including pharmacies (Central Bureau of Statistics 2011). Private sector facilities are, therefore, the major recipients of out-of-pocket payments (Figure 4).

Figure 4 Recipients of out-of-pocket expenditure in health sector (2008/09)



Source: MoHP 2012

Governance of health facilities

The Local Self Governance Act, 1999 envisaged decentralise governance in the health sector through the devolution of responsibilities, authority and resources to local bodies. As per this Act, peripheral government health facilities (SHPs, HPs and PHCCs) were handed over to local Health Facility Operation and Management Committees (HFOMCs) in 28 districts. HFOMCs are supposed to govern the affairs of local health facilities, including their operation and management. Based on the Local Self Governance Act, in some districts, funds allocated to health flow through the district development committee (DDC) to the VDC then to the HFOMC and finally to the health facility. Despite this handover, human resource transfers, placements, leave and promotion are still controlled by the central and regional offices of the MoHP.

Regarding district and upper-level health facilities, under the Development Board Act, 1956, district level hospitals, sub-zonal hospitals, zonal hospitals, and regional hospitals have been gradually handed over to local-level hospital development boards. The chairperson of the hospital development board is nominated by the Government of Nepal from among eminent social activists or retired doctors, as defined in the formation order of that particular hospital. The board has the authority to manage the hospital autonomously according to prevailing government rules and regulations. Most of the tertiary and specialty hospitals and some district level hospitals in the public sector have semi-autonomous status and receive government budget funds in the form of block grants without any direct linkage to their performance. The rest of the public health care providers remain directly under the jurisdiction of the Department of Health Services and receive line item budget support or in-kind support. The governance structure of the selected hospitals is summarised in the following table.

Table 1 Governance structure of the selected hospitals

Governance structure	Tikapur Hospital	Seti Zonal Hospital (Kailali District)	Bheri Zonal Hospital (Banke District)	Ilam District Hospital
Forming order	2060 BS (2003 AD)	2045 BS (1988 AD)	2041 BS (1985 AD)	2060 BS (2003 AD)
Board composition	<p>Chairperson: Nominated by Government of Nepal</p> <p>Members: Chief/chairperson of Tikapur Municipality; representative from DDC; chief of Ilaka administration office; president of District Federation of Nepalese Chambers of Commerce and Industry; chairperson of Nepal Red Cross Society; women leader from respective ward; staff nurse nominated by Board</p> <p>Member secretary: Medical superintendent</p>	<p>Chairperson: Nominated by the Government of Nepal from among socially reputed persons</p> <p>Members: DDC chairperson; District Administration Office chief; mayor/chief of Dhangadhi Municipality; 2 persons nominated by Government of Nepal from among reputed social leaders; 2 specialised doctors, 1 medical officer and 1 paramedic or nursing staff nominated by Government of Nepal based on the recommendation of Board</p> <p>Member Secretary: Medical superintendent</p>	<p>Chairperson: Nominated by the Government of Nepal from among retired senior doctors</p> <p>Members: DDC chairperson; District Administration Office chief; mayor/chief of Nepalgunj; 2 persons nominated by Government of Nepal from among reputed opinion leaders; 2 specialised doctors, 2 medical officers and 1 paramedic or nursing staff nominated by Government of Nepal based on the recommendation of Board</p> <p>Member Secretary: Medical superintendent</p>	<p>Chairperson: Nominated by Government of Nepal</p> <p>Members: Mayor/chairperson of municipality or VDC where hospital is located; representative from DDC; officer level staff from District Administration Office; president of District Federation of Nepalese Chambers of Commerce and Industry; chairperson of Nepal Red Cross Society; women representative from respective ward; health workers among staff nominated by Board</p> <p>Member Secretary: Medical superintendent</p>

Board's major roles and responsibilities	<ul style="list-style-type: none"> • Management and operation of hospital • Preparing long-term and short-term plans for the smooth functioning of hospital • Management of adequate resources for the smooth functioning of hospital • Approval of hospital budget • Determining service charges • Recruitment and management of local level staff and management of government staff • Provision of extra incentives to Government of Nepal employees 	<ul style="list-style-type: none"> • Generating local funds to make hospital self reliant • Recruitment of human resources (technical and administrative) • Determining charges for out-patient, clinical, inpatient and laboratory services • Determining free and payable bed charge • Recommending high level training opportunities to staff • Recruitment of local level staff and management of government staff • Provision of extra incentives to Government of Nepal employees 	<ul style="list-style-type: none"> • Policy formulation relating to hospital management • Recruitment of human resources (technical and administrative) • Determining charges for out-patient, clinical, inpatient and laboratory services • Determining free and payable bed charge • Recommending high level training opportunities to staff • Recruitment of local level staff and management of government staff • Provision of extra incentives to Government of Nepal employees 	<ul style="list-style-type: none"> • Management and operation of hospital • Preparing long-term and short-term plans for the smooth functioning of hospital • Management of adequate resources for the smooth functioning of hospital • Approval of hospital budget • Determining service charges
Budget	<p>Sources of funds held in the separate account of the Board:</p> <ul style="list-style-type: none"> • Government grant • Government of Nepal funds for staff salaries and incentives • Revenue raised by hospital from provision of services • Funds from donors or external support 	<p>Sources of funds held in the separate account of the Board:</p> <ul style="list-style-type: none"> • Government grants for management of hospital • Revenue raised by hospital from provision of services • Funds from donors • Government of Nepal funds for staff salaries and incentives 	<p>Sources of funds held in the separate account of the Board:</p> <ul style="list-style-type: none"> • Government grants for the management of hospital • Revenue raised by hospital from provision of services • Funds from donors • Government of Nepal funds for staffs salaries and incentives 	<p>Sources of funds held in the separate account of the Board:</p> <ul style="list-style-type: none"> • Government subsidies • Revenue raise by hospital from provision of services • Funds from donors or external support • Other funds <p>Account signatories: Medical</p>

	<ul style="list-style-type: none"> Others funds <p>Account signatories: Medical superintendant and account officer</p>	<ul style="list-style-type: none"> Other funds 	<ul style="list-style-type: none"> Other funds 	superintendant and account officer
Transparency and accountability	Financial audit based on Government of Nepal provisions	Financial audit based on the Government of Nepal provisions	Financial audit based on Government of Nepal provisions	Financial audit based on Government of Nepal provisions
Autonomy	Board can prepare required policy, but it needs to be endorsed by Government of Nepal.	Board can prepare required policy, but it needs to be endorsed by Government of Nepal.	Board can prepare required policy, but it needs to be endorsed by Government of Nepal.	Board can prepare required policy, but it needs to be endorsed by Government of Nepal

Source: Compiled from formation order of each hospital

Chapter 3 Profile of Surveyed Districts

Geographic profile

Out of the five surveyed districts, three (Kailali, Banke and Sarlahi) are located in the Terai (plains region of Nepal) and two (Baglung and Ilam) in the hills. Although mainly in the hills, Baglung stretches up to an altitude of 7,244 m and can, therefore, be partly considered a mountain district. All development regions were covered in the study, with one district being selected from each development region.

Table 2 Geographical characteristics of the surveyed districts

District	Area	Develop- ment region	Area (km ²)	Elevation (m)	Average rainfall per year (mm)	Mean tempera- ture (°C)	Area cov- ered in snow in winter (ha)
Kailali	Terai	Far Western	3,235	179–1,957	1,792.5	24.5 (2010)	0
Banke	Terai	Mid Western	2,337	129–1,290	1,350.8	24.8 (2010)	0
Baglung	Hills	Western	1,784	1,000–7,244	NA	NA	1,738
Sarlahi	Terai	Central	1,002	61–808	NA	NA	0
Ilam	Hills	Eastern	1,703	610–3,679	1,713	20.4 (2009)	0

Note: NA means data not available; location for meteorological data: Dhangadhi (Kailali), Nepalgunj (Banke) and Ilam tea state (Ilam); rainfall numbers are calculated as average for the years 1971–2000.

Source: Intensive Study and Research Centre (2013)

In terms of area, Kailali is the biggest district (3,235 km²) and Sarlahi the smallest (1,002 km²). Baglung is the only district with snowfall during an average winter, although the mountains in Ilam also reach up to more than 3,500 m. Kailali, Banke and Sarlahi are relatively flat for Nepalese standards and, hence, have very mild winters and hot summers. Rainfall data is only available for Kailali, Banke and Ilam where the average rainfall per year is relatively high. As in most places in Nepal, these districts receive a large amount of rain during the monsoon and little during the dry winter.

Demographic profile

The demographic profiles of the districts differ remarkably. The differences are particularly great between the Terai districts and hill districts.

Table 3 Demographic profile of the surveyed districts

District	Popula-	Population < 5	Population > 64	Sex ratio	Population density	Literacy
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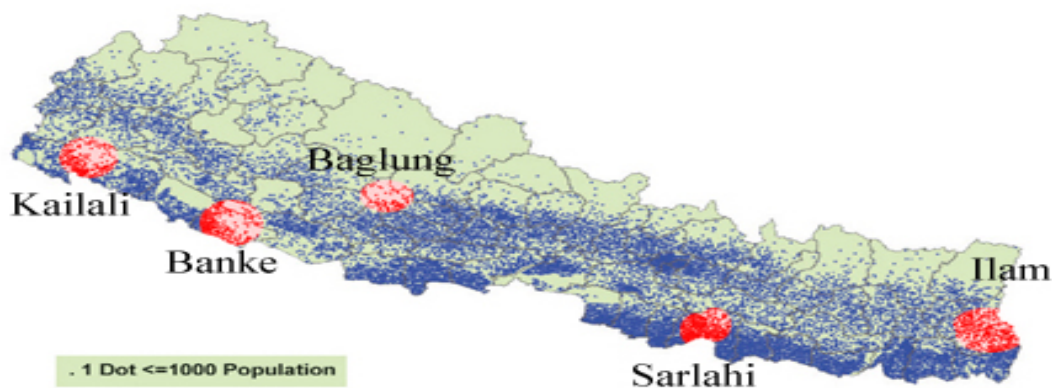
	tion	years	years	(males per 100 fe- males)	(people per km ²)	rate (%)
Kailali	775,709	74,278 (9.57%)	33,052 (4.26%)	95.2	383.07	66.3
Banke	491,313	48,828 (9.93%)	20,369 (4.14%)	98.8	375.33	62.4
Baglung	268,613	27,508 (10.24%)	18,327 (6.82%)	78.3	150.57	71.9
Sarlahi	769,729	86,846 (11.28%)	36,613 (4.75%)	102.6	498.53	46.3
Ilam	290,254	20,494 (7.06%)	16,027 (5.52%)	94.6	87.64	77.9

Source: Intensive Study and Research Centre (2013)

As expected, the population density in the Terai districts (Kailali, Banke and Sarlahi) is much higher than in the hill districts (Baglung and Ilam). Kailali is the largest of the five districts in terms of area and population. Surprising, although Sarlahi is the smallest of the five districts in terms of area, it has the second largest population, which explains the very high population density of nearly 500 people per square kilometre. Furthermore, Sarlahi is the only district included in the assessment with more than 11% of its population under five years old. In contrast, Ilam has the lowest population density and a relatively small proportion of its population under five years old (7%).

Baglung has the largest proportion of people aged 65 or above in the sample, at 6.82% this figure is more than 2 percentage points higher than for Kailali, Banke and Sarlahi. Two additional things are worth noting: Firstly, compared to the other districts, Baglung has a significant excess of women. For every 100 women in the population there are only 78 men. While four out of the five districts show at least a small surplus of women, Sarlahi is the only district where the number of men exceeds the number of women (at 103 men to 100 women). Secondly, the literacy rate of people living in Sarlahi (46.3%) is very low compared to other surveyed districts (which range from 62% to 78%) and also to the national average (65.9%).

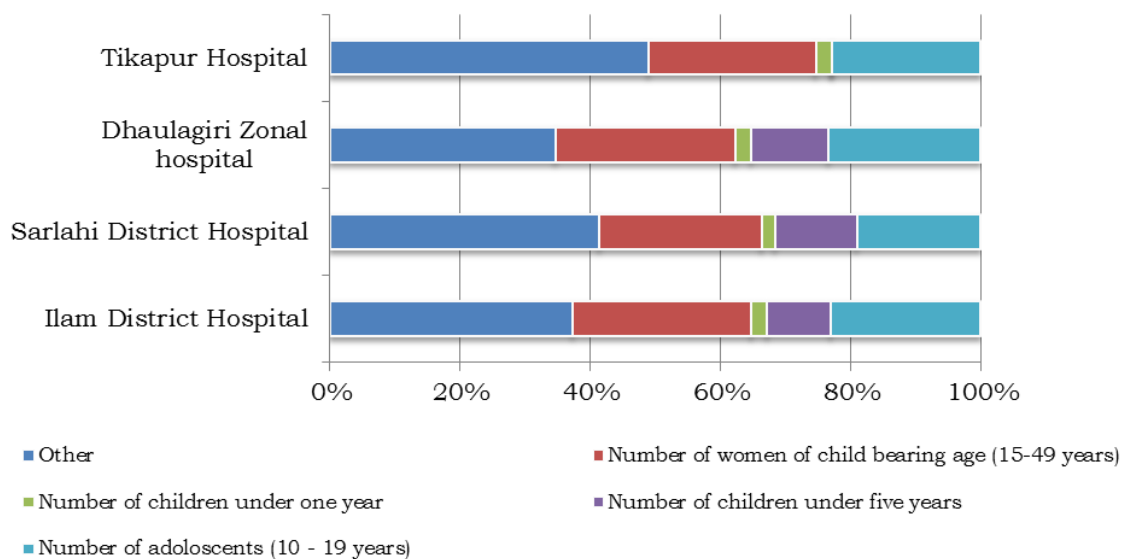
Figure 5 Population distribution in Nepal in 2001



Source: Central Bureau of Statistics Nepal (2007)

The data collected for the district assessment broadens the demographic profile analysis by providing detailed information on the composition of the population in the catchment areas of the selected facilities. Figure 6 shows the proportion of woman of child bearing age (15–49 years), children under one year, children under five years and adolescents from the total population in the catchment area of the health facility at the public hospital level. Although small discrepancies can be observed, similar trends were found for peripheral facilities (PHCCs, HPs and SHPs).

Figure 6 Demographic profile of population in the catchment area of public hospitals



Note: Information for Bheri and Seti Zonal Hospital was not available.

Furthermore, the survey revealed that the composition of the urban and rural population in the catchment areas of the sampled public hospitals differs significantly between surveyed

districts. For example, while Kailali's rural population was estimated to be around 60%, Ilam's rural population was over 90%.

Socioeconomic profile

As the differences between the districts in terms of demographics and geography are significant, it follows that the socioeconomic differences are also great (Table 4).

Table 4 Socioeconomic profile of the surveyed districts

District	GDP per capita (PPP USD)	Human Development Index (HDI)	Ratio to national HDI (%)	Social Empowerment Index
Kailali	1,184	0.442	93.8	0.409
Banke	1,370	0.479	101.6	0.437
Baglung	1,145	0.492	104.3	0.423
Sarlahi	802	0.408	86.5	0.213
Ilam	1,215	0.521	110.5	0.412

Note: The social empowerment index is calculated using four key domains: participation, information, health and education.

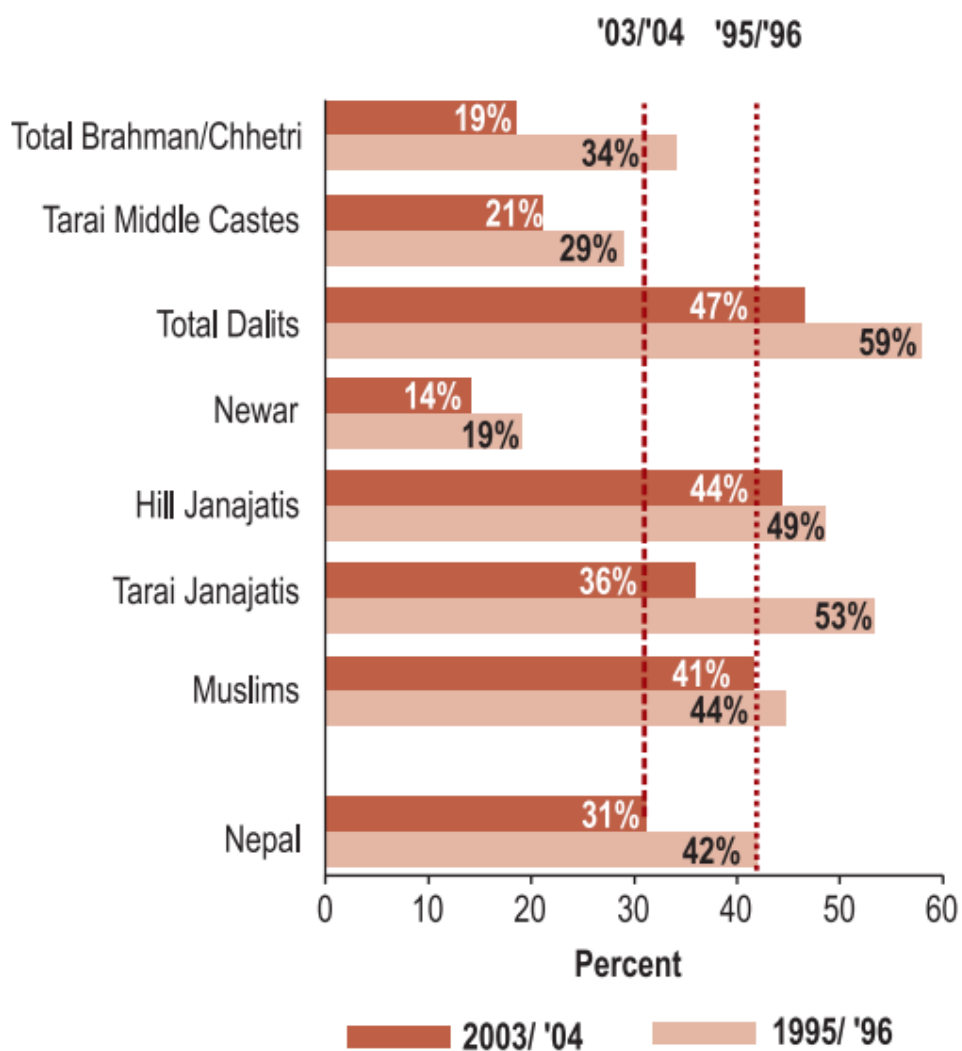
Source: Tropp (2004); all data is from 2001

According to all three indicators, namely, GDP per capita, HDI and Social Empowerment Index, Sarlahi is by far the worst performing of the five districts. The scope of the difference, especially in terms of GDP per capita and the Social Empowerment Index, is quite remarkable. For example, the GDP per capita in Ilam is more than 50% higher than the same figure in Sarlahi. The difference in the Social Empowerment Index is even larger and the other four districts show values about twice as high as the ones for Sarlahi. These numbers are consistent with the relatively low literacy rate in Sarlahi compared to the other four districts and the national average.

Out of the districts sampled, Ilam, Baglung and Banke have a higher HDI than the national average, whereas Kailali is slightly below the national average, even though its GDP per capita is relatively high. As mentioned above, Sarlahi is far below average. If ranked according to HDI in comparison to all other Nepalese districts, Ilam comes 11th out of the 75 districts and Baglung, Banke, Kailali and Sarlahi rank 19th, 29th, 46th and 58th, respectively (United Nations Development Programme, 2004).

Finally, significant socioeconomic differences can be observed between the different cultural and religious groups. Figure 7 below shows the national incidence of poverty for different ethnic groups and the dotted line in the figure shows the national average for total population.

Figure 7 Trends in the incidence of poverty by caste and ethnicity



Source: Gender and Social Exclusion Assessment Team (2006)

These socioeconomic differences have an appreciable impact on health outcomes. Table 5 shows the differences in mortality rates and life expectancy between the different ethnic groups.

Table 5 Mortality rates and life expectancy by caste/ethnic group

Caste / Ethnicity	Under 5 MR (per '000)	IMR (per '000)	Life Expectancy*
Brahman	69.0	52.5	61.4
Chhetri	109.1	77.8	58.4
Yadav/Ahir	142.0	98.5	54.2
Dalit	171.2	116.5	50.8
Newar	74.9	56.0	63.2
Tamang	141.2	98.0	54.2
Magar	135.9	94.7	54.9
Limbu	133.3	93.2	55.2
Rai	133.0	92.9	55.3
Gurung	126.3	88.6	56.1
Tharu	106.4	76.0	58.7
Muslim	158.3	108.6	52.2

Note: MR = mortality rate; IMR = infant mortality rate.

*Disaggregated data by gender and caste is unavailable

Source: Gender and Social Exclusion Assessment Team (2006)

As Table 5 shows, Muslims and Dalits have a higher mortality rate and a lower life expectancy than any other ethnic group. The differences between other ethnic groups are also significant.

Epidemiological profile

Given the lack of a comprehensive study on the burden of disease in Nepal, the proportion of outpatient department (OPD) visits and the reasons for consultation was used to describe the epidemiological profile in the surveyed districts. The data used in this section was taken from the Department of Health Services Annual Report for 2010/11 (Department of Health Services 2012).

Table 6 Epidemiological profile of surveyed districts (2010/11)

	National	Ilam	EDR	Sarlahi	CDR	Baglung	WDR	Banka	MWD	Kailali	FWR
% of new OPD visits of total population	70.39	45.84	72.30	99.26	58.97	85.45	72.67	80.64	89.89	52.33	76.40
Disaggregated by sex among total OPD visits											
Female	55.65	56.81	54.81	66.42	55.75	57.30	56.75	55.17	55.87	59.68	54.79

Male	44.35	43.19	45.19	33.58	44.25	42.70	43.25	44.83	44.13	40.32	45.21
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Note: EDR = Eastern Development Region; CDR = Central Development Region; WDR = Western Development Region; MWDR = Mid Western Development Region; FWDR = Far Western Development Region

Source: Department of Health Services (2012)

The percentage of OPD visits in the sampled districts varied from between 46% in Ilam to almost 100% in Sarlahi. It should be noted, however, that the figures for the individual districts differ from those for the development regions. This could be due to the diverse geography of the different districts within the region and, consequently, the availability of health facilities in the district. In addition, the difference in health seeking behaviour between the male and female population in all districts is similar to the national ratio of 44:56, except for Sarlahi where the ratio was around 66:34.

In terms of the burden of disease evidenced during the OPD visits (which is an indicator of morbidity), communicable and infectious diseases ranked highest in all five surveyed districts. A similar trend was observed at the national and regional levels. Skin diseases ranked second in all of the surveyed districts, as well as in the five development regions, which is consistent with national figures. Banke had the highest proportion of skin diseases and Baglung the lowest. The proportion of people with non-communicable diseases, such as cardiovascular problems and mental health problems, was quite low in all districts. This could be explained by the underreporting of these pathologies or confusion with regards to their classification in the HMIS.

Table 7 Percentage of OPD visits out of total OPD visits in the surveyed districts

	Na- tional	Ilam	EDR	Sar- lahi	CDR	Bag- lung	WDR	Bank e	MWD R	Kailali	FWD R
Total com- municable diseases	17.66	13.55	18.28	15.77	17.18	18.90	15.15	19.76	20.74	15.67	17.64
Other infec- tious dis- eases	18.15	20.65	18.72	11.73	16.10	22.27	18.86	18.24	18.78	19.23	20.28
Nutritional and meta- bolic disor- ders	2.56	1.90	2.51	2.60	2.78	1.86	2.49	2.74	2.44	3.11	2.39
Skin diseas- es	12.59	10.14	13.53	11.82	13.69	9.01	11.47	16.45	12.44	11.69	9.74
Ear, nose and throat infections	6.03	11.26	7.70	3.13	5.69	7.31	6.49	4.18	4.85	4.31	4.17

Oral health related problems	3.30	3.87	3.05	2.14	3.94	3.66	3.23	3.42	2.94	1.82	2.78
Eye problems	2.53	2.83	3.16	1.11	2.52	2.06	2.34	2.87	2.12	2.15	2.13
Obstetric complication and gynaecological problems	1.69	1.24	1.38	0.49	1.52	1.73	2.06	0.94	1.77	2.72	2.07
Mental health related problems	0.40	0.31	0.33	0.08	0.37	0.52	0.80	0.06	0.20	0.26	0.22
Malignancy	0.07	0.00	0.08	0.00	0.09	0.01	0.12	0.02	0.01	0.00	0.00
Cardiovascular related problems	1.90	2.37	1.66	1.12	2.05	2.25	2.67	1.01	1.27	1.64	1.56
Other diseases and injuries	33.13	31.88	29.62	50.00	34.07	32.12	34.43	30.29	32.46	37.40	37.02

Note: The category 'other diseases and injuries' includes surgical problems; EDR = Eastern Development Region; CDR = Central Development Region; WDR = Western Development Region; MWDR = Mid Western Development Region; FWDR = Far Western Development Region

Source: Department of Health Services (2012)

Table 8 presents selected disability indicators. It shows that the proportion of people with disability oscillates around 2% nationally, in each development region and in the five districts surveyed, except for the Central Development Region and Sarlahi district, where the proportion of people with disabilities was 1.25% and 1.44%, respectively. The disaggregation of this indicator by gender revealed that disability was higher among males than females in all of the surveyed districts and development regions, as well as for the nation as a whole.

Table 8 Disability indicators

	National	Ilam	Eastern hills	Sarlahi	Central Terai	Baglung	Western hills	Banka	Mid Western Terai	Kailali	Far Western Terai
Proportion of population disabled	1.94	2.63	2.58	1.25	1.44	2.30	2.40	1.52	1.94	1.98	1.99

bled											
Disaggregated by sex											
Male	2.17	2.98	2.98	1.43	1.62	2.84	2.88	1.73	2.18	2.15	2.18
Female	1.71	2.30	2.23	1.05	1.25	1.88	2.01	1.31	1.72	1.82	1.81

Source: Department of Health Services (2012)

Health facilities

This section assesses service delivery status in terms of health facilities based on the data collected from a limited number of health facilities. In all five districts, the distribution of health facilities is based on geographical considerations, not on population size. Distribution is largely according to the administrative and political division of the districts. This system is followed nationwide. As a consequence, many facilities are difficult to reach, which has encouraged people to access health facilities in districts other than where they live. The survey found that between 10% and 30% of the patients who visit a public hospital go to a different district than the one in which they live. This figure increases for peripheral facilities and private hospitals. Note, Banke has one electoral constituency without any PHCC, despite the traditional system of assigning one PHCC to each electoral constituency.

Table 9 Health facilities per district and MoHP expenditure per capita

District	District-level per capita expenditure by MoHP (NPR)	Number of health facilities					
		Hospital	PHCC	HP	SHP	Private	Total
Kailali	426	2	5	7	31	12	57
Banke	580	1	3	9	35	15	63
Baglung	981	1	3	9	49	2	64
Sarlahi	352	1	5	10	84	4	104
Ilam	819	1	4	6	38	3	52

Source: Department of Health Services (2012)

MoHP expenditure per capita is particularly low in Sarlahi and Kailali, which is not surprising as these districts have the highest population density. This makes it cheaper to provide at least a basic health facility within a certain distance to everybody as more patients per facility decrease the cost per patient (economies of scale). Correspondingly, the per capita expenditure of the MoHP is very high in districts with low population density, such as Baglung and Ilam.

Kailali is the only surveyed district with more than one public hospital, but it has a comparatively small number of health posts and sub health posts. This leads to a rather small total

number of health facilities considering the size of the district and, hence, people in Kailali have to travel longer distances on average to reach a health facility. The opposite is true for Sarlahi, which also has a relatively large population, but only one public hospital and a high number of smaller health facilities (HPs and SHPs).

It should be noted that there are two types of facility within the category of ‘hospital’ assessed in this study: district and zonal. These different types of hospital differ not only in their reach, but also in their size and governance structure.

Table 10 Number of beds available for inpatient care at public hospitals

	Ilam District Hospital	Sarlahi District Hospital	Dhaulagiri Zonal Hospital (Baglung)	Bheri Zonal Hospital (Banke)	Tikapur Hospital (Kailali)	Seti Zonal Hospital (Kailali)
Type of hospital	District	District	Zonal	Zonal	District	Zonal
Number of beds available for inpatient care	25	15	50	150	28	125

The district of Banke has, considering its area, a rather small number of public health facilities, but the Bheri Zonal Hospital has the largest number of available beds for inpatient care. This, in addition to the abundance of private facilities, compensates for the reduced number of public facilities.

Information collected with regards to ayurvedic medicine and traditional healers is insufficient to draw any conclusions. However, there is evidence that a significant number of people in Banke and Kailali rely on traditional healers. There are extreme cases in Banke where families do not even accept immunisation. According to the chief of the D(P)HO Kailali, there are between five and seven well-known traditional healers in the district.

Key findings

- The sampled districts present diverse demographic profiles. Significant differences were observed in health outcomes between the different ethnic groups.
- Communicable and infectious diseases have the highest incidence of all health issues in the surveyed districts.
- There is a correlation between the epidemiological profile of the surveyed districts and their level of development.

- Health service utilisation does not respect geopolitical boundaries and patients decide on which facility to use not based on the availability of facilities in their home district, but on geographical factors and the availability of doctors.

Chapter 4 Service Delivery

The survey looked at the volume and type of services currently provided by health facilities at different levels and the fees charged for such services. It also looked at patient flows, referrals and ambulance services.

Services

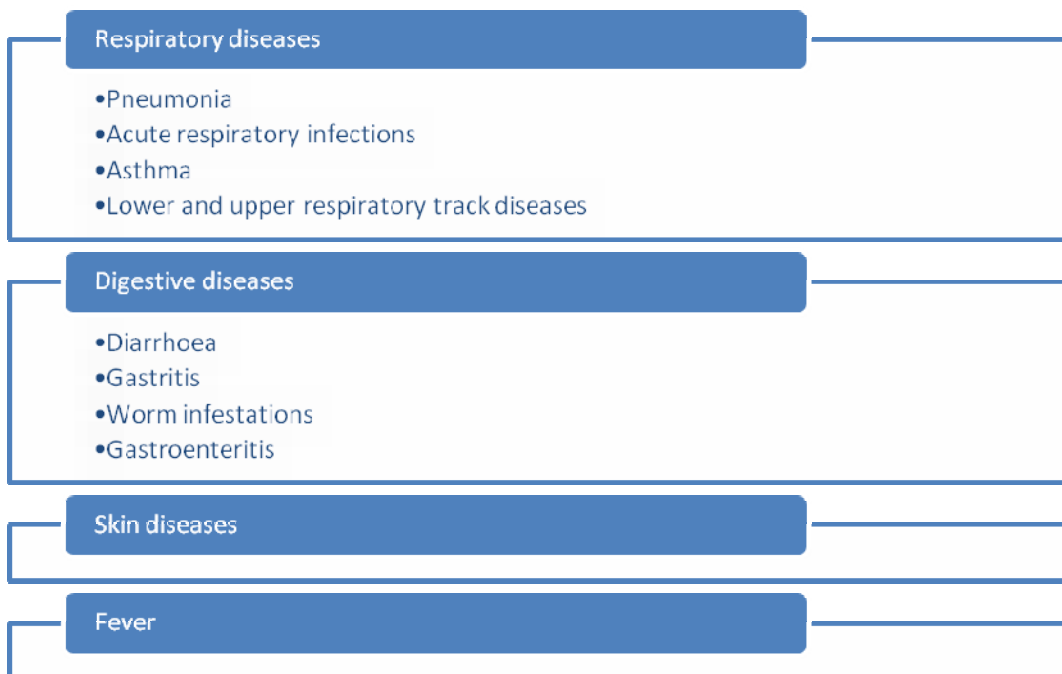
Public hospitals provide a myriad of services. This survey enquired about the following services: x-rays, laboratory diagnosis services (including malaria testing, tuberculosis testing, haemoglobin testing and blood sugar testing for diabetes), ultrasounds, electrocardiographs (ECGs), antenatal care and post natal care, delivery, caesarean section, blood transfusion, anaesthesia, abortion, diagnosis and treatment of respiratory tract infections and sexually transmitted infections, HIV counselling and testing, antiretroviral therapy, family planning, directly observed treatment system, child immunisation, growth monitoring, treatment for acute respiratory infections, basic cancer treatment, intensive care and operating theatres. While most of these services were available 24 hours, some were available for only part of the day or on certain days (e.g., such as ultrasound services, HIV counselling, family planning services and second trimester abortion, among others).

Some of the services provided by the peripheral health facilities (PHCCs, HPs and SHPs) are worth noting. Most of the PHCCs have basic laboratory services. In addition to that, a few of them (Kushmishera in Baglung and Malakheti in Kailali) also offer special laboratory services such as lipid profiles and renal function tests. All the PHCCs surveyed reported having a birthing centre. Most of them also had medical abortion services, except for Fikkal, Lalbandi and Barahathawa. Furthermore, Fikkal PHCC in Ilam offers some special services such as oxygen therapy, nebulisation, ECGs and x-rays. Galkot PHCC in Baglung offers surgical abortion (dilatation and curettage).

With regards to HPs, all of those surveyed reported having a birthing centre. In addition, Sishoutiya HP in Sarlahi, Sarkuwa HP in Baglung and Kanchanpur HP in Banke have basic laboratory services. Medical abortion services are available at most HPs. Two of the SHPs surveyed (Phulwari and Hasuliya, both in Kailali) reported having basic laboratory services. Most of them also reported having a birthing centre (Jeetpur in Ilam, Gwalichaur and Narayansthan in Baglung, and all six SHPs surveyed in Kailali, but excluding Kohalpur in Banke). Some SHPs, such as Jeetpur and Sumbek in Ilam and Pathariya in Kailali, also reported having IP services.

With regards to the type of services provided, the survey looked at the most common illnesses treated at health facilities. Although there were some differences between districts and between levels of health facility, a clear pattern was detected with respiratory and digestive diseases among the most commonly reported diseases in the surveyed districts.

Figure 8 Common diseases treated at health facilities in the surveyed districts



Public hospitals and peripheral facilities such as HPs and SHPs reported treating similar diseases. This may be because of the absence of a functioning gate-keeping mechanism to prevent patients from going to a public hospital for treatment of simple cases such as fever or diarrhoea. On the other hand, the assessment did not ask about the severity of illnesses, so it could be that only more severe cases of fever and diarrhoea presented at the higher-level facilities. Table 11 shows the geographical distribution of different types of illnesses in the survey districts and compares the cases reported at the public hospitals with the general district information.

Table 11 Top five illnesses in district and public hospitals

Ilam		Sarlahi		Baglung		Banke		Kailali		
Whole District	District Hospital	Whole District	District Hospital	Whole District	Dhaulagiri Zonal	Whole District	Bheri Zonal	Whole District	Tikapur Hospital	Seti Zonal
Tonsillitis	Headache	Pyrexia of unknown origin	Kala-azar	Upper respiratory tract infection	Skin Infection	Skin disease	Acute encephalitis syndrome	Skin disease	Fever	Anaemia
Headache	Chronic obstructive pulmonary disease	Skin disease	Physical assault	Lower respiratory tract infection	Chronic obstructive pulmonary disease	Upper respiratory tract infection	Septicaemia	Upper respiratory tract infection	Diarrheal disease	Fever
Respiratory tract infection	Respiratory tract infection	Intestinal worms	Enteric fever	Gastritis	Acute gastroenteritis	Headache	Chronic obstructive pulmonary disease	Pyrexia of unknown origin	Chronic obstructive pulmonary disease	Acute respiratory infection
Intestinal worms	Dental problems	Gastritis (acid peptic disorder)	Urinary tract infection	Headaches	Acute respiratory infection	Acute respiratory infection	Abdominal pain	Ear nose and throat problems	Skin disease	Acute gastroenteritis
Gastritis	Pneumonia	Headache	Poisoning	Typhoid	Typhoid/enteric fever	Gastritis	Birth asphyxia	Malnutrition	Trauma, injury	Pneumonia

The distribution of diseases treated also varied according to the age of the patient (Figure 9).

Figure 9 Top five illnesses by age group

All patients	<ul style="list-style-type: none">• Respiratory diseases• Gastroenteritis and diarrhoea• Skin diseases• Headaches• Fever, pyrexia of unknow origin
Children under 5 years old	<ul style="list-style-type: none">• Respiratory diseases• Gastroenteritis and diarrhoea• Fever• Skin diseases• Kala-azar
Woman of child bearing age (15-49)	<ul style="list-style-type: none">• Pelvic inflam atory disease• Urinary tract infection• Lower abdomen pain• Typhoid fever• Kala-azar

Fees

Among the myriad of services, some are provided for free, while others require payment of a fee. As Table 12 shows, the fees charged for services are relatively homogenous in all public hospitals. However, surgery fees vary between facilities. Information regarding surgery fees was not available for Sarlahi District Hospital. In Tikapur Hospital, the surgery fees cover all necessary extras (such as drugs, bandages and gloves). However, this was not the case in other hospitals, where surgery fees covered only the charges for the surgeries performed.

Table 12 Fees for five most frequently provided medical services and surgeries at public hospitals

Medical services											
Ilam District Hospital		Sarlahi District Hospital		Dhaulagiri Zonal Hospital (Baglung)		Bheri Zonal Hospital (Banke)		Kailali			
								Tikapur Hospital		Seti Zonal Hospital	
Service	Fee	Service	Fee	Service	Fee	Service	Fee	Service	Fee	Service	Fee
Comprehensive abortion care	1,000	OPD service	5	Curative care services	25	Blood test (complete blood count)	50	Ultrasonography	450	Ultrasonography	450
Blood test (complete blood count)	150	Routine microscopic test	10	Haemoglobin test	15	X-ray	125			Routine blood test	250
Urine routine and microscopic examination	30	Chest x-ray	135	Ultrasonography	450	Blood sugar test	60				
Normal plaster	500			Antenatal care	0	Ultrasonography	350				
Tooth extraction	50			DOTS	0	Comprehensive abortion care	1,000				
Major surgeries											

Ilam District Hos- pital		Sarlahi District Hospital		Dhaulagiri Zonal Hospi- tal (Baglung)		Bheri Zonal Hospital (Banke)		Kailali			
								Tikapur Hospital		Seti Zonal Hospital	
Surgery	Fee	Sur- gery	Fee	Surgery	Fee	Surgery	Fee	Surgery	Fee*	Surgery	Fee
Caesarean section	0	NA	NA	Caesare-an sec- tion	0	Cholangitis	1,850	Incision and drain- age	500	Herniorrha- phy	2,500
Appendec- tomy	7,500	NA	NA	Hydro- cele	1,000	Appendici- tis	1,850	Fracture (close reduction)	1,000	Hydrocele	2,000
Herniorrha- phy	7,500	NA	NA	NA	NA	Hysterec- tomy	1,850	Appendectomy	8,000	Fracture (close reduc- tion)	1,000
Lipoma excision	1,000	NA	NA	NA	NA	Laparatomy	1,850	Hernia	15,000	Perforation	3,500
Foreign body exci- sion	500	NA	NA	NA	NA	NA	NA	Hydrocele	1,500	Small intes- tine obstruc- tion	3,500

Note: NA means data not available; *Surgery fees at Tikapur Hospital include all necessary extras, such as drugs, bandages and gloves.

To increase comparability, the survey requested surveyed facilities to provide information on their fees for certain standard procedures and services that do not require particularly advanced infrastructure or equipment, such as OPD registration, a one-night stay in the general ward, urine tests, a standard chest x-ray and one standard meal (Figure 10).

Figure 10 Fees charged at public hospitals for selected services

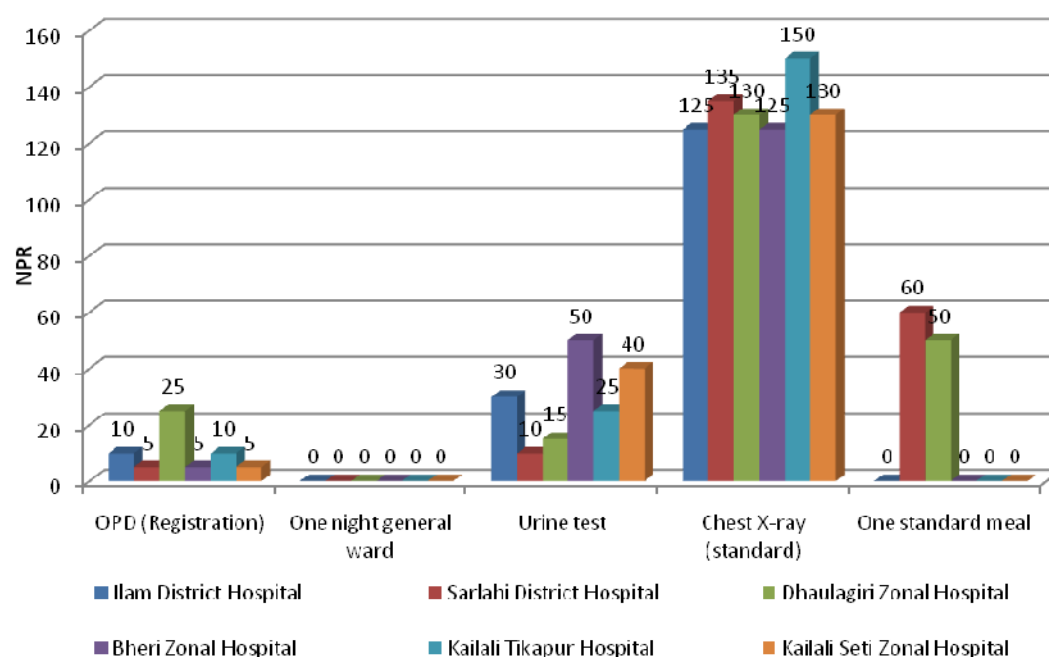
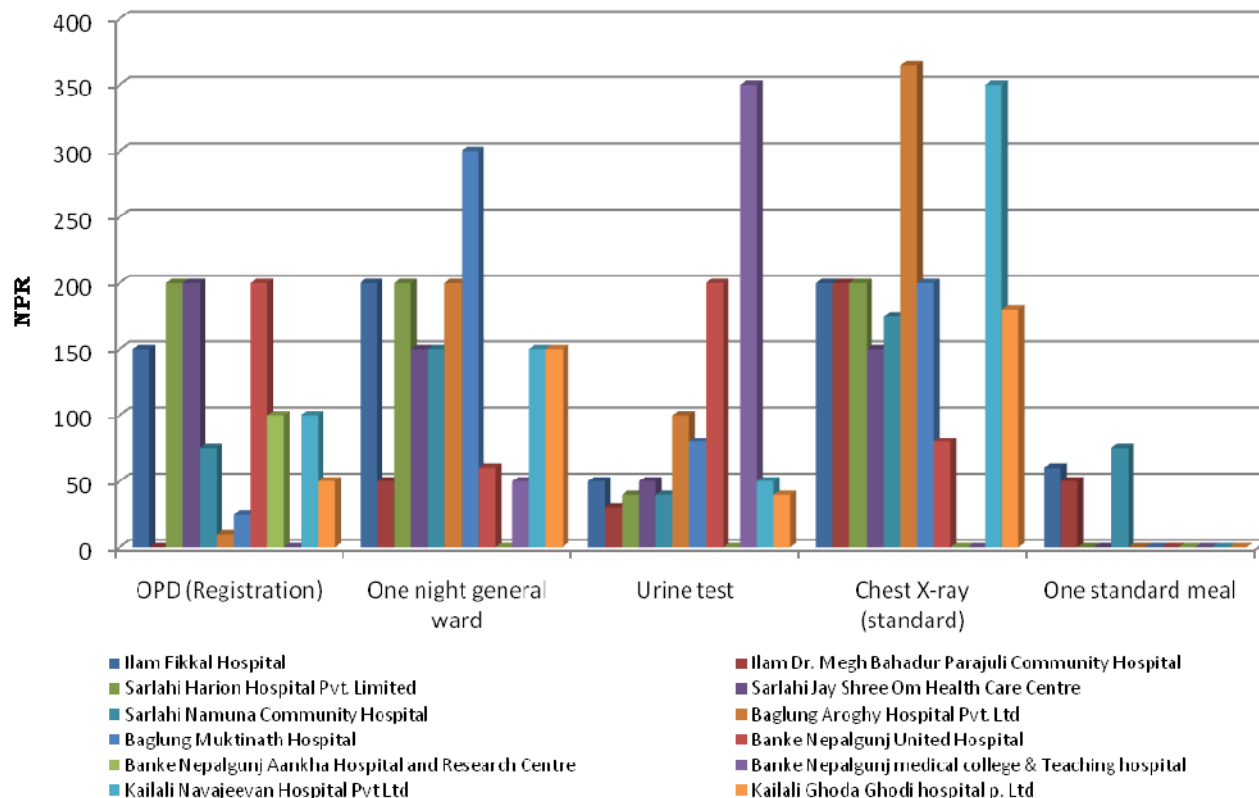


Figure 10 shows that the fees charged for most services did not differ significantly across public hospitals, except for the fee for a standard meal, which was provided for free by some hospitals, but not others. The cost of a urine test also varied from district to district, with the fee charged in Bheri Zonal Hospital and Seti Zonal Hospital four to five times higher than that in Sarlahi District Hospital.

Figure 11 Fees charged at private hospitals for selected services



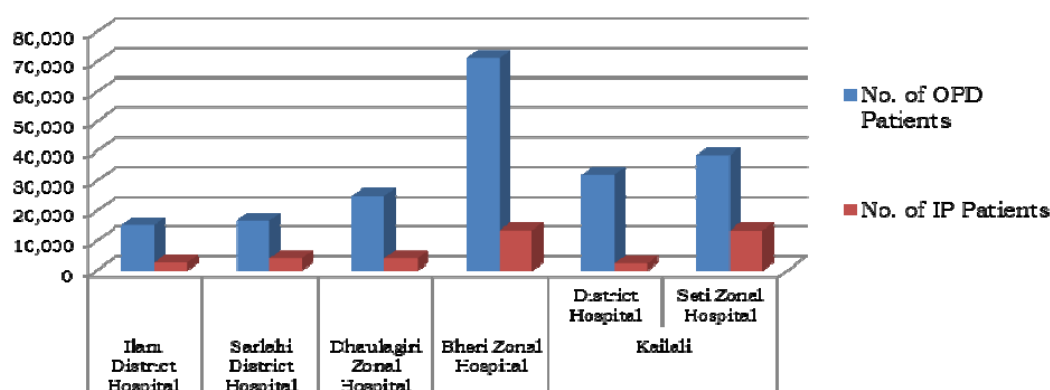
In private hospitals, the fees charged for services differed significantly from facility to facility and across districts (Figure 11). The discretion in the determination of fees by private hospitals reflects the lack of governmental regulation of private sector health provision.

Patient flows

In general, four main factors explain a patient's choice between the different levels of health provision: the availability of drugs, the presence of a health worker, particularly a doctor, the fee structure and barriers to access to the health facility (e.g., geographical and in terms of waiting time).

At the public hospital level, the Bheri Zonal Hospital and Seti Zonal Hospital showed the greatest patient load (inpatient and OPD) (Figure 12).

Figure 12 Patient load in public hospitals



Although the patient load at the peripheral facilities was positively correlated with the total population of the district (Kailali and Sarlahi received the highest patient flow), this trend was not observed at the public hospital level. Surprisingly, Bheri Zonal Hospital received a comparatively high volume of patients, while Sarlahi district hospital received a comparatively low volume of patients. This may be explained by the fact that people from neighbouring districts go to Bheri Zonal Hospital instead of using facilities within their own districts. In the case of referral, patients chose Bheri Zonal Hospital given its convenient location for the entire region and the availability of many health facilities in case of the need for further referral. A similar phenomenon was observed in Baglung. For many residents in this district, it is easier to reach a health facility at Palpa or Butwal than to go to Dhaulagiri Zonal Hospital.

As stated in the annual report of the Department of Health Services of 2011/12, the same year for which assessment data was gathered, the average length of stay was found to be around 2 days for all of the surveyed hospitals, except for Sarlahi District Hospital, which had an average length of stay of 4.58 days (Department of Health Services 2013). The bed occupancy rate for Dhaulagiri Zonal Hospital and Bheri Zonal Hospital was around 35%, whereas for other hospitals it lay between 60 and 77%.

Table 13 Average length of stay and bed occupancy rates at public hospitals

	Ilam District Hospital	Sarlahi District Hospital	Dhaulagiri Zonal Hospital (Baglung)	Bheri Zonal Hospital (Banke)	Tikapur Hospital (Kailali)	Seti Zonal Hospital (Kailali)
Average length of stay (days)	2.67	4.58	2.04	2.86	1.69	2.13
Bed occupancy rate (percentage)	70.4	77.26	36.09	33.61	61.28	62.4

Source: Department of Health Services (2013)

Referrals

A vital feature of an efficient health system is an interconnection between the different levels of health facilities through referrals. Health facilities at different levels should provide different services, with the highest-level facilities responsible for delivering the services of greatest complexity. This avoids overlapping between facilities and reduces the cost involved in using expensive resources such as specialists and sophisticated equipment in simple cases where such resources are not needed.

Referrals are subject to the existence of health facilities equipped to handle cases of different degrees of complexity in a certain area or district. A higher rate of referral does not necessarily mean that facilities are adequately interconnected. On the contrary, it could reflect an inability of peripheral facilities to deal with simple cases.

In the sampled districts, the decision to refer was primarily made by the consulting medical staff, sometimes in consultation with the department head, and assessing the severity of the case in relation to the availability of services at that particular facility. Only a limited number of facilities reported that referrals were made at the request of the patient. No follow up was done after the referral, with the exception of Dhaulagiri Zonal Hospital, which gathered some information from family members, ambulance drivers and the facility where the patient was referred.

The survey evaluated current practices by looking at referrals between different levels and types of health facility. The survey team asked the health facility in charge – in public hospitals, mostly the superintendents, with the exception of Bheri Zonal Hospital, where the record officer was interviewed – about the most commonly referred cases and the number of referrals made. At the public hospital level, this information was available for Ilam District Hospital, Dhaulagiri Zonal Hospital, Tikapur Hospital and Seti Zonal Hospital (Table 14).

Table 14 Estimated number of referrals from public hospitals in 2011/12

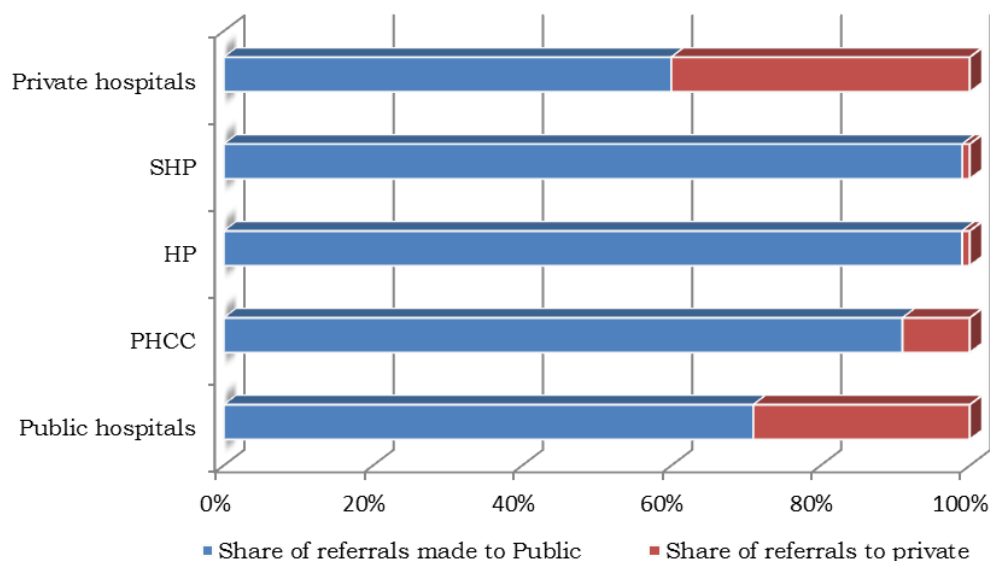
	Ilam District Hospital	Sarlahi District Hospital	Dhaulagiri Zonal Hospital (Baglung)	Bheri Zonal Hospital (Banke)	Tikapur Hospital (Kailali)	Seti Zonal Hospital (Kailali)
Referrals made						
Total number	400	NA	250	NA	150	1,000
Referrals received						
Total number	600	NA	1,500	NA	NA	6,000

With few exceptions (Laxmanpur PHCC in Banke and Netragunj SHP in Sarlahi), almost 100% of referrals from peripheral facilities (PHCC, HP and SHP) were made to other public facilities. Furthermore, most of the referrals received at public hospitals were from other public institutions, showing a low level of interaction between public and private health facilities.

The health facility in-charges at private hospitals were asked to identify the challenges with regards to cooperation between private and public facilities and suggest ways to improve cooperation. Among the challenges, they identified a negative attitude towards the private sector, lack of a timely response, inadequate governmental monitoring of compliance with government rules, lack of a properly defined government policy, administrative hassles and lack of governmental trainings to private health facility staff.

Interviewees at private facilities suggested treating public and private facilities equally, more specifically they suggested that: public facilities should be required to meet the same standards as private sector health facilities; the public sector should cooperate with the private sector for training and capacity development; the referral mechanism from public to private health facilities should be systematised where there is sufficient capacity; and easy recording and reporting systems should be used to minimise paper work.

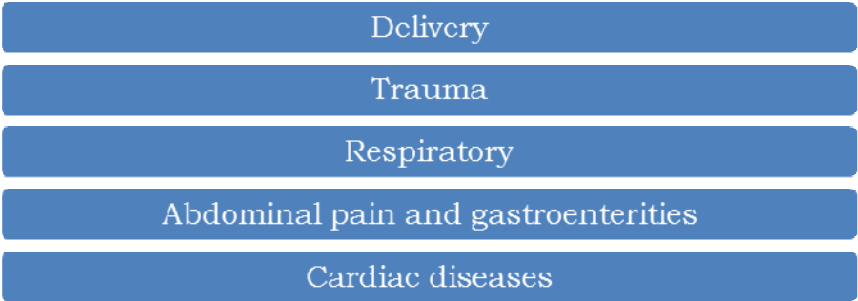
Figure 13 Estimated share of referrals made to private and public facilities



With regards to the most commonly referred diseases, all four levels of public health facility (public hospitals, PHCC, HP and SHP) reported similar referral patterns. It should be noted, however, that none of the surveyed health facilities kept a record of referred cases so the data on referrals was estimated based on information provided by the health facility in-charge. Figure 14 shows the top five most-referred illnesses, which differs from those reported by the District Health Offices (DHOs) who said that referrals were primarily made in

the case of highly complex diseases or cases requiring specialised equipment, such as cancer and kidney diseases.

Figure 14 Top five most referred cases in public facilities



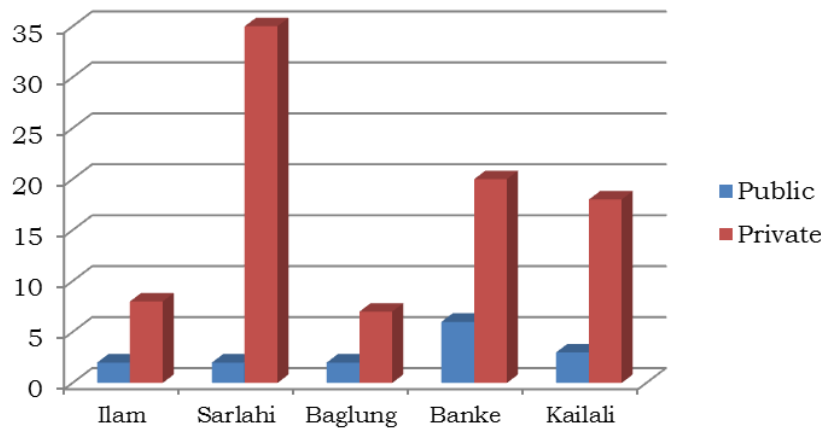
In the case of private hospitals, the survey found that referrals were mainly made in cases of great complexity, such as chemotherapy and neurosurgery.

All facilities (public and private) referred their patients for similar reasons: insufficient trained staff, lack of equipment and inadequate infrastructure. When asked about potential ways of improving the referral system, interviewees suggested the strengthening of front line public health facilities (SHP, HP and PHCC) with additional equipment and medical staff to reduce the referral rate. In order to make access to referral care easier, it was suggested to provide financial support for transportation. Furthermore, it was suggested that each level of health facility should be aware of the services available in the higher-level facilities to which they refer the patients and a stronger follow up mechanism should be in place.

Ambulance services

This section looks at the availability, distribution, ownership and use of ambulances in the survey districts.

Figure 15 Number of ambulances in survey districts (public and private)



The survey found that all public hospitals had ambulances on call 24-hours a day. A significant difference was observed from facility to facility in terms of the usage of ambulances, which is likely to be related to geographical factors. While Ilam District Hospital estimated an average ambulance usage of two hours per day, Dhaulagiri Zonal Hospital had an average usage of six hours a day.

The fee structure applied in each facility was found to mainly depend on the topography of the area served. Whereas some districts calculated their fees on a kilometre basis (e.g., Ilam District Hospital), others used a lump sum fee depending on the neighbourhood or region they served (e.g., Dhaulagiri Zonal Hospital). For kilometre-based fees, an average of NPR 30 was charged for blacktopped roads and NPR 80 for non-blacktopped roads. It was also reported that in some cases, when patients could not afford transportation costs, the fees were financed by health workers themselves.

Key findings

- Similar illnesses were treated by all levels of health facility in the surveyed district highlighting the need for a gate-keeping mechanism to distribute cases according to their complexity.
- While the fees charged by public health facilities were largely homogenous, the fees charged by private health facilities varied widely.
- Patient load in district hospitals appeared to be correlated with the population of the district that the hospital serves. Zonal hospitals on the other hand, except for Dhaulagiri Zonal Hospital, had high patient flows. The high coverage area of zonal hospitals, including other districts in the Mid Western and Far Western development regions could explain this.
- Referrals between public and private health facilities were limited.
- Referrals from both public and private facilities were generally made because of insufficient trained staff, lack of equipment and inadequate infrastructure.
- All public hospitals had ambulances on call 24 hours a day and these ambulances were mostly private-owned. Fees charged for ambulances were mostly on a lump sum basis.

Chapter 5 Financing Structure

The survey enquired about health facilities' sources of income, composition of expenditure and fees charged for most frequently provided services and surgeries.

Health financing system

At all levels, sufficient information on the sources of income and the composition of expenditure was not available from health facilities. Facilities were asked to describe the share of their budget financed by the MoHP, local government, user fees, the sale of drugs and other sources. Only a marginal number of institutions were able to provide this kind of information.

Interviewees were asked about ways to improve the health financing system. Computerisation of the registration and billing system, orientation of finance staff and prevention of political interference in hospitals management were the suggestions put forward by interviewees from public health facilities.

Mechanisms to support the poor

The survey also found that public hospitals in Ilam, Baglung and Kailali have mechanisms in place to support the poor that go beyond those provided by the government in the FHCS programme. Ilam provides certain procedures for free, supplies some drugs supported by the Community Drug Programme and grants discounts on ambulance charges. Baglung subsidises transport costs for referrals and Kailali provides some drugs and meals for free to poor patients. Although not targeted only at the poor, all the beds in Bheri Zonal Hospital have been provided free of charge, irrespective of who uses them, for last two years.

Private hospitals also have mechanisms in place to subsidise the poor. As in the public sector, the identification of the poor is based on the judgment of the concerned health worker or administrative staff when patients are unable to pay.

Budgeting process

Another important aspect of health financing is related to the budgeting process at the different levels. Despite attempts to implement bottom-up approaches to budgeting, most interviewees at public facilities reported that this is not happening in practice and budgeting is mostly conducted by the D(P)HO and health facility authorities are excluded from the process. However, the D(P)HO is constrained by a ceiling set by the MoHP for health facility budgets. Furthermore, interestingly, D(P)HOs reported that planning and budgeting for the districts are mostly done at the centre irrespective of what districts prepare at the district level.

In private facilities, the management team is responsible for setting the budget. The board of directors or management committee conducts the budgeting process, occasionally in consultation with other concerned staff.

A centralised budget does not readily allow for needs-based budgeting and infrastructure improvements, which are often excluded given the financial burden that they represent for the district. Respondents to the survey agreed that decentralised budgeting is of great importance. In addition, respondents expressed their dissatisfaction with delays in the release of budget funds and suggested the creation of an emergency fund for the procurement of essential equipment such as generators.

Key findings

- Sufficient information on the sources of income and composition of expenditure was not available in any of the health facilities surveyed. To improve the weak financial management system in public hospitals, interviewees suggested the computerisation of the registration and billing system; orientation of finance staff and prevention of political interference in the management of the hospital.
- Both public and private health facilities have mechanisms in place to support the poor, in addition to those provided by government programmes.
- Despite attempts to implement bottom-up approaches to budgeting, the survey found that budgeting is mostly conducted by the D(P)HO with health facility authorities excluded from the process.

Chapter 6 Human Resources

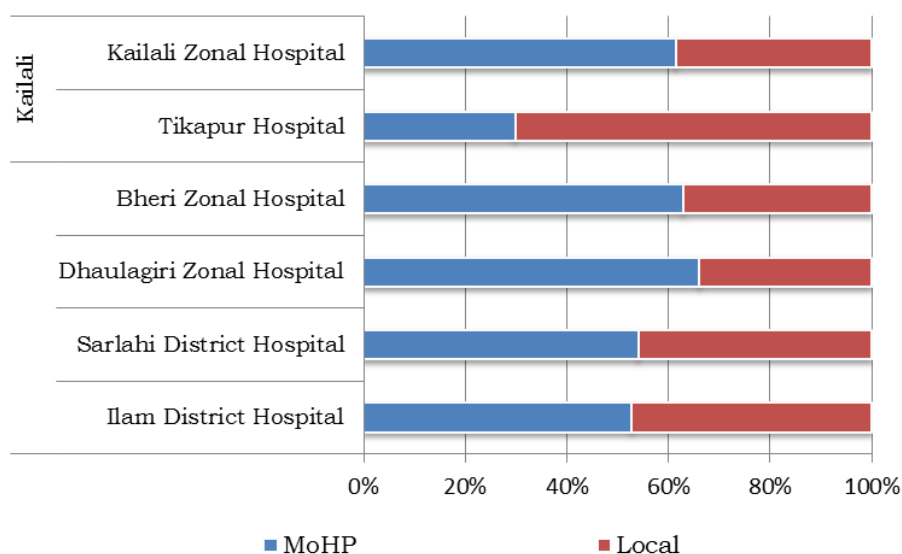
With regards to human resources, the survey focused on:

- the ratio of locally contracted staff to government contracted employees;
- the share of medical staff; and
- the sufficiency of human resources

Origin of human resources

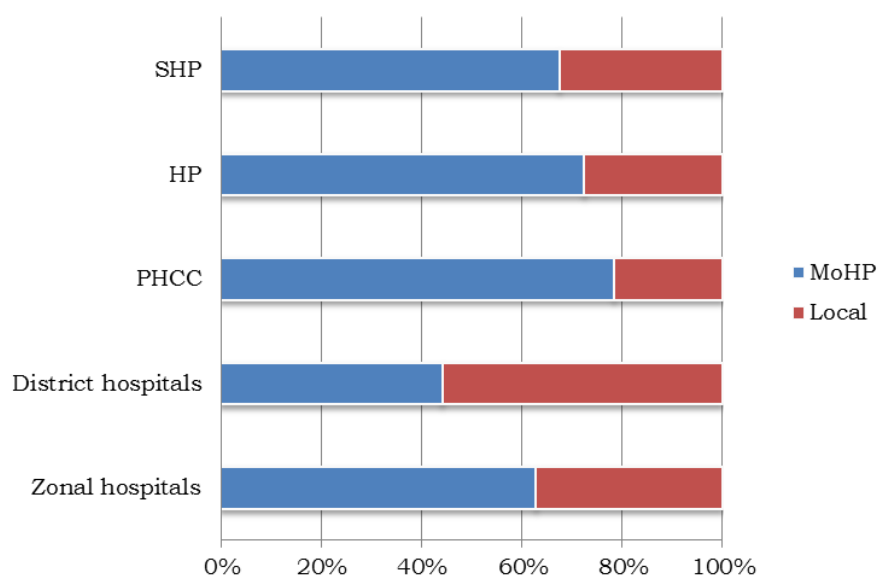
With the exception of Tikapur Hospital in which most of the personnel was local, between 52% and 66% of the staff in public hospitals are provided by the MoHP (Figure 16).

Figure 16 Origin of human resources in public hospitals



On average, in the public sector, hospitals had the lowest share of MoHP personnel compared to peripheral facilities. Among peripheral facilities, the share of personnel provided by the MoHP was found to decrease with the level of the facility (from PHCCs with the largest share to SHPs have the lowest share). This is related to the fact that personnel assigned to certain districts did not always go, mainly because of the living conditions in these districts, and so these positions were filled by local personnel (or remained vacant).

Figure 17 Origin of human resources at different levels of health facility (average)

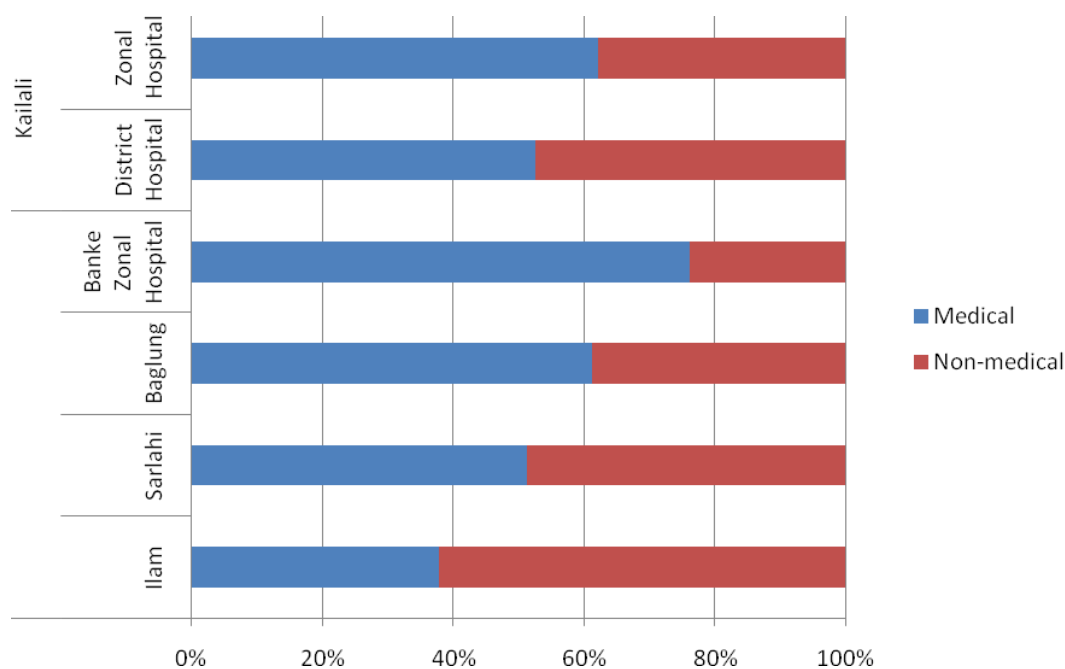


Medical staff

A better understanding of the availability of medical as well as non-medical staff at public hospitals is vital in terms of capacity for service delivery and information management. Medical staff includes medical superintendents, specialists, medical officers, paramedics, health assistants, senior auxiliary health workers (SAHWs), nursing staff, diagnostics staff and laboratory assistants, among others. The rest of the staff are categorised as non-medical staff. A correct mix of both medical and non-medical staff is crucial for actual delivery of services and internal management of service delivery.

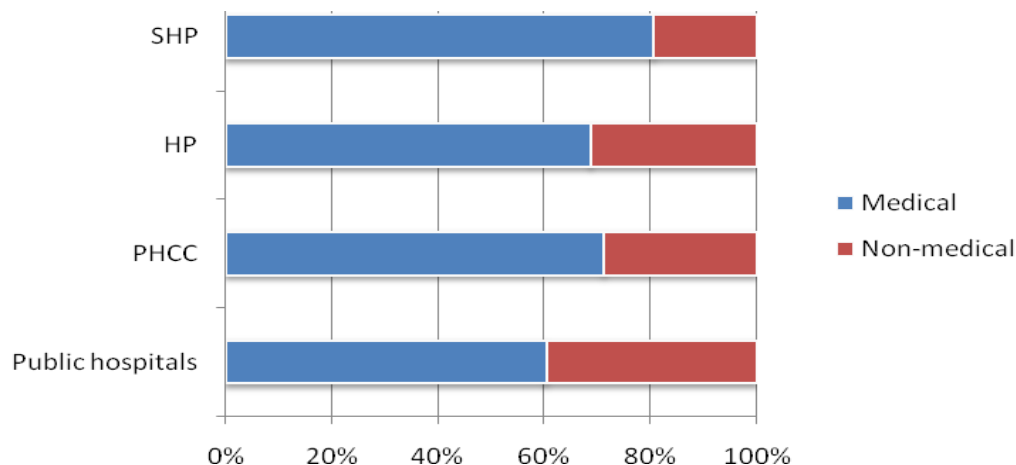
Public hospitals varied in terms of their ratio of medical to non-medical staff. Moreover, not all public hospitals had record officers. The ratio of medical to non-medical staff was found to be higher for zonal level hospitals than district level hospitals.

Figure 18 Percentage of medical and non-medical staff at public hospitals



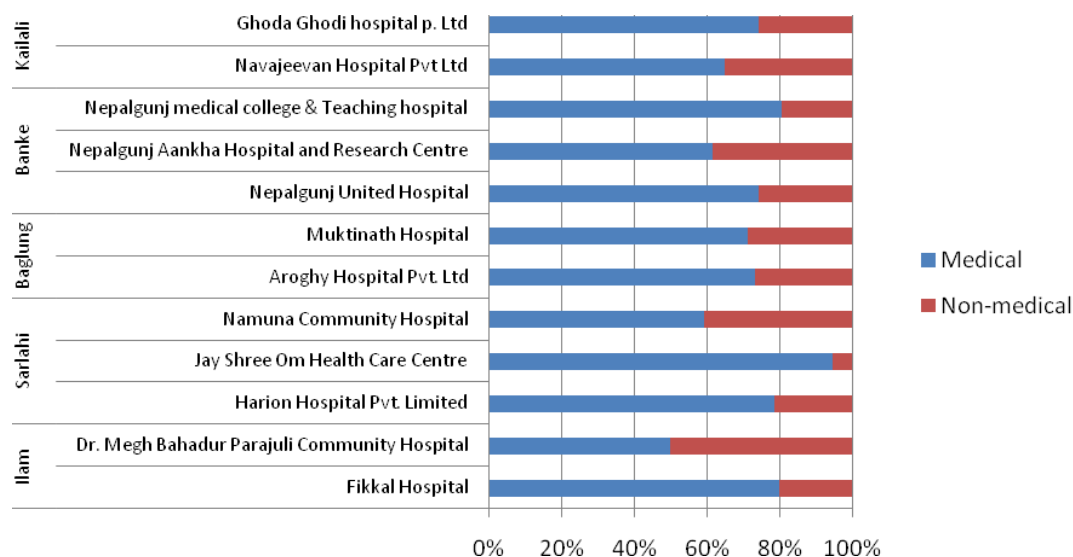
Albeit with lower variability, peripheral facilities also presented a mixed picture of the proportion of medical and non-medical staff and, hence, no clear conclusion can be drawn. However, when looking at averages per level, the share of medical staff oscillated between 60% and 80%. It should be noted that a higher rate of medical to non-medical staff does not necessarily imply a high level of specialisation at a health facility. Provided that paramedics, auxiliary health workers and laboratory assistants are also included under medical staff, peripheral facilities can present a high rate of medical to non-medical staff while having no doctor or specialised professional at all.

Figure 19 Average percentage of medical and non-medical staff at peripheral facilities and public hospitals



In private hospitals, the share of medical and non-medical staff was highly heterogeneous. As Figure 19 shows, the share of medical staff varied from 50% to 95% of the total staff. A low rate of non-medical staff is not necessarily associated with the poor performance of the administration, finance and management of health facilities. For example, the comparatively lower rate of non-medical staff in private facilities is linked to the use of computers and more advanced methods of health management information.

Figure 20 Percentage of medical and non-medical staff in private hospitals



Sufficiency of human resources

A salient feature of Nepal's health system in terms of human resources is the limited total number of doctors and trained medical staff. The scarcity of doctors has resulted in a large workload for the few doctors who are available. When asked about the top five categories of

insufficient staff, facilities at all levels mentioned insufficiency of medical staff (specialist doctors at the public hospital level, doctors at the PHCC level and auxiliary health workers at the HP and SHP level). A few facilities reported an insufficient number of administrative or financial staff in their top five. In addition, in some hospitals (Bheri Zonal Hospital, Tikapur Hospital and Seti Zonal Hospital), a significant share of human resources were also engaged in private practices: 5% in Ilam District Hospital, 25% in Sarlahi District Hospital and Dhaulagiri Zonal Hospital, 75% in Bheri Zonal Hospital, and a massive 90% in both Tikapur Hospital and Seti Zonal Hospital.

It is also worth mentioning that supervisory visits to health facilities detected the poor retention of human resources by health facilities and found that many posts were not filled. The ratio of filled to sanctioned positions was calculated based on DHO interviews for Ilam (74.1%), Sarlahi (90.6%) and Baglung (80.8%). Some of the reasons for this, as reported by D(P)HOs, is the infrastructure, access to capital city and living conditions in the districts, which make it unattractive to doctors. In addition, it was found that doctors lack incentives and additional benefits to entice them to stay longer at the facilities and provide 24-hour services. However, some attempts have been made to retain staff including the introduction of performance-based evaluations, training and salary increases for specialised personnel.

The survey also asked private hospitals whether their staff were employed on a part-time or fulltime basis. In the majority of the cases, over 80% of personnel were employed on a fulltime basis.

Key findings

- A significant proportion of the sanctioned positions at public health facilities are not filled.
- Performance management was found to be rarely practised at the facility level and there was a lack of incentives in place for personnel.
- A high demand for specialised doctors was found and interviewees mentioned a need for further training of administrative, record and finance staff.
- Self-reported engagement in private practice by staff of public health facilities ranged from 4% to 90%.

Chapter 7 Health Management Information System

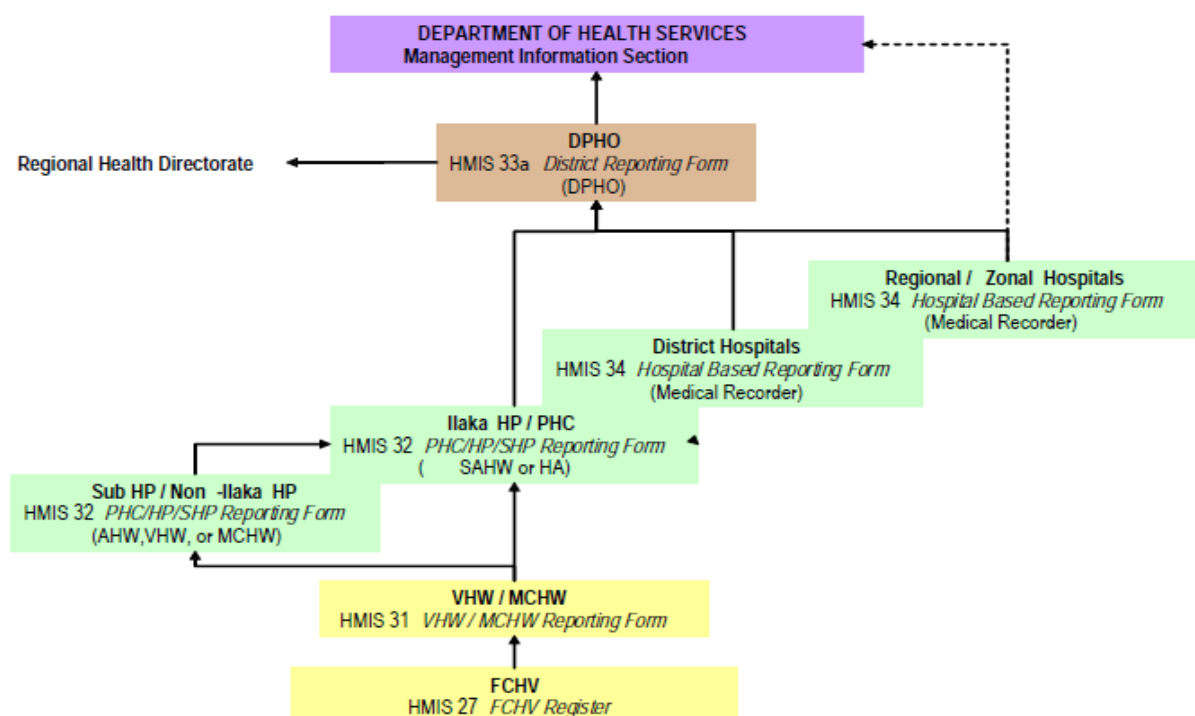
A health management information system is an internal system that captures, stores and manages information from center to at the health facility level. In Nepal, the Health Management Information System (HMIS) is institutionalised and based in the Management Information Section (MIS) of the Management Division of the Department of Health Services and has been in operation since 1994. It collects information relating to the provision of health services, health status and the performance of programmes. HMIS data is compiled, reported, and reviewed monthly at the ilaka, district, regional and national level.

Recording of information

Figure 21 shows the flow of information within the HMIS. At the lowest level, female community health volunteers (FCHVs) complete a general reporting form (HMIS 27), which they submit to village health workers (VHWs) and maternal child health workers (MCHWs). The VHWs and MCHWs in turn complete a HMIS 31 reporting form on a monthly basis and send it to their assigned health facility. Ilaka HPs and SHPs and non-ilaka HPs compile this information. SHPs and non-ilaka HPs complete a HMIS 32 reporting form and submit it on a monthly basis to the ilaka HP or ilaka PHCC, which collates data for its own coverage including VHW and MCHW reporting forms and FCHVs registers. Ilaka HPs and PHCCs also complete the HMIS 32 reporting form and submit it on a monthly basis to the D(P)HO. District, zonal, sub-regional, regional and national level hospitals including other public and non-public hospitals complete and submit HMIS 34 reporting forms to the D(P)HO every month.

The D(P)HO compiles all the reports received from health facilities (ilaka HPs, PHCCs and hospitals) and completes and submits the HMIS 33 district reporting form to the Regional Health Directorate and MIS every month. The MIS at the central level enters the monthly reports received from the D(P)HOs and hospitals into an electronic HMIS database that can be accessed via the Internet and LAN.

Figure 21 Information flow within the HMIS



Source: Department of Health Services Annual Report 2010/11 (Department of Health Services 2012)

In addition to the HMIS, in all five districts the survey found that once the HMIS forms are received by the D(P)HO they are uploaded onto a web-based system and hard copies are sent to the regional health directorate and MIS in the Department of Health Services. At all levels of health service provision, recording was done in HMIS format and reporting was done through regular reporting systems of the D(P)HO. Ilaka-level meetings were held on the third of every month to review the data collected below the ilaka level. These meetings were followed by the submission of HMIS forms to the D(P)HO on the seventh of each month.

Implementation

The survey found a lack of compliance with HMIS reporting requirements across all surveyed districts. District Health Officers interviewed argued that the inadequate implementation of the HMIS is primarily due to a lack of trained personnel with sufficient time to fulfil this task:

“Our office assistant is not skilled enough to help in recording and reporting. Therefore, we are always under pressure to meet deadlines.” In-charge, HP

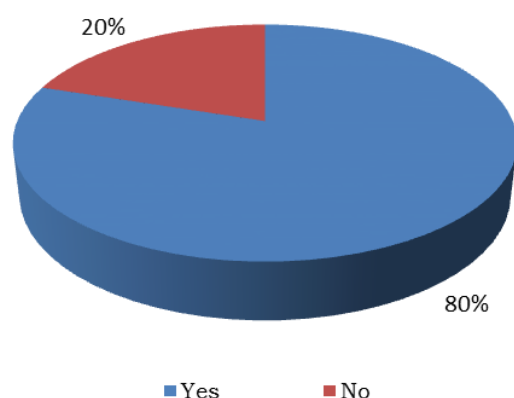
“There is no other person to support recording. Service providers have to do everything. We have so many other things to do (such as provide services to clients) besides recording and reporting.” In-charge, PHCC

Official reporting forms are provided by the MIS to the health facilities to complete and use as a template for the collection of data. However, most of the health facility personnel are not trained on how to use the templates. Some of them expressed their concern about the

unavailability of computers and statisticians to carry out the job and the late delivery of templates. Only a few felt that the templates were too long. It is worth mentioning that despite these concerns, interviewees were overall satisfied with the templates provided by the MIS.

At the district level, biannual and annual review meetings are organised by the D(P)HO. In these meetings, the health facilities are responsible for reviewing and verifying their own data.

Figure 22 Use of computers for recording at public hospital level



The survey also revealed that private hospitals comply with HMIS reporting requirements more often than public hospitals and 75% use computers to record information. All health facilities in the public sector reporting using similar software to record information – either Microsoft Word or Microsoft Excel. In private health facilities specialised software (mainly MediPro) is used. Given the increase in data volume that health insurance schemes represent, the lack of computerised HMIS represents a challenge to implementation of a national health insurance scheme.

Logistics Management System

The Logistic Management Information System follows a similar dynamic. However, reports are submitted on a trimester basis and sent to the Regional Medical Store and D(P)HO. Similar concerns were raised about the Logistic Management Information System, namely, lack of timely provision of templates and insufficient trained staff to fulfil this task.

Key findings

- The current configuration of the HMIS was positively valued by all of the health facilities surveyed.
- Suggestions for improving compliance with HMIS reporting requirements include the timely delivery of reporting forms and training for staff responsible for completing these forms.

- Computerisation of the information system was limited at public health facilities, but quite extensive at private hospitals.

Chapter 8 Pharmaceutical Services

The survey looked at the pharmaceutical profile of the different health facilities and the number of pharmacies located within the vicinity of health facilities as well as the share of drugs available under the FHCS programme, the share of patients receiving these drugs and the time taken to receive these drugs. In addition, information was collected on the most commonly self-procured drugs by facilities and prescribed drugs at the different levels.

Drug procurement

In public hospitals, the hospital development board or hospital management committee makes decisions about drug procurement based on the need for the drug and following a tendering process, as per government rules. Drugs are sometimes purchased directly when drugs are needed urgently or in small quantities. Private hospitals reported purchasing drugs from distributors by placing an order. One community hospital (Megh Bahadur Parajuli) said that it sends orders to its Kathmandu office for the procurement of drugs and it takes around 10 days for the drugs to reach the hospital after placing the order. Otherwise, all hospitals reported receiving drugs either on the same day or within three days of placing an order.

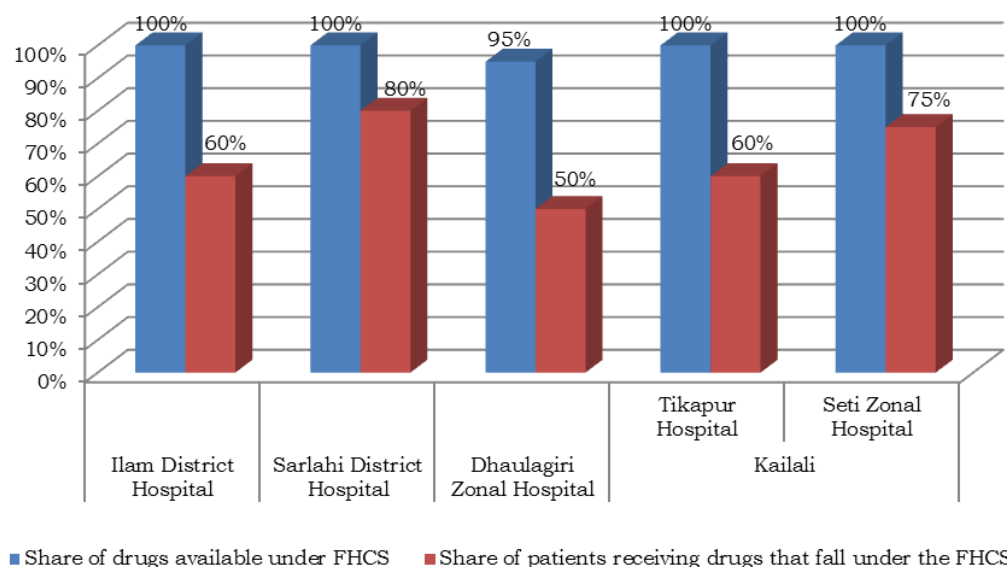
Essential drugs are supplied to public hospitals, PHCCs, HPs and SHPs under the FHCS programme. This programme covers 40 free drugs for public hospital, 33 for PHCs and HPs, and 22 for SHPs (Annex 1). In addition, aminophylline (a drug for treating asthma and chronic obstructive pulmonary diseases) is only available free of charge at SHPs.

The Regional Medical Store is responsible for supplying drugs to public hospitals and the D(P)HO is responsible for supplying drugs to PHCCs, HPs and SHPs. In case of necessity, public hospitals can procure drugs from local distributors.

Availability of drugs

At the public hospital level, almost all facilities reported full availability of drugs under the FHCS programme. However, drugs provided through the FHCS programme roughly covered all the prescribed drugs for less than 80% of the patients while others had to buy at their own expense, partially or fully (estimated by the hospitals).

Figure 23 Pharmaceutical profile for public hospitals



Commonly prescribed drugs

The survey additionally asked about the most commonly prescribed (under the FHCS programme and beyond), self-procured and stock out drugs at all levels. The following list is not exhaustive, but provides an overview of the most commonly prescribed drugs at public hospitals: paracetamol, amoxycillin, ciprofloxacin, ceftriaxone, ampicillin, cotrimoxazole and antacid. A similar pattern was observed in private facilities. The most commonly prescribed drugs at peripheral facilities (namely PHCCs and HPs) were amoxycillin and paracetamol, both falling under the FHCS programme, and were reported in almost all facilities.

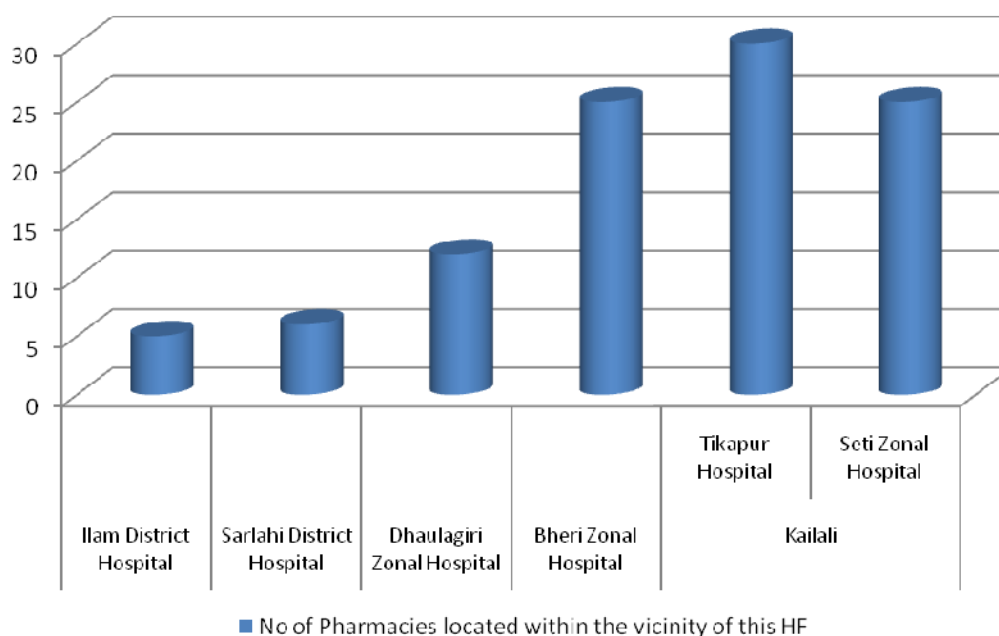
Table 15 Most commonly prescribed drugs at PHCCs and HPs, under FHCS and beyond

PHCC		HP	
Under FHCS	Beyond FHCS	Under FHCS	Beyond FHCS
Amoxycillin	Cough syrup	Paracetamol	Azithromycin
Paracetamol	Cefixime	Ciprofloxacin	Cough syrup
Metronidazole	Azithromycin	Amoxycillin	Vitamins/calcium

Proximity of pharmacies

With regards to the drugs that patients have to procure themselves, the survey examined the number of pharmacies located within the vicinity of health facilities and found that this varied significantly from facility to facility. While less than 10 pharmacies were located in the vicinity of Ilam District Hospital and Sarlahi District Hospital, there were more than 20 near Dhaulagiri Zonal Hospital, Tikapur Hospital and Seti Zonal Hospital. Private hospitals had a more limited number of pharmacies in their vicinity, ranging from 0 to 15 in Nepalgunj Medical College and Teaching Hospital and Ghoda Ghodi Hospital. This can be explained by the fact that patients normally get their drugs at the private health facility.

Figure 24 Number of pharmacies located within the vicinity of health facilities



Key findings

- In public hospitals, the hospital development board or committee makes the decision to procure drugs, which is done through the process of tender, but, less often, also directly.

- A large proportion of patients in need of drugs falling under the FHCS programme had to procure these drugs at their own expense.
- At least five pharmacies were observed within the vicinity of all of the surveyed health facilities.

Chapter 9 Initialising NHI in the Regulatory Framework

The study also looked at the regulatory framework for setting up national health insurance. There are four options for operationalising national health insurance in Nepal

- Establish a unit within the MoHP
- Create a new autonomous body
- Create a public company
- Contract a private organisation

Option 1: Create a unit within the MoHP

As the MoHP already has a budget head for insurance, one straightforward mechanism to begin implementation of NHI immediately would be to establish a unit within the MoHP responsible for insurance administration. The financial control of this unit would legally remain under the MoHP, but oversight could be broadened to include others.

The advantage of this mechanism is that, as a budget head for insurance already exists, the unit could be operationalised quickly. The disadvantage would be the lack of strong checks and balances as the purchaser and provider would be integrated. Under this option, the MoHP would need to take the following steps:

- Create a 'NHI section' under one of the divisions of the MoHP, the most relevant would be the Policy Planning and International Cooperation Division
- Appoint certain persons from the civil service to this NHI section to work exclusively on health insurance
- Create a 'NHI unit' at the D(P)HO or at the district development committee office and appoint certain persons to that unit to work exclusively on health insurance
- Make the NHI unit in the district accountable to the NHI section at the MoHP

Option 2: Create a new autonomous government body

Global best practice shows that having an entity separate from regulators and providers can create strong checks and balances in the system. There are two pieces of existing Nepali legislation that can be leveraged to operationalise this option: The Development Board Act 2013 BS (1956 AD) and the Good Governance (Management and Operation) Act 2064 BS (2006 AD). Regardless of which legislation is used, strong championing will be required by the MoHP to operationalise this option.

Development Board Act: According to Section 3 of the Development Board Act 2013 BS (1956 AD), the Government of Nepal by notification may constitute a development board and assign any type of authority to that board, which will have a separate corporate personality. To establish an autonomous body under this Act, the MoHP would have to take the following steps:

- Develop the proposal for the formation of the development board
- Obtain approval on the proposal from the Ministry of Law and Justice

- Obtain financial approval from Ministry of Finance
- Forward the proposal for approval of Cabinet

Once Cabinet has approved the proposal, the development board is deemed to be created by publication in the official government Gazette by the concern ministry (MoHP). To obtain the budget, the development board would then submit its budgetary plan to the MoHP, which would need to be approved by the Ministry of Finance.

An autonomous agency created under this option will have to follow its own regulations and needs to abide by the Public Procurement Act 2063 BS (2007 AD) and other laws and rules including the following:

- The roles and responsibilities of the autonomous agency shall be as mentioned in the formation order and financial audit shall be conducted by the office of the auditors general.
- The autonomous agency can hire its own staff from its own revenue and/or can request staff from the government, as described in the formation order.
- The autonomous agency should follow any additional terms and conditions made while providing the government budget.
- The autonomous agency can develop and implement its own rules and directives after obtaining approval from the concerned ministry (MoHP).

Good Governance (Management and Operation) Act: Further research is needed to fully understand the process that would need to be followed to establish a new autonomous body to administer the NHI under the Good Governance (Management and Operation) Act 2064 BS (2006 AD). However, in essence, the Act provides that the Cabinet can pass a rule to create a new autonomous body with a separate corporate personality. The MoHP would first need to clear the concept with the Ministry of Finance, and then submit the proposal to Cabinet for its approval. Once approved, the new autonomous body is deemed to be created by publication in the official government Gazette by the concerned ministry.

Option 3: Create a public company

The MoHP may constitute a public corporation under its authority. Such a corporation would be accountable to the MoHP, with MoHP staff serving on the corporation's board. This option allows for greater autonomy than Option 1, but less than Option 2, as the company falls under the authority of the MoHP. To operationalise this option, approval of the Ministry of Finance is necessary to ensure the existence of adequate budget funds. Additional legal and administrative steps may be necessary and need to be research further.

Option 4: Outsource to private organisation

The MoHP could initiate a tendering process to outsource the management of the national insurance system to a private organisation. This option can be effective if strong oversight is provided by the MoHP and other ministries. This option depends on the existence of suffi-

cient capacity in the private sector to administer insurance, and, therefore, a market assessment must be undertaken to assess the feasibility of this option.

All procurement of goods and services are supposed to be undertaken by the Logistics Management Division of the Department of Health Services. With the signing of the Financing Agreement of 18 August 2010 between the Government of Nepal and the World Bank, the Government of Nepal agreed that procurement will be conducted under an International Competitive Bidding process according to the World Bank's Guidelines for procurement. Under these guidelines, the tendering and bidding process for consultative services is a 'two-envelope' process (one for the technical proposal and one for the financial proposal) and uses quality-cost-based-selection. The process involves the following steps:

- Terms of reference need to be developed and a 'no objection' obtained from the World Bank.
- Based on the terms of reference, a request for expression of interest approved by the World Bank is advertised and interested parties usually have 28 days to submit an expression of interest.
- A Committee is formed in the Logistics Management Division to make a shortlist of the expressions of interests received, which should contain not less than six and not more than eight expressions of interests. There should not be two expressions of interest from one country and preferably three from separate continents.
- A 'no objection' to the shortlist must be obtained from the World Bank.
- A request for proposals is then sent to the approved shortlisted parties, which have, depending on complexity, 45 days to submit two envelopes (one outlining the technical proposal and the other the financial one).
- The technical bids are opened in a meeting that is open to the public in the Logistics Management Division.
- An Evaluation Committee is formed and may include one technical specialist (who could also be a consultant). The Evaluation Committee needs to be formally constituted through the Director General of Department of Health Services.
- Each member of the Evaluation Committee takes one copy of each bid and gives it a score (based on the evaluation matrix). A minimum of one week per bid is usually required to conduct a proper evaluation.
- The scores are then compared and sent to the World Bank. If the scores are too different, the Committee might be asked by the World Bank to re-evaluate the bids.
- The Logistics Management Division has to write an evaluation report for every part of the technical evaluation and send it to the World Bank for approval.
- Only then can the Logistics Management Division issue an invitation for the combined opening of the financial bids and evaluate the results of the technical bids.
- A 'no objection' on the final selection must be received from the World Bank.

Table 16 Comparative chart of options

Advantages/ disadvantages	Create new unit within MoHP	Create new au- tonomous gov- ernment body	Create public corporation	Outsource to private organi- sation
Speed to setup	Fastest option as the MoHP already has a budget head for health insurance	Depends on motivation of Minister of Health and Population to push this option	Relatively quick once financial justification approved by Ministry of Finance	Can take 6 months to 1 year depending on tendering circumstances
Checks and balances	Limited checks and balances as option does not offer a purchaser-provider split	Strong checks and balances, allowing for MoHP participation, but also relative independence	Company can be independent but will fall under authority of MoHP, which can reduce checks and balances	Reports to MoHP, but has relative freedom to implement purchasing function
Capacity needs	A new unit would need to be staffed, but existing MoHP processes/procedures can be leveraged	New organisation, thus procedures, policies, staffing, and all other aspects will need to be established	New organisation, thus procedures, policies, staffing, and all other aspects will need to be established	Depends on winning bidder's capacity; presumably the successful bidder will have strong capacity to begin quickly
Cost implications	Lower administrative costs as infrastructure already in place	Higher administrative costs associated with establishment of new organisation	Higher administrative costs associated with establishment of new organisation	Administrative costs can vary, but can be controlled by setting caps
Potential risks	Poor overall governance due to lack of adequate checks and balances; difficult to transition to autonomous agency later	Delays in setting up new organisation; requires strong MoHP leadership to initiate	Delays in setting up organisation; perceived lack of independence and autonomy	Limited private sector capacity to implement; strong oversight needed to ensure profit motive does not overtake public good

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Annexes

Annex 1. List of essential medicines under FHCS programme

SN	Medicine	Dosage form	District Hospital	PHCC	Health Post	SHP	Level of Supply
1	Lignocaine injection	Injection	*	*	*	*	3
2	Paracetamol	Tablet	*	*	*	*	3
		Injection	*	*	*	*	3
		Syrup	*	*	*	*	3
3	Chlorpheniramine	Tablet	*	*	*	*	3
4	Pheniramine	Injection	*	*	*	*	3
5	Albendazole	Tablet	*	*	*	*	3
6	Metronidazole	Tablet	*	*	*	*	3
		Suspension	*	*	*	*	3
7	Amoxycilin	Tablet/capsule	*	*	*	*	3
8	Cotrimoxazole	Tablet	*	*	*	*	3
		Suspension	*	*	*	*	3
9	Ferrous salt + folic acid	Tablet	*	*	*	*	3
10	Calamine lotion	Lotion	*	*	*	*	3
11	Gamma benzene hexachloride	Cream	*	*	*	*	3
12	Povidinelodine*	Solution	*	*	*	*	3
13	Al. hydroxide + magnesium hydroxide	Tablet	*	*	*	*	3
14	Hyoscinebutylbromide	Tablet	*	*	*	*	3
15	Oral rehydration solution (ORS)	Powder	*	*	*	*	3

16	Ciprofloxacin	Drop	*	*	*	*	3
17	Ciprofloxacin	Ointment	*	*	*	-	2
18	Chloramphenicol	Applicaps	*	*	*	*	3
19	Clove oil*	Drops	*	*	*	*	3
20	Vitamin B complex	Tablet	*	*	*	*	3
21	Metoclorpropamide	Injection	*	*	*	*	3
22	Comp. sodium lactate (ringers' lactate)	Intravenous fluid	*	*	*	*	3
23	Normal saline	Intravenous fluid	*	*	*	-	2
24	Charcoal activated	Powder	*	*	*	-	2
25	Atropine	Injection	*	*	*	-	2
26	Ciprofloxacin	Tablet	*	*	*	-	2
27	Benzoic acid + Salicylic acid	Cream	*	*	*	-	2
28	Atenolol	Tablet	*	*	*	-	2
29	Furosemide	Tablet	*	*	*	-	2
30	Promethazine	Tablet	*	*	*	-	2
31	Dexamethasone	Injection	*	*	*	-	2
32	Salbutamol	Tablet	*	*	*	-	2
33	Oxytocin	Injection	*	*	*	*	3
34	Magnesium sulphate	Injection	*	*	*	*	3
35	Gentamycin	Injection	*	*	*	*	3
36	Aspirin	Tablet	*	-	-	-	1
37	Phenobarbitone	Tablet	*	-	-	-	1
38	Chloramphenicol	Capsule	*	-	-	-	1
		Powder	*	-	-	-	1
		Suspension	*	-	-	-	1

		Applicaps	*	*	*	*	3
39	Alprazolam *	Tablet	*	-	-	-	1
40	Dextrose solution	Intrave- nous fluid	*	-	-	-	1

Note: Aminophylline tablets are allocated only to SHPs and are not included in the table.

*Free Health Care Services programme provisions that particular drug from that particular facility

** Drugs that are part of Free Health Care Services programme but are not included in essential drug list.

Legend: 1 =Supply to only district hospital; 2 = Supply to district hospital, PHCC and HP; 3 = Supply to district hospital, PHCC, HP and SHP

Annex 2. List of health facilities visited

District	Ilam	Sarlahi	Baglung	Banke	Kailali
DHO/D(P)HO	DHO	D(P)HO	DHO	D(P)HO	D(P)HO
Public hospitals	Ilam District Hospital	Sarlahi District Hospital	Dhaulagiri Zonal Hospital	Bheri Zonal Hospital	Seti Zonal Hospital Tikapur Hospital
Private hospitals (including community/NGO-run)	Fikkal Hospital	Harion Hospital	Arogya Hospital	Nepalgunj United Hospital	Navajeevan Hospital
	Dr MBP Community Hospital	Jay Shree Om Health Care Centre	Muktinath Hospital and Research Centre	Nepalgunj Aankha Hospital and Research Centre	Ghoda Ghodi Hospital
		Namuna Community Hospital		Nepalgunj Medical Hospital and Teaching Hospital	
PHCCs	Fikkal	Lalbandi	Kushmishera	Khajura	Bhajani
	Mangalbare	Barahathawa	Galkot	Laxmanpur	Malakheti
HPs	Sakhejung	Sasapur	Resha	Kachanapur	Pahalmanpur
	Kolbung	Sishoutiya	Sarkuwa	Fattepur	Pratappur
SHPs	Pachakanya	Brahmapuri	Palakot	Sitapur	Phulwari
	Jeetpur	Netrgunj	Gwalichaur	Matehiya	Hasuliya
	Sumbek	Bagdaha	Naraynsthana	Kohalpur	Pathariya

