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A Review of Studies on Nepal's National Free Health Care Programme

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Primary Health Care Revitalisation Division
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Strengthening Health Systems-Improving Services

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The provision of free essential health care services is a central strategy of the Government of Nepal for improving the health of the Nepalese people and meeting the health MDGs. The current review was carried out to assess the success of the free care programme and to identify areas for improvement.

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EXECUTIVE SUMMARY

Review of Studies on Nepal's National Free Health Care Programme

A. Background

Between 2006 and 2009 free health care was introduced for poor people and other targeted groups in Nepal. A number of assessments of this programme have been carried out but a synthesis of findings has yet been carried out. This review of studies on Nepal's national free health care programme has been undertaken to address this gap. More than 14 studies were identified and the appropriate reports collected from the Nepal Health Research Council, private research institutes and from internet sources.

B. Findings

The major findings of the review are as follows:

1. ***Knowledge levels***: The average knowledge level among household heads on the availability of free health care services was reported to have increased from 60% in 2010 to 76.2% in 2012. Knowledge levels were higher in rural than urban areas, and with greatest increases seen among the poorest wealth quintile.
2. ***Use of free care***: Access to free health care in the population is reported to have increased significantly since the launch of the programme, but with the extent of increase reported depending on study sample size, level of facility and methodology used.
3. In the year following programme launch, free service use was reported to have increased by between 62 and 133% in SHPs and between 62 and 255% in health posts.
4. The proportion of clients receiving free care at public health facilities increased from 29% in 2009 to 82% in 2011.
5. Dalits were recorded as benefitting most from free outpatient services.
6. ***Out of pocket expenditure***: Further analysis of the Nepal Living Standards Survey (NLSS) suggest that, in 2003/04, 11% of respondents spent 10% or more of their total 'consumption' (= all kinds of consumption) to treat catastrophic health events. Following implementation of the free health care programme, the frequency and extent of out-of-pocket payments by clients is reported to have decreased - particularly for those with serious illnesses which tend to be expensive to treat.
7. ***Client satisfaction***: Over two-thirds of clients reported being satisfied with free health care services. In 2012, six per cent rated outpatient services as very good and 63% as good. However, still room for improvement is seen to exist in reducing client waiting times, improving the cleanliness of facilities and maintaining the privacy and confidentiality of clients.
8. ***Types and Quantities of Free Drugs***: Care providers and clients reported that the existing types and quantities of free essential drugs available at health facilities were insufficient to meet patient requirements.
9. Medical doctors and other care providers recommended the addition of several items to the free medicines list including: amclox (ampilicillin + cloxacillin); third generation antibiotics such as agithromycin; anti-hypertensive drugs and anti-diabetic drugs.

10. ***Stock Outs***: Findings on drug stock-out rates must be viewed as indicative only since data derive from different sources which use varying definitions, methodologies and sampling approaches.
11. The studies report that following the launch of the programme an initial increase in drug stock-out rates was seen. The percentage of health posts reporting no stock-outs fell from 34.1% in 2009 to 4.3% in 2010 and from 32.9% in 2009 to 13.2% in 2010 for sub-health posts.
12. By 2012, improvements were reported with 40% of primary health care centres (PHCCs), 36% of health posts and 47% of SHPs experiencing no stock-outs.
13. Stock-out rates were higher in mountain districts (80% of all health facilities) compared with hill (43%) and Terai (52%) districts according to 2012 data and lowest in district hospitals.
14. The Logistics Management Information System (LMIS) reported lower stock-out levels (20.8% of health facilities in 2010/11) than the surveys.
15. Strong seasonality in the occurrence of stock-outs was reported with almost 75% of all stock-outs occurring in the first quarter of the financial year.
16. ***Expired Drugs***: High levels of expired drugs in health facilities were reported to be a major concern. 59.6% of all expired drugs had been purchased locally and 30.6% from central procurement. This suggests that district health offices have been purchasing drugs having short expiry dates. The high volume of expired drugs is seen to have diminished the efficiency of the free health care programme.
17. ***Human Resources***: A decrease in filled health worker positions at facility level from 60% in 2009 to 50% in 2011 was reported and seen to have adversely affected health service delivery including free care. This shortfall was offset to generally good effect by the issuing of local service contracts to ANMs and AHWs, frequently using locally sourced funds.
18. ***Fund Flows***: In the early years of the programme, fund flows from MoHP to health facilities were intermittent but have improved significantly since 2010 with district health offices/district public health offices (DHOs/DPHOs) now routinely requesting and receiving letters authorising the local purchase of essential drugs. However, delays in reimbursing funds by the centre to health facility accounts persist.
19. The increasing availability of VDC, DDC and other local funding (38% of health post income; 53% of SHP income) has given facilities greater flexibility and capability to support the free care programme.

C. Recommendations

1. Review the types of free essential drugs provided to address current treatment and case management needs while considering fund limitations and the technical competency of health workers at different levels of health facilities. The addition of any new drugs to the essential drugs list should be appropriately budgeted and incorporated in the next AWPB.
2. Reduce stock-outs by more effectively implementing the pull system of drug management at health facilities and more effective monitoring of drug stock status at district and facility levels.
3. Further strengthen LMIS to improve the reliability and validity of LMIS data.
4. Carry out a separate study to understand the magnitude of the stock-out problem and identify its underlying causes.

5. Develop and pilot financial and non-financial incentive packages to better retain health workers in posts, particularly medical officers and nurses in remote areas.
6. Carry out and implement social audits, score cards, public hearings, and civil society monitoring to improve governance and accountability in the provision of health services at local and district levels.
7. Encourage the Primary Health Care Revitalisation Division (PHC-RD) to coordinate with the Ministry of Cooperatives and Poverty Alleviation (MoCPA) to identify the poor for targeted free care via a system of identity cards.

CONTENTS

ABBREVIATION AND ACRONYMS

ANM	auxiliary nurse midwife
CRD	Centre for Reviews and Dissemination
CSO	civil society organisation
DDC	district development committee
DFID	Department for International Development
DH	district hospital
DHO	district health office
DoHS	Department of Health Services
DPHO	district public health office
DRC	Development Resource Centre
EHCS	essential health care service
FCHV	female community health volunteer
FHCS	free health care service
FHD	Family Health Division
FHS	Free Health Service Programme
GESI	gender equality and social inclusion
GON	Government of Nepal
HDC	hospital development committee
HDI	Human Development Index
HFOMC	health facility operation and management committee
HFS	health facility survey
HMIS	Health Management Information System
HP	health post
IEC	information education and communication
IP	in-patient
LMIS	Logistics Management Information System
MCHW	maternal and child health worker
MoHP	Ministry of Health and Population
MoCAP	Ministry of Cooperatives and Poverty Alleviation
NEAT	Nepal Evaluation and Assessment Team
NGO	non-governmental organization
NHRC	Nepal Health Research Council
NHSP-2	Nepal Health Sector Programme 2
NHSSP	Nepal Health Sector Support Programme
NPC	National Planning Commission
OOP	out-of-pocket payment
ORC	outreach clinic
PHC-RD	Primary Health Care Revitalisation Division
PHCC	primary health care centre
PHFS	Public Health Facility Survey
RECPHEC	Resource Center for Primary Health Care
RIDA	Research Inputs and Development Action
RTI	Research Triangle Institute
SHP	sub-health post
STS	Service Tracking Survey
VDC	village development committee

1 INTRODUCTION

1.1 Background

A priority of the ten point position paper of the government, which followed the Second Popular Movement of April 2006, was to reduce inequalities in access to and use of health services. The paper focused on economically and socially marginalized individuals, genders, ethnic groups, and geographical areas. In 2007, health care was endorsed as a basic human right for the first time in Nepal in its Interim Constitution. This constitution called for the creation of an inclusive society, where people of all ethnic groups, genders, castes, religions, political beliefs, and social and economic status have equal rights and are not subject to discrimination. This approach reinforced the state's proactive approach to ensuring its people's health.

Nepal subsequently abolished user fees on primary health care services to reduce inequalities in access to and use of health services, and in health outcomes. The free health care policy was introduced in four phases:

- *Targeted free care* — On 15 December 2006 (Nepali date: 2063-8-29), the Government of Nepal (GoN) made emergency and inpatient services free of charge at district hospitals and primary health care centres (PHCCs) for ultra-poor, poor, destitute, elderly, those living with disabilities and female community health volunteers (FCHVs). Outpatient services were also offered free of change to the targeted groups in low HDI districts from fiscal year 2007/08 onwards. This is known as the targeted free care policy.
- *Universal free care* — On 7 October 2007, GoN declared that essential health care services were to be provided free of charge to all users at all health posts and sub-health posts (SHPs). The universal free care policy was implemented from mid-January 2008.
- *PHCC free care* — On 16 November 2008, GoN declared essential health care services free of charge to all at all PHCCs.
- *Hospital free care* — On 15 January 2009, GoN declared that outpatient, inpatient, emergency services and all medicines would be provided free of charge to targeted groups in hospitals with 25 or fewer beds. For non-targeted clients 40 listed drugs were to be made available free of charge.

The objectives of the free health care policy as laid out in its operation guidelines (MoHP 2008) are to:

- ensure fulfilment of the right to basic health services for all Nepalese citizens;
- increase access to and use of health services by targeted groups (including the poor and destitute) and ensure their right to health services;
- reduce the mortality rate and proneness to disease through the provision of basic health services;
- make the state responsible for the delivery of health services to ensure healthy lives for its citizens;
- deliver basic health services effectively and with an assurance of quality; and
- create opportunities for implementing various programmes and activities related to public health.

These objectives are intended to reduce the financial barriers to seeking care, provide relief to poor families, and promote the use of essential health care services. The national free health care

programme has been implemented through the Primary Health Care Revitalisation Division (PHCRD) under the Department of Health Services (DoHS). The Division is accountable for implementing the programme, although health system issues such as the supply of essential drugs fall under the Logistic Management Division while human and financial resources are the responsibility of DoHS's Administrative and Financial Management sections.

The implementation of free basic health services is guided by DoHS's Free Health Service Programme Implementation Guidelines (DoHS 2006 and DoHS 2008). The directives, which define free health services, list free services and medicines, and identify target groups, were introduced to bring uniformity in understanding and implementation of the free health service programme across the country (DoHS 2008).

The following five groups are currently targeted for free health services at district hospitals with up to 25 beds, according to the Free Health Service Implementation Guidelines (DoHS 2008):

1. Poorer (defined as able to provide adequate food for less than six months a year).
2. Poor (defined as able to provide adequate food for six to fewer than 12 months).
3. Destitute and disabled people.
4. Senior citizens (above 60 years of age)
5. Female community health volunteers (FCHVs).

A monitoring mechanism was established to track progress of the free health care programme. The Nepal Health Sector Programme (NHSP-2, 2010–2015) provides for an annual service tracking survey (STS) (previously 'facility survey') to obtain information on the national free health care programme, the delivery of priority services, various demand side financing schemes, gender equality and social inclusion (GESI), governance and progress against selected NHSP-2 indicators. In addition, MoHP commissions a household survey every two years that reports against NHSP-2 indicators.

Monitoring the national free health care programme has been lent a high priority. Under NHSP-1 (2004-2010) a facility survey was carried out three times a year and the Family Health Division (FHD) undertook two additional annual surveys to monitor the Aama incentive programme. The latter had a similar scope to the free care facility survey but with a greater emphasis on funds flow and Aama-related services.

Under NHSP-2, MoHP requested NHSSP to combine these two surveys into a single service tracking survey (STS). The first STS was undertaken in 2011 (Suvedi et al. 2012) and the second in 2012 (Mehata et al. 2013). The STS is intended to be conducted annually using the same basic methodology but with minor changes to questionnaires to reflect emerging interests and concerns. Also in 2012, FHD continued its series of rapid assessments for the Aama programme, with a sixth round completed, and the National Planning Commission carried out its own study of the free health care programme (DRC 2012).

Several external development partners and civil society organisations have also reviewed aspects of their programmes that support free health care provision.

1.2 Rationale for this Review

Several assessments have been carried out of the national free health care programme but these have tended to have objectives centred around limited themes and activities. Little work has been

done to bring together the findings and lessons learned from these studies to improve implementation of the free health care programme. As noted, these studies tended to address free health care issues from limited perspectives (e.g. providers, users, NGOs, government).

Recognizing this gap, PHCRD requested in 2013 that a consolidated review of studies be carried out to identify core concerns which could then be taken forward in its 2013/14 annual programme and budget process. PHCRD also called for the review to highlight other factors requiring further investigation.

This assignment was therefore carried out to combine the results of the free care related studies carried out to date in order to yield more reliable data, and to provide comprehensive knowledge on implementation of the free health care programme.

1.3 Objective of the Review

The overall objective of the assignment was to review, analyse and document the various findings and recommendations from recent studies carried out on the national free health care programme. A specific objective was to identify particular issues faced by women and poor and excluded people in accessing benefits from the programme.

1.4 Methodology

The review looked at studies, reports, documents, and papers published in journals that captured at least one of the following themes (see Annex 1 for 14 main studies). Box 1 gives details of six of the major surveys that provided information on free health care.

Box 1: Some of the key sources of information for the free health care review

Survey	Abbreviation	Citation
Public Health Facility Survey 2008/09	PHFS 2008/09	RTI International 2009a
Public Health Facility Survey	PHFS 2009/10	RTI International 2010a
Pro-poor Household Survey 2009/10	HHS 2009/10	RTI International 2010b
Service Tracking Survey 2011	STS 2011	Suvedi et al. 2012
Service Tracking Survey 2012	STS 2012	Mehata et al. 2013a
Household Survey 2012	HHS 2012	Mehata et al. 2013b

Manual and electronic searches were carried out to identify relevant reports and papers. Reports were collected from the Nepal Health Research Council and from private research institutes. The selection of studies mostly took place in two stages; firstly an initial screening of titles and abstracts to identify potentially relevant papers followed by a screening of the full papers identified as being of possible relevance (CRD 2009).

The content was collated and grouped under the following topics:

- Knowledge on free care
- Adequacy of benefit package
- Availability free care services
- Availability of free essential drugs
- Availability human resource

- Availability of fund for free care
- Access to free health care
- Effectiveness of free care
- Equity of free care
- Efficiency of free care
- Quality of care of free care
- Sustainability
- Issues and challenges.

The various studies were collated, organised and their main findings described. Findings were then categorised under major themes and synthesised.

1.5 Limitations

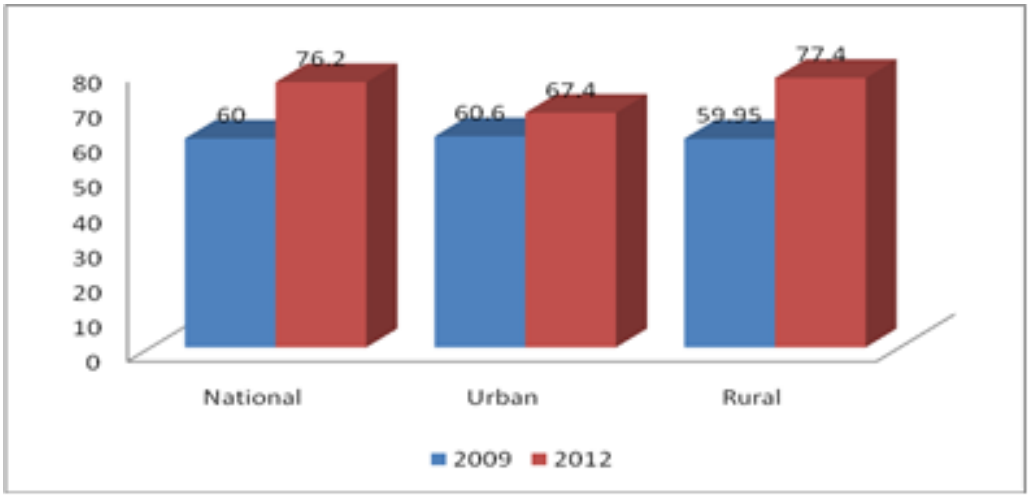
With the exception of the Health Facility Survey 2009-2010 (RTI International 2010a), Household Survey 2010 (RTI International 2010b), Service Tracking Survey 2011 (Suvedi et al. 2012), and Household Survey 2012 (Mehata et al. 2013a), many of the other findings proved anecdotal or were based on small sample sizes, thereby making findings suggestive rather than conclusive.

2 FINDINGS

2.1 Knowledge about Free Care

It proved difficult to show the trend in levels of awareness of free care from the studies consulted due to certain methodological differences. However, the Household Survey (HHS) 2009/10 (RTI International 2010b) and HHS 2012 (Mehata 2013b) used a similar methodology and so could be compared to some degree. The data shows an increasing level of awareness of heads of households on free health care services from 60% in the 2009/10 HHS to 76%in the 2012 HHS (Figure 1). The same sources show lower levels of increases in urban areas —from 60.6% in 2009 to 67.4% in 2012.

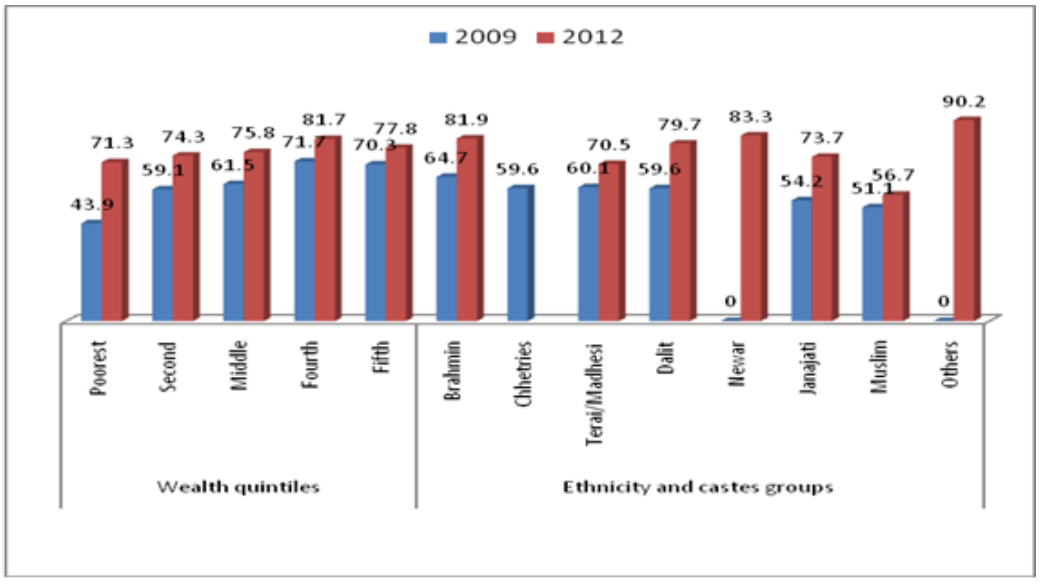
Figure 1: Awareness among heads of households of free health care (percentages)



Sources: HHS 2009/10 (RTI International 2010b) and HHS 2012 (Mehata 2013b)

The same sources show an increase of 27.4 percentage points in household heads' knowledge of free care in the poorest wealth quintiles between 2009 and 2012 (Figure 2) compared to a 7.5 percentage point increase in the wealthiest quintile.

Figure 2: Knowledge of heads of household about free care by wealth quintiles, and castes and ethnic groups (percentages)



Sources: HHS 2009/10 (RTI International 2010b) and HHS 2012 (Mehata 2013b)

The rate of increase in this period decreased with increasing wealth, although in 2012 the level of knowledge was still higher in the wealthiest quintile (77.8%) than the poorest (71.3%). By caste and ethnic group the level of knowledge increased by about 20 percentage points between 2009 and 2012 among Dalits and Janajatis (ethnic groups) (see Figure 2).

Some sources give anecdotal evidence on the level of awareness on free health care from studies in small areas with purposive sampling. NEAT and RECPHEC (2011) found high levels of knowledge on free care among household heads (87%). The same study reported a large difference in awareness levels by wealth and caste/ethnic group. Only a half of poorest households had heard about free health care services compared to 98% of household heads from the wealthiest quintile. And Dalits were less aware of free health care than other caste and ethnic groups: 74% of Dalits were aware compared to 89% of Janajatis and 91% of other castes. Regarding sources of information on free care, 91% of household heads possessing a radio or cassette player were aware, compared to only 65% who did not possess one.

Also regarding sources of information, the HHS 2009/10 (RTI International 2010b) measured the first exposure to information on free care i.e. from a single source, whereas the HHS 2012 (Mehata 2013b) allowed for the reporting of multiple sources. This means that the data is not comparable. However, it does indicate the effectiveness of various media for disseminating information.

The HHS 2012 (Mehata 2013b) found friends/peers/neighbours to be the major source of information on free care at 63% of respondents (Table 1), whereas the 2009/10 HHS (RTI International 2010b), found FM radio to be the primary source of information with 37% of household heads saying that they had first heard about free care in this way. The HHS 2012 (Mehata 2013b) recorded family members and relatives as the second major source of information with four in ten having received information through family members and relatives followed by 37% from a government facility and 20% from a female community health volunteer FCHV.

Table 1: Source of information on free care (percentages) in 2009 and 2012

Source	2009 Single source	2012 Multiple sources
Family/relative		40.4
Friend/peer/neighbour	16	63.1
FCHV	12	20.8
Government facility/staff	24	36.5
FM radio	37	15
Television	5	3.2
Facility noticeboard	6	0.4

Source: HHS 2009/10 (RTI International 2010b) and HHS 2012 (Mehata 2013b)

In general, the available studies and surveys show that levels of knowledge on free care have increased in recent times, thus suggesting that demand will increase further so long as free care continues to be made available. The studies and surveys also indicate that interpersonal communications with peers, friends, family members and staff of government health institutions are the most effective vehicles for informing household heads about free care.

2.2 Adequacy of the Free Care Package

The free health care package consists of free medicines, diagnostic services, beds and registration in inpatient, emergency and outpatient (OPD) departments. The studies and surveys reported very few complaints about the adequacy of services, but several identified the unavailability of free drugs as a cause for concern.

Shrestha et al. (2009) found that 15 of the 40 free medicines in six district hospitals were judged to be the most prescribed in outpatient, emergency and inpatient departments while 16 medicines were less prescribed (see Table 2). This data was based on the perceptions of prescribers working in hospital OPDs. The providers reported that the essential drugs listed for free care were inadequate to treat patients with several common illnesses/conditions. Most medical doctor respondents said that other drugs should be added including amclox (ampilicillin+cloxacillin), a number of third generation antibiotics (agithromycin) and anti-hypertensive and anti-diabetes drugs.

Table 2: Prescribers' assessment of use of 40 free medicines in six district hospitals

Most prescribed medicines	Used in		Less prescribed medicines	Used in
1. Albendazol	OPD		1. Chloramphenicol eye ointment	OPD
2. Alprazolam	OPD		2. Clove oil	OPD
3. Aluminium hydroxide + Magnesium hydroxide	OPD		3. Cap Chloramphenicol	Emergency/OPD/IP
4. Amoxicillin	Emergency, OPD, IP		4. Benzoic acid+ salicylic acid	OPD
5. Ciprofloxacin cap.	Emergency, OPD, IP		5. Calamine Lotion	OPD
6. Ciprofloxacin liq.	Emergency, OPD, IP		6. Charcoal activated	Emergency
7. Ciprofloxacine eye ointment	OPD		7. Aspirin	Emergency/OPD/IP
8. Hyoscine butylbromide	OPD		8. Atenolol	OPD
9. Metronidazole	OPD		9. Chlorpheniramine	OPD
10. Paracetamol	Emergency, OPD, IP		10. Metoclorpropamide	OPD
11. Salbutamol	OPD		11. Gamma benzene hexachloride	OPD
12. Sulfamethoxazole + Trimethoprim	Emergency, OPD, IP		12. Frusemide	OPD
13. Vitamin B complex	Emergency, OPD, IP		13. Phenobarbitone	OPD
14. Oral rehydration solution (ORS) (free supply under public health programme)	OPD		14. Promethazine	OPD
15. Ferrous salt + Folic acid (free supply under PH programme)	OPD		15. Pheniramine	OPD
			16. Magnesium Sulphate	OPD for dressing/IP

Source: Shrestha et al. (2009)

Bhusal et al. (2009) conducted a study to assess the availability of free health care in Kavre and Morang districts. They reported that the supplies of 25 types of drugs at SHPs and 32 types at PHCCs were inadequate to meet common demands. Supplies of basic drugs such as paracetamol

and antibiotic syrup were grossly inadequate at PHCC level, being hardly sufficient to last for a week. At health posts and SHPs, patients had to buy drops, syrup, and other drugs from local pharmacies because these items were not on the free essential drugs list.

Some health post and SHP in-charges stressed that the government should provide adequate budgets to allow facilities to buy needed drugs since the quantities supplied by regional warehouses were insufficient to meet demand.

Bhusal et al. (2009) and Shrestha et al. (2009) reported that district hospitals and PHCCs needed more advanced types of drugs to treat some referral cases. Care providers reported that antibiotic drugs such as cotrim, cipro and amoxicillin were effective for treating only about 40% of infection cases. The other 60% needed treating with more advanced antibiotics, which are not included on the free drugs lists for PHCCs and district hospitals. The high demand for more advanced drugs may be due to over-prescription of antibiotics at SHPs, health posts, PHCCs and private health institutions and the increased drug resistance that results.

The STS 2011 (Suvedi et al. 2012) found that 17% of all clients were paying for drugs because the medicines they required were not on the essential free drugs list. It was also noted (Brhlikova et al. 2011) that drug company representatives frequently provided 'bonuses' including discounts and gifts to doctors in return for them prescribing their brands, thus distorting prescribing practices.

DRC (2012) found that the listed free drugs and medical commodities addressed most common health needs in their five study districts for antenatal care, deliveries, family planning, vaccines, worm infestations, skin diseases, diarrhoea, pneumonia, chest infections, eye infections, hypertension, accidents, arthritis, bronchitis, depression, fevers, colds and coughs, typhoid, urinary tract infections, and gastrointestinal problems. However, the study found that the types and volumes of some drugs to be inadequate and recommended that the free care package should also cover emergency services, x-rays and laboratory services at PHCCs and health posts.

DRC (2012) found that drug types and availability were not the main problems:

> *"The drugs under the free drug scheme of the Government are available in sufficient quantity. Lack of human resources and infrastructure are the main problems". — DHO, District 3*

A commonly expressed view was that:

> *"Drugs are not in sufficient quantities. Although the service is available, all necessary medicines are not provided from the PHCC. There is a need to increase the number of staff. The regular supply of drugs is difficult during the rainy season. Hence, stocks should be built prior to the rainy season." — PHCC In-charge, Mustang*

One woman client (Dudhpokhari VDC), said:

> *"It takes one whole day to reach the nearby health post. Even if we go there, we get no medicines and doctors. What to do?"*

In conclusion, the free care package was seen to lack a sufficient range of drugs for PHCCs and hospitals, thereby limiting their abilities to treat referral and other complex cases, and a general shortage of stocks was reported at all facility levels.

2.3 Availability of Free Care Services

Shrestha et al. (2009) assessed the availability of free care services at six district hospitals including outpatient, emergency, inpatient, safe abortions (including post abortion complication services), minor surgical care, and maternal health services (delivery care but excluding caesarean sections) (Table 3). Routine blood, stool and urine testing laboratory equipment was available at all six hospitals however the absence of technicians in several places restricted access to these services.

Table 3: Distribution of service availability in study districts, 2009

Services	Sunsari	Nuwakot	Gorkha	Rupandehi	Bardiya	Baitadi
Medical services (OPD, emergency, IP)	√	√	√	√	√	√
Delivery care (normal and assisted)	√	√	√	√	√	√
Safe abortion care	X	√	√	√	X	X
Post abortion care	√	√	√	√	√	√
Minor surgery	√	√	√	√	√	√
Laboratory services	√	√	√	√	√	√
X-rays	√	√	√	√	√	√
Ultrasonography (USG)	√	√	√	√	√	X
Electrocardiogram (ECG)	√	√	√	√	√	X
Public health services	√	√	√	√	√	√

Source: Shrestha et al. 2009

The PHFS 2009/10 (RTI International 2010a) and NEAT and RECPHEC (2011) studies found that short opening hours of SHPs and health posts adversely affected service delivery. It was found that staff spent only 4.2 hours a day on average providing services to clients at facilities which were only open from 10 am to 2 pm, whereas they should be open for 7-8 hours a day. This was said to significantly limit the availability of free care at community level facilities.

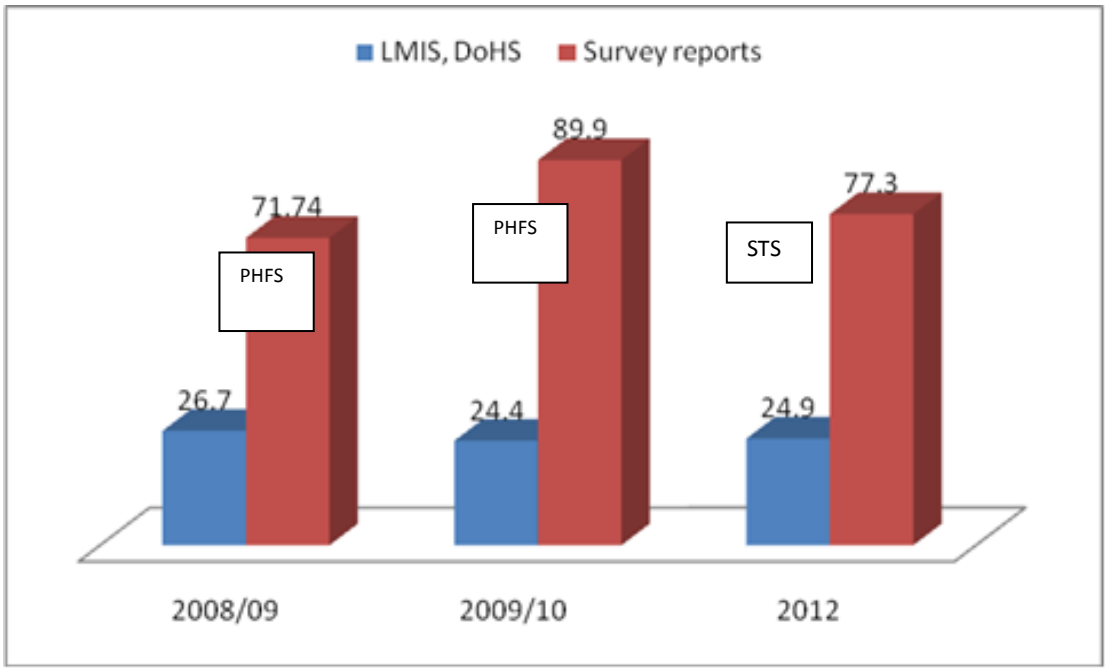
2.3.1 **Availability of free drugs**

Ensuring the availability of sufficient quantities of drugs needed by patients remains a major challenge for Nepal's health system and several studies reviewed availability from both supplier and consumer perspectives.

The HHS 2012 (Mehata 2013b) found that of surveyed clients who had used outpatient care and purchased drugs from a private pharmacy, nearly two-thirds (64%) had done so because the drugs had not been available at the public health facility. 30% said that the public health provider had told them to purchase the drugs elsewhere.

The trend of drug stock-outs has fluctuated over the last four years. The PHFS for 2009/10 (RTI International 2010a) recorded the incidence of stock-outs as increasing from 71% in 2008/09 to 90% in 2009/10 while the STS 2012 (Mehata 2013a) reported a decrease to 77.3% (Figure 3).

Figure 3: Stock-outs of essential drugs



Source: Logistics Management Information System (LMIS), PHFSs 2008/09 and 2009/10 (RTI International 2009a and 2010a) and STS 2012 (Mehata et al. 2013a)

The STS 2012 (Mehata 2013a) found that 77% of surveyed health facilities lacked adequate stocks of essential drugs in the previous fiscal year. Nearly-three quarters (73%) had experienced a lack of ferrous sulphate and folic acid (Table 4). The next two most commonly out of stock drugs were hyoscinebutyl bromide capsules and amoxycillin. The pattern of out-of-stock essential drugs was similar for the different levels of facilities, although there tended to be fewer stock-outs at hospitals than at the lower level facilities. The frequency of stock-outs varied across different levels of health facilities during the last fiscal year. Altogether, 22 essential drugs had been out of stock at least once and some drugs had been out of stock up to 12 times across different facilities.

DRC (2012) conducted a study to assess the availability of drugs in health facilities in one district in each of Nepal's five development regions. It identified the distribution of stock-outs in place, time, and by item. The stock-out rate was higher in mountain districts with 80% of health facilities having a stock-out of at least one type of free drug compared to 43% in hill districts and 52% in Terai districts. The stock-out rate of types of essential drugs was 53% in SHPs and 64% in health posts. At least one essential drug was out of stock in all the five district hospitals. The highest rates of stock-outs were found in mountain region health posts.

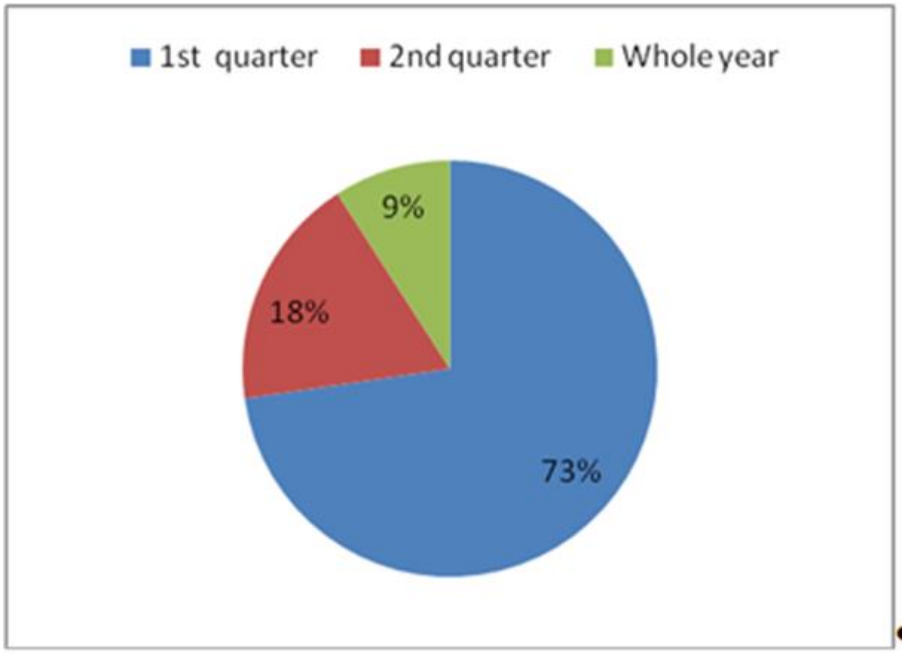
In terms of seasonality of stock-outs, three-quarters (73%) occurred in the first trimester (four months) of the financial year (DRC 2012) (Figure 4). This was said to be due to the high incidence of communicable diseases in the mid-July to mid-November period and delays in receiving new budgets and drugs from the centre. The most stocked out drugs according to health facility records were phenobarbitone tablets (45%), alprazolam (25%), aspirins (15%), gentamycin (15%), cotrim (6.2%) and amoxicillin (6.2%). The seasonality of drug stock-out rates is shown in Figure 4.

Table 4: Drugs that stocked-out in 2011/12 (STS 2012)

	Hospital	PHCCs	HPs	SHPs	Overall
Ferrous sulphate + folic acid cap/tab 60+0.4 mg	40	74.1	76.3	75.4	73.2
Hyoscinebutyl bromide cap/tab 10 mg	50	85.2	71.2	70.2	71.9
Amoxycillin disp. tab. 125 mg	60	55.6	61	75.4	65.4
Aluminium hydroxide + magnesium hydroxide tab 250 mg.	30	77.8	62.7	64.9	64.1
Chloramphenicol 1% eye applicaps	20	44.4	64.4	61.4	56.9
Gamma benzene hexachloride 1% lotion	10	44.4	64.4	57.9	54.9
Zinc sulphate 20 mg	40	63	52.5	52.6	53.6
Sulfamethoxazole + Trimethoprim cap/tab 100/20 mg	70	48.1	45.8	57.9	52.3
Amoxycillincap/tab 250 mg	30	37	47.5	56.1	47.7
Providone iodine 5% solution	20	33.3	37.3	47.4	39.2
Oral Rehydration Solution (ORS)	60	48.1	23.7	43.9	37.9
Compound solution of Sodium lactate (Ringer's L)	30	29.6	30.5	43.9	35.3
Metronidazole cap/tab 200mg.	10	18.5	23.7	42.1	28.8
Ciprofloxacin cap/tab 250 mg.	40	51.9	40.7	0	27.5
Gentamycin inj. 80mg/2ml	10	33.3	45.8	8.8	27.5
Oxytocin Injection, 10 IU in 1 ml ampoule	30	44.4	32.2	3.5	23.5
Albendazole cap/tab 400 mg	20	25.9	13.6	26.3	20.9
Magnesium sulphate Injection, 1 gm/2ml (50 % W/V)	30	25.9	28.8	8.8	20.9
Paracetamol cap/tab 500mg.	10	14.8	23.7	21.1	20.3

Source: STS 2012 (Mehata 2013a)

Figure 4: Seasonality of stock-outs of free drugs



Source: DRC (2012)

DRC (2012) further reported on clients' perspectives on the availability of free essential drugs. Approximately two-thirds of surveyed clients had received all their prescribed essential drugs from government health facilities, while 27% had received some and 6% had not received any. MoHP's Logistics Management Information System (LMIS) reported that only a quarter of health facilities experienced stock-out of drugs in FY 2010/2011 (DoHS 2012).

DRC (2012) found that 22% of surveyed clients had paid for essential drugs.

Regarding year round availability of free essential drugs, 25% of district hospital users and 40% of PHCC users reported that they were always available. The comparable figures at health posts and SHPs were 37% and 22% respectively. By sex, slightly more males (65.2%) than females (59.6%) reported the same while by ethnicity, two-thirds of Brahmin/Chhetri, 58% of Janajati and 55% of Dalit service reported this. However, only 17% Madhesi and 7% of Muslim respondents said the same (DRC 2012).

Box 2 explains the benefits of the introduction of the pull system of stocking drugs at public health facilities.

Box 2: Pull system of drug stocking claimed to have reduced drug stock-outs and stocking of expired drugs

A pull system of drug stocking at health facilities is a demand-based approach for ensuring the reliable availability of drugs at service delivery points in a health system. DoHS introduced such a system in public health facilities around 2006. DoHS claims that this has resulted in the stock-out of essential drugs reducing from 31.9% in 2006/07 to 20.8% in 2010/11 (DoHS 2012). Some other studies also say that this system has helped reduce drug stock-outs (Bhusal et al. 2010, NEAT and RECHPEC 2011, and DRC 2012).

The overall system is a 'push-pull' system that is designed to address health facilities' demands for drugs with half the annual estimated consumption of health facilities being dispatched directly to facilities. The other half is stored at the district level to respond to demands during the rest of the year.

Bhusal et al. (2010) conducted a study in five districts to assess the status of free health care services and found that 7 out of 35 drugs were very scarce at most of the surveyed health facilities. By reviewing logistical records, the study found that paracetamol inj. 150mg/ml, ciprofloxacin eye and ear drops 0.3%W/V, ciprofloxacin eye ointment 0.3% W/V, metoclopropamide inj., charcoal activated powder, ciprofloxacin tab. 250mg, atenolol tablets 50 mg, and magnesium sulphate inj. had seldom been supplied from central supplies to DHOs/DPHOs (period unknown).

The PHFSs for 2008/09 and 2009/10 (RTI international 2009a and 2010a) surveyed the supply perspective on the availability of essential drugs. The incidence of no stock-outs of essential drugs decreased markedly from 34.1% of health posts in 2009 to 4.3% in 2010 and from 32.9% of SHPs in 2009 to 13.2% in 2010. The two-year trend showed a steady increase in stock-outs.

But DRC (2012) found some improvement in 2012 with no stock-out rates improving to 40% in PHCCs, 36% at HPs and 47% at SHPs, meaning that 60% of PHCCs, 64% of HPs and 53% of SHPs had at least one drug stock-out in 2011/12. This review cross matched these findings with data from

the Logistic Information System (LMIS) which reported overall stock-out rates decreasing from 31.9% in 2006/07 to 21% in 2010/11 (DoHS 2012). The discrepancies may be due to differences in methods used, definitions, and reporting and recording errors of HMIS.

RIDA and RECPHEC (2009) reported that there is a common tendency among doctors to advise clients to purchase prescribed drugs from private pharmacies in order to protect supplies and record fewer stock-outs. Bhusal et al. (2009 and 2011) reported on a common view held by local users:

> *"We cannot get full medicinal support from government institutions and are therefore forced to visit the private hospital." – woman*

> *"the problem of medicinal shortage is massive. Sometimes, a common medicine like Paracetamol is not made available." — focus group participant, Jumla*

Bhusal et al. (2011) also reported malpractice at SHP level whereby clients request additional medicines either for their neighbours or to store them at home for future use:

> *"Some clients want to take medicines for their neighbours too. If we provide them, they don't use them properly."— SHP in-charge*

These findings raise questions on the reliability of data at health facilities which are authorised to prescribe medicines to clients in attendance only. As such, these data need to be viewed as suggestive rather than conclusive. Although overall progress is reported on the availability of free essential drugs, major challenges remain and the different stock-out rates reported across data sets raise questions about definitions and measuring methods.

Whatever methodological differences may exist, all data sources including the government's LMIS figures (20.8% in 2010/11) show relatively high stock-out rates, the frequency and duration of which are directly linked to procurement, supply and management systems.

2.3.2 **Availability of human resources**

The availability of adequate human resources is critical if free health care services are to be made widely available. The PHFSs for 2008/09 and 2009/10 (RTI International 2009a and 2010a) and the STS 2011 (Suvedi et al. 2012) sought to track this indicator using almost identical methodologies (13 clusters of districts, the same sampling procedure and almost the same sample size). However, the 2008/09 and 2009/10 PHFSs merged the findings of PHCCs and district hospitals while the latter disaggregated data by facility level, thus making direct comparison of findings impossible. These surveys revealed a decreasing trend of filled health worker positions over the previous two year period.

The 2009/10 PHFS (RTI International 2010a) and the STS 2012 (Mehata 2013a) found a declining percentage of filled positions at district hospitals— from 77% in 2009 to 56.4% in 2012 (Table 5). For PHCCs, the proportion of filled doctor positions decreased from 77% in 2009 to 50% in 2011 and was only 19% in 2012. The percentage of filled positions of staff nurses at PHCCs decreased from 68% in 2009 to 59% in 2012. The main reason given for these high understaffing levels was the government's moratorium on health worker recruitment which will remain in place until the new Health Services Act is approved. Low staffing levels were reported to have adversely affected the delivery of free health care services. However, the 2013 passing of the ordinance for the

Health Services Act has led to new recruitment being initiated and it is expected that human resource levels will improve.

Table 5: Percentage of filled positions of health workers in different levels of health facilities

	PHFS 2009	STS 2011	STS 2012
% of sanctioned posts filled:			
Doctors at PHCCs	77.3	50	19.4
Doctors at district hospitals		69	56.4
Nurses at PHCCs	68.	74	58.7
Nurses at district hospitals		83	82.7
% of sanctioned posts of HAs, ANMs and AHWs filled at health posts:			
Health assistants		46.7	54.4
ANMs	88.6	88.1	58.9
AHWs	85	98.3	68.1

Sources: PHFS 2009/10 (RTI International 2010a), STS 2011 (Suvedi et al. 2012) and STS 2012 (Mehata et al. 2013a)

The retention of human resources, particularly of doctors and nurses in district hospitals and PHCCs, is reported as very poor. The PHFS 2009/10 (RTI International 2010a) found that around 11% of health workers in filled positions were out of station, either on leave or on secondment. The same study showed that in 2008/09 and 2009/10, following an initial period of increased retention, the rates stabilised at between 90% and 92% of filled positions in health posts and SHPs within the fiscal year.

The PHFS 2009/10 found that the retention rates of paramedical personnel overall had increased from 85% of filled positions in 2008/09 to 90% in 2009/10. For ANMs and MCHWs, retention increased from 87% of filled positions in 2008/09 to 91% in 2009/10. The rate for nurses increased from 68% of filled positions in 2008/09 to 75% in 2009/10, but that for medical doctors decreased from 77% in 2008/09 to 56% in 2009/10.

Overall, the availability of health care providers increased due to the hiring of health workers on local service contracts, especially at district and below levels (see Box 3).

Box 3: Service contracts have improved the availability of care providers

In 2010/11, about 20% of all ANMs and 48% of AHWs were recruited on service contracts. Health facility operation and management committees (HFOMCs), hospital development committees (HDCs), district development committees (DDCs) and village development committees (VDCs) have recruited staff for fixed periods depending on their budgets. The recruitment and contracting process is short and simple, and most such recruitment happens for lower level facilities. The newly recruited health workers are accountable to HFOMCs and HDCs and cannot be deputed. This kind of recruitment has helped increase the availability of care providers at lower level facilities.

Source: STS 2011 (Suvedi et al. 2012)

NEAT and RECPHEC (2011) found an average health worker attendance rate of 66% as reported by health facilities for the period April–December 2010 with the health facility in-charges present for only 36 out of 100 work days. The principal reasons for absences were found to be leave, training

courses and various outreach programmes. The absence of health workers from facilities was seen to greatly affect the efficiency of the free health care programme.

Health workers often join the government service for job security and operate private clinics and medical stores independently from their government jobs. NEAT and RECPHEC (2011) found that virtually all types of health workers were also working as private health service providers.

The following quotes from Bhusal et al. (2009) address important concerns on the availability of human resources for health.

> *"Because of the frequent transfer of health workers, we are not getting proper health care services from our health post." — Focus group participant in a mountain region*

> *"We are really helpless. We do not want to die. So we go to 'private' even if we have to take loans. We cannot get full medicinal (support) from government institutions and next thing; doctors usually do not stay there. We poor people are forced to be sufferers from every side." — A woman service seeker in Dolakha district*

In conclusion, the availability of health care services is often seriously undermined by high numbers of vacant posts and low levels of staff retention.

2.3.3 **Fund availability**

PHCCs, health posts and SHPs are not MoHP cost centres and therefore do not receive funds directly from MoHP. However, all levels of health facilities receive funds to implement specific initiatives, including the Aama and free care programmes. They also receive revenues from local government bodies (VDCs and DDCs).

Tiwari et al. (2012) found that the government's budget has increased in recent years:

- for universal free care by 21% from NPR 101.6 million in 2010/11 to NPR 123.2 million in 2011/12; and
- for the targeted programme by 6.5% from NPR 268.8 million in 2010/11 to NPR 286.5 million in 2011/12.

The STS 2011 (Suvedi et al. 2012) reported that, in FY 2010/11, only 50% of health facilities had received some budgeted funds within the first trimester during which only 10–16% of the total budget had been received. 16–38% of the total had been received in the second trimester, and between 48% and 74% in the third trimester.

The STS 2011 (Suvedi et al. 2012) reported that delays in receiving funds had adversely affected service delivery. The underlying causes were budget deficits at all levels (71% of health facilities), priority given to funding other sectors (26%) and delays in submitting financial reports (13%).

The STS 2011 further reported the increased availability of VDC, DDC and other funds at lower level health facilities with:

- total local contributions accounting for 38% of health post income (VDCs 19.1%, other internal sources 13%, DDCs 5% and NGOs 1%); and
- total local contributions accounting for 53% of SHP income (VDCs 23.4%, other internal sources 4.8%, DDCs 6.6% and NGOs 18.2%).

RTI International (2009a) found that funds were not flowing smoothly from MoHP to all health facilities, although considerable improvements were seen from 2010 onwards in shortening the time period between requesting and receiving the letter authorising the purchase of drugs. However, delays in MoHP depositing subsidies in health facility accounts continue to be a problem.

The proportion of the health budget allocated for free care increased significantly between 2008/09 and 2011/12. Further, between 2008/09 and 2009/10 (MoHP 2009) the individual budgets for:

- free care health increased by 74%;
- free drugs increased by 88%;
- free service provision and management support increased by 26%.

The same analysis showed a higher proportion of the budget allocated for drugs in 2009/10:

- In 2008/09, 78% of the free care budget went on procuring drugs and 22% on service provision and management support;
- In 2009/10, 84% of the budget for free care went on procuring drugs and 16% on service provision and management support.

Delays in fund flows to health facilities for procuring drugs and service delivery also reduced, but remains a major challenge.

2.4 Access to Free Health Care

The HHS 2012 (Mehata et al. 2013b) found 35% of the population lived within 30 minutes travel of a health post or SHP. This survey found significant differences in access to health posts and SHPs by caste and ethnicity, by urban/rural residence, by ecological zone and by wealth quintile (Table 6). The lower-level health facilities were less accessible for highest wealth quintile people (24%), for those living in hill districts (24%), and for those in urban areas (9%). Note though that these groups probably have better access to higher-level facilities.

Table 6: Population living within 30 minutes of a health post or SHP

Indicators	Achieved		
	2011	HHS 2012	
		%	Total population (N)
% population living within 30 minutes' travel time to a HP or SHP	61.8* (NLSS)	34.9	53,878
Residence:			
Urban	85.9	9.3	5,911
Rural	59.0	38.1	47,967
Ecological zone:			
Mountain		42.1	3,608
Hill		24.4	22,895
Terai		42.8	27,375
Wealth quintile:			

Indicators	Achieved		
	2011	HHS 2012	
		%	Total population (N)
First		38.1	10,402
Second		34.9	12,176
Third		36.8	11,856
Fourth		38.2	11,260
Fifth		23.6	8,183
Caste/ethnicity:			
Brahmins/Chhetris		29.3	12,568
Terai/Madhesi other castes		52.1	9,196
Dalits		40.6	6,870
Newars		35.0	1,398
Janajatis		27.3	20,266
Muslims		46.1	2,710
Others		34.5	869

** Note: NLSS (CBS 2011) measured households not population*

Sources: CBS 2011 and HHS 2012 (Mehata et al. 2013b)

The HHS 2009/10 (RTI International 2010b) found that nearly a half (45%) of client respondents could reach a health post or SHP within 30 minutes travel. The Terai middle castes had the best access with two-thirds of them living within half an hour travel compared to Chhetri respondents (34%) who had to travel the furthest (Table 7). The major barriers in accessing free health care were said to be the high fees charged at facilities (43%) followed by facilities being too far away (41%) and insufficient drugs and supplies (26%).

Table 7: Travelling distance to nearest health post or SHP by caste and ethnic group, Nepal 2009

Ethnicity	Within 30minutes	30 mins to 1 hr	1-1.5hrs	1.5 to 2 hrs	2 to 3hrs	Over 3hrs	Don't know
Chhetri	34.02	19.12	4.87	9.00	2.53	0.94	29.52
Brahmin/Sanyasi	40.70	17.83	3.36	5.04	1.46	0.78	30.83
Dalit	54.62	14.41	2.93	4.39	2.14	2.14	19.37
Terai Brahmin/Chhetri	58.49	7.55	00	0	0	0	33.96
Janajati	36.68	22.04	4.86	8.85	4.40	3.36	19.81
Terai middle castes	66.05	8.34	0.81	1.39	0.35	0.12	22.94
Muslim	61.44	9.32	1.69	0.42	0.42	0.42	26.27
Total average	**44.94**	**17.11**	**3.59**	**6.14**	**2.49**	**1.74**	**23.99**

Source: HHS 2009/10 (RTI International 2010b)

Survey data indicate improving access to basic health services over time:

- In 2009/10 the HHS 2009/10 (RTI International 2010b) reported that 45% of surveyed clients lived within 30 minutes travel distance of a health post or SHP;

- in 2010/11 the Nepal Living Standard Survey 3 (CBS 2011) found that 59% of surveyed clients had access to a health post or SHP within 30 minutes and 22% within an hour's travel distance.

However, access to free care services remains problematic, particularly for Dalits and other disadvantaged groups (RTI international 2010b) with short opening hours (see above) limiting access for all. Bhusal et al. (2009) recorded the following on the plight of disadvantaged people living far from health facilities:

> *"The Thami community [and other disadvantaged] groups residing far from the SHP have poor access to health service. Besides, they were not properly informed about the free health services. Because of this, they don't come here for treatment." — Focus group discussion with FCHVs and HFOMC personnel.*

2.5 Impact of Free Health Care

The impact of free health care can be measured in terms of reduced out-of-pocket expenditure, particularly among clients from poor and excluded groups, reduced inequalities in health care use, and more efficient health service delivery.

2.5.1 **Reducing out-of-pocket expenditure on accessing health care**

The HHS 2012 (Mehata 2013b) found that almost all (92%) of outpatients at district hospitals had paid for at least one type of health service and had therefore not received completely free care. This figure was reduced at lower level facilities where 25% of outpatients at PHCCs, 11% at health posts and 5% at SHPs paying for some health services.

The PHFS 2008/09 (RTI International 2009b) found that user fees accounted for 24% of total district hospital income in 2009, reducing to 9% in the STS 2011 (Suvedi et al. 2012). This indicates that the free care programme, much of which was introduced in the period between these two surveys, has significantly reduced out-of-pocket expenditure by clients.

The HHS 2009/10 (RTI International 2010b) reported nearly 29% of surveyed clients to have paid nothing for their health care. Clients from the poorest quintile were the most likely to have received free services (43%) compared to only 14% of the wealthiest quintile. This suggests reduced inequality in access to free health care services. Those who paid among the poorest were charged on average less than half (NPR 1,400) that charged to the wealthiest (NPR 2,900) per visit.

The STS 2012 (Mehata 2013a) found that over a third (34%) of surveyed clients said they had paid for drugs for outpatient care in 2011, slightly higher than the 30% that reported doing so the previous year's STS (Suvedi et al. 2012). The STSs also reported that the proportion of clients paying for drugs during outpatient care decreased from 53% in 2011 to 44% in 2012 at district hospitals. These surveys also showed that the proportion of clients who paid for drugs during outpatient care related primarily to health facility level with 44% of district hospital patients and only 9% at SHPs paying for drugs in the STS 2012 (Table 8).

All health services at PHCCs, health posts and SHPs are supposed to be provided free of charge for all clients across the country. The STS 2012 (Mehata 2013a) found that clients were more likely to have paid for drugs that are not on the free care list; but that a significant proportion had paid for essential drugs that should have been available free of charge. Outpatients in mountain regions

(23%) were more likely to have paid for health care services than outpatients in hill (14%) and Terai (18%) districts. Most of these services should have been available free of charge.

Table 8: Proportion of clients who paid for drugs (STS 2012)

	2011	2012
District hospitals	53	44
PHCCs	26	19
HP/SHPs	13	12
SHPs	9	8

Source: STS 2012 (Mehata et al. 2013a)

NEAT and RECHPEC (2011) found that around 82% of clients had received health services for free. Of those who paid for drugs, around 35% had borrowed money interest free from relatives or neighbours while 16% had taken interest-bearing loans and 6% had borrowed the money from community saving groups.

Further analysis of National Living Standards Survey data (NLSS) (Adhikari 2011) found that before the introduction of free health care, the proportion of households in Nepal spending 10% or more of their total consumption (= all types of consumption) on treating serious health problems (= catastrophic payments) had increased from 6% of all households in 1995/96 to 11% of households in 2003/2004. Medicines accounted for 77% of these out-of-pocket health care payments in 2003/04. Several years following the introduction of free health care (2010/11 NLSS), expenditure on medicines has decreased to almost 15% of household out-of-pocket health expenditure.

The STS 2011 (Suvedi et al. 2012) found that more Brahmin/Chhetris (37%) and Terai/Madhesi other castes (34%) had paid for 'free' health care services compared to 23% of Dalits and 29% of Janajatis.

Silva-Leande (2012)'s benefit incidence analysis in the health sector found cost to be a major barrier to clients seeking care, particularly in the country's mountain belt (Table 9). This study calculated that the average cost of accessing health care for a single illness event consumed 65% of monthly household incomes in mountain areas compared to only 31% in hill and 47% in Terai households.

On average, mountain individuals spent NPR 1,473 in a month on public health care services compared to NPR 1,018 in hill and NPR 1,244 in the Terai. The income poor spent 64% of their monthly household incomes on accessing and using health care in the event of serious illness events compared to 36% of incomes for non-poor households. In the same situation, disadvantaged Janajati households spent 53% of their monthly household incomes accessing care compared to 32% of incomes for upper castes. On average, more money was spent on medicines NPR 730 than on fees (NPR 273) and transport (NPR 130).

Table 9: Access to and utilization cost of health care services to access health care for costly illness events

Sub groups	Fees	Medicine	Transport and other expenses	Total	Monthly HH income	Out-of-pocket expenditure as %of monthly HH income
Ecological belt						
Mountain	355	998	120	1473	2,278	64.66
Hill	269	562	187	1,018	3,274	31.09
Terai	261	869	114	1,244	2,667	46.64
Poverty						
Income Poor	242	459	75	776	1,211	64.08
Not Income Poor	282	808	172	1,262	3476	36.31
Caste and ethnicity						
Dalit	182	623	92	897	1,942	46.19
Disadvantaged Janajatis	515	627	202	1,343	2,552	52.63
Disadvantaged non-Dalit Terai caste group	145	569	44	759	2,340	32.44
Other	825	3,994	18	4,837	2,203	219.56
Relatively advantaged Janajatis	401	1,560	163	2,124	4,983	42.62
Religious minorities	82	777	50	909	2,414	37.66
Upper castes	204	708	197	1,109	3,457	32.08
Total Population	**273**	**730**	**150**	**1,153**	**2,908**	**39.65**

Source: Silva-Leande 2012

The HHS 2012 (Mehata 2013b) found that nearly a half of outpatients (48%) and over two-thirds of all surveyed clients (68%) had spent money at other facilities prior to their care at government facilities; and of those admitted in hospitals more than a half (54%) had spent money at a pharmacy.

- Of those clients who had paid for outpatient care, 53% had used their household savings, and 19% had taken loans to cover costs. Of those who had taken out a loan, most had borrowed money from friends/relatives/neighbours (84%) while one in ten (12%) had borrowed from a money lender (known for their high interest rates).
- Of those who had paid for inpatient care, 42% had used their household savings while 44% had taken out a loan to cover the costs. Of those who had taken out a loan, most had borrowed money from family, relatives, or neighbours (80%), but 15% had borrowed from a money lender. To repay these loans, 62% said that they were able to do so from their regular incomes, but 25% said they had to sell assets to repay loans. Of those who sold assets for inpatient care, 48% had sold fixed assets, 42% livestock, 14% grains, and 6% jewellery.

In conclusion, with the implementation of the free health care programme, the incidence and intensity of payments to access health care has decreased particularly for payments for serious illnesses (catastrophic health events). The proportion of clients receiving free care has increased

from 29% in 2009 to 82% in 2011. The cost of medicines as a proportion of out-of-pocket expenditure on accessing health care decreased from 77% in 2003/04 to 15% of total out-of-pocket payments as a result of the supply of free essential drugs. Medicines still, however, remain the main item of out-of-pocket expenditure (see further analysis of NLSS).

2.5.2 Promoting equity in health care use

Silva-Leande's (2012) benefit-incidence analysis found that individuals in mountain areas were receiving an average public subsidy (gross) of NPR 70 compared to NPR 44 for Terai individuals. However, the PHFS 2008/09 (RTI international 2009a) calculated the cost of outpatient treatment per patient as higher in mountain areas (NPR 172) than in the Terai (NPR 116). It also calculated that non-poor people received a higher level of public subsidy (NPR 58) than poor people (NPR 50) while Dalits benefited more, on average receiving a public subsidy of NPR 74 compared to only NPR 39 for religious 'minorities' who received the least (Table 10).

Table 10: Gross public health subsidies (NPR)

Groups	SHP	HP	PHCC	Hospital	Mobile clinics	Ayurveda	Total
Ecological belt							
Mountain	27.43	11	3.46	28.35			70.23
Hill	23.43	5.87	4.13	31.45	1.49	1.33	67.70
Terai	17.64	2.41	3.63	19.1	0.67	0.68	43.86
Poverty							
Income poor	28.71	5.28	2.05	13.82	0.32	0.2	50.21
Non-income poor	18.27	4.3	4.44	29.03	1.31	1.17	57.93
Ethnicity							
Dalits	33.77	7.68	2.21	30.06	0.63		74.25
Disadvantaged Janajatis	20.23	3.19	3.62	20.96	1.72	1.14	50.24
Disadvantaged non-Dalit Terai caste groups	21.11	3.15	4.55	12.44	0.84	1.28	42.95
Others	11.6	0.94		17.86	0	0	30.4
Relatively advantaged Janajatis	10.24	3.83	6.64	28.61	0	1.13	50.27
Religious 'minorities'	10.67	2.78	1.47	22.44	0.64	1.68	39.12
Upper castes	20.42	5.61	4.13	32.69	1.21	0.86	64.22
Total population	**20.89**	**4.55**	**3.84**	**25.22**	**1.08**	**0.96**	**55.99**

Source: Silva-Leande 2012

The STS 2011 (Suvedi et al.2012) reported increased care utilisation in the 2008/09 to 2010/11 period. The level of increase varied by facility type with an increase of 62% at SHPs, 14% at health posts, 61% at PHCCs and 73% at district hospitals in the three year period.

The HHS 2009/10 (RTI International 2010b) identified a clear relationship between wealth and choice of facility with poor people more likely to use health posts and SHPs and wealthy people more likely to use hospitals and other higher level facilities. The use of care in district hospitals increases with wealth quintile. The same study found that the wealthiest had used district

hospitals more than twice (50.3%) that of people from the poorest quintile (20%) (Table 11). On the other hand, the poorest had used health posts/SHPs six times more (61%) than the wealthiest (9%). A similar trend was seen in care use by ethnic and religious groups with Terai Brahmin/Chhetris using district hospitals more than 1.5 times more (45%) than Dalits (29%) while Dalits used health posts/SHPs 1.5 times more (45%) than Terai Brahmin/Chhetris (30%). Poor and excluded groups were disproportionately benefited by free care services at health posts and SHPs.

Table 11: Free care use by caste and ethnic group and by wealth quintile

	District hospitals	PHCCs	Health posts/SHPs
1. Utilization by ethnic and religious group			
Chhetris	31.4	4.7	33.7
Brahmin/Sanyasi	38.7	5.1	18.6
Dalit	29.1	4.3	44.9
Terai Brahmin/Chhetri	45	0	30.0
Janajati	29.8	2.2	37.9
Terai Middle Castes	37.3	7.7	31.4
Muslim	37.4	4.3	36.7
2. Free care utilization by wealth quintile			
Poorest	19.5	5.1	61.2
Second	28.5	6.2	41.8
Middle	35.6	5.2	39.1
Fourth	32.5	3.2	25.6
Fifth	50.3	1.5	9.2

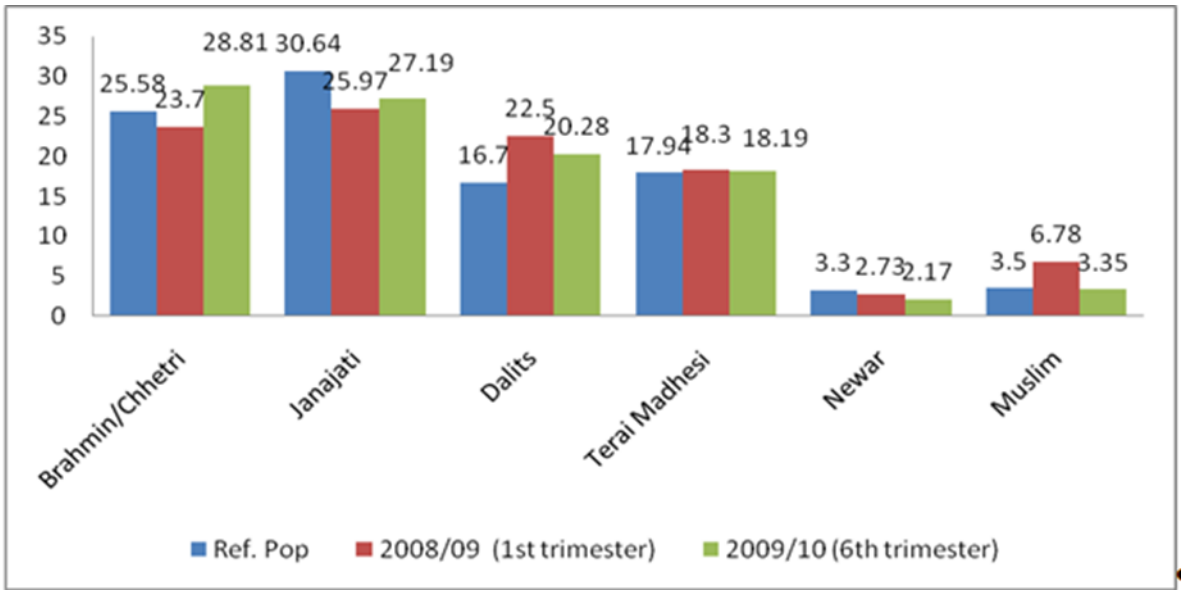
Source: HHS 2009/10 (RTI International 2010b)

Hachette (2009) analysed the use of free health care in three districts by comparing the situation before introduction (in the last six months of 2007) and after introduction (in the first six months of 2008). The analysis found that use had increased substantially — by as much as 133% at SHPs, 215% at health posts, 57% at PHCCs, 200% for hospital outpatients, and 52% for hospital in-patients.

The PHFS 2008/09 (RTI international 2009a) analysed the use of free health care in 13 districts. The trend of use of outpatient health care services care by ethnic group showed that:

- Janajatis, who accounted for 30.6% of the population in the 13 districts, had used less than their proportion of the population, despite a slight increase from 26% of all use in 2008/09 to 27.2% of all use in 2009/2010 (Figure 5);
- Brahmin/Chhetris, who accounted for 25.6% of the population, had used outpatient services more than their proportion of the population — increasing from 27.8% of all use in 2008/09 to 28.8% of all use in 2009/10;
- Terai Madhesis (17.9% of the population) had used outpatient services in proportion to their population.
- Dalits (16.7% of the population) had used outpatient services more than their proportion of the population although the proportion of all use had decreased from 23.2% in 2008/09 to 20.3% in 2009/10.

Figure 5: Outpatient care use at health post/SHP level by ethnic/religious group



Source: PHFSs 2008/09 and 2009/10 (RTI International 2009a and 2010a)

In conclusion, health care use increased significantly after the introduction of free care, but the rate of increase varied by facility — between 62-133% for SHPs and 62-255% for health posts. The PHFS 2009/10 (RTI International 2010a) reports Brahmin/Chhetris and Dalits benefitting disproportionately from free outpatient services.

2.5.3 Increasing efficiency

The PHFSs for 2008/09 and 2009/10 (RTI International 2009a and 2010a) found that the average cost of drugs (only drugs) per outpatient visit at health posts and SHPs increased by nearly 50% from NPR 22.9 in 2009 to NPR 33.3 in 2010. The average unit cost of outpatient visits was found to be NPR 154 and inpatient services NPR 1,010 at district hospitals in 2009. Before the free care programme, care providers and facilities tended to be underused, meaning that the unit costs of outpatient and inpatient visits were high. The increasing use following the introduction of free care is likely to have reduced unit costs.

Shrestha et al. (2009) reported average costs for:

- outpatient visits (median) of NPR 93 with quartile values of NPR 50 and NPR 200;
- emergency services (median) of NPR 183 with quartile values of NPR 55 and NPR 342; and
- inpatient services (median) of NPR 501 with quartile values of NPR 215 and 1,350.

Although the PHFS 2008/09 (RTI International 2009a) and Shrestha et al. (2009) were both conducted in the same year, the estimates differ greatly. This may be due to the latter only capturing public sources and the former public and private sources.

The PHFS 2008/09 found 78% of district hospital funds from government health budgets were spent on regular staff salaries and 20% on drugs and medical supplies. The latter amounts were said to be inadequate to deliver health care services properly. The same study found that supplies of:

- amoxicillin had expired in 14% of PHCCs, 13.3% of health posts and 8.8% of SHPs;
- magnesium sulphate had expired in 18% of PHCCs and 6.3% of SHPs;

- sulphamethoxazol + trimethoprim had expired in 15.6% of health posts and 17.5% of SHPs; and,
- oxytocin had expired in 9% of health posts and 15% of SHPs.

This raises questions on the management of drug supplies in the five districts (one from each region spread across ecological regions) in the PHFS 2008/09 (RTI International 2009a).

A study on essential drug procurement and distribution for free care (DRC 2012) showed that seven types of free drugs were found expired in at least one health facility and five types of free drugs were found expired in two health facilities. As reported, the reasons for expiry included: receiving drugs with close expiry dates, and delayed supply from regional medical stores to DHOs/DPHOs and on to PHCCs, health posts and SHPs. Altogether 18 of the free drugs had less than six months' remaining expiry dates.

The unit cost of outpatient and inpatient care will increase with more expired drugs and diminish the efficiency of the free health care programme.

2.5.4 **Improving quality of care**

Quality of care is likely to be reduced with the increased provision of health care unless additional staff and resources are provided. Note that all of the following findings are from client exit interviews and none captured providers' perspectives.

The STSs found the level of client satisfaction increasing from 56% in 2011 to 64% in 2012, although the proportion of 'very satisfied' clients decreased in 2012 (Suvedi et al. 2012 and Mehata et al. 2013a) (Table 12).

Table 12: Client satisfaction with health services

Clients satisfaction	2011	2012
Very satisfied	6.6	3.7
Satisfied	56.2	63.9

Source: STS 2011 and 2012 (Suvedi et al. 2012 and Mehata et al. 2013a)

The 2009/10 PHFS (RTI International 2010a) had a majority (72%) of clients rating health services as good and 9% very good.

Bhusal et al. (2009) reported that most private clinics provided strong antibiotics that will usually cure illnesses quickly while SHPs were usually providing mild drugs that take time to cure illnesses. This was said to be a reason why some people doubt the quality of drugs provided by SHPs.

NEAT and RECHPEC (2011) reports health workers as saying that medicines purchased from the local market are often more effective than the same medicines purchased centrally and distributed under the free health care scheme. In a few cases, the free distribution scheme is suspected to have resulted in irrational drug consumption since patients tend to take medicines without prescriptions.

DRC (2012) found that about 44% of service users were highly satisfied with the free services and another 37% were fairly satisfied. Thus, more than seven in ten were satisfied with the provided services. Nearly two-thirds said they would strongly recommend others to visit the health facilities

while another 30% said they would recommend others to visit health facilities. Only a very few said they were dissatisfied.

The STS 2011 (Suvedi et al. 2012) found that over two-thirds of surveyed clients were satisfied with the health services provided. About 6% of clients rated outpatient services as very good and two-thirds (63%) as good. However, about one-third (33%) were irritated with too long waiting times and only 40% of outpatient clients had had curtains on doors and windows in consultation rooms to maintain privacy.

In conclusion, all the consulted studies found that 60–70% of clients were satisfied with the health services received. However, the findings of the STS 2011 (Suvedi et al. 2012) indicate the need to reduce waiting times, improve cleanliness, and maintain privacy and confidentiality in consultation rooms at health facilities.

It needs to be noted here that clients are less likely to state dissatisfaction with provided services and usually feel obliged to report satisfaction for fear of facing negative consequences in subsequent visits.

2.5.5 **Sustaining the free care programme**

The misuse of free drugs by users is reported to have increased as a result of the removal of entrance/registration fees at health facilities. A different view on the misuse of free drugs by service providers is given in DRC (2012) which expresses doubts among providers about the sustainability of the free health care programme. RIDA & RECHPEC (2009) reported that many health workers recommended the introduction of a minimal user registration fee (NPR 1) to discourage misuse of the system. Health personnel expressed appreciation for VDC and other local funding which may help improve free care's long term sustainability.

RIDA and RECHPEC (2009) captured the following voices of health workers on sustainability of the free care programme.

> *".....The flow of people at the health centre is … difficult to control. It is not clear for how long the government is going to implement the free health services. The government should carry out in-depth homework and have a clear vision...."*
>
> *".....The positive aspect of this programme is that the number of visitors is increasing and the worst aspect is people have not used the services seriously and there is misuse also."*
>
> *"If we give them the full course, medicines will only be available for two months. In this way, what will be the impact of incomplete dose of antibiotics among communities? It is a serious issue."*

3 DISCUSSION AND RECOMMENDATION

3.1 Ensuring Adequacy of the Benefits Package

Common essential drugs are provided to SHPs, health posts, PHCCs and district hospitals to generally good effect, but higher level facilities - particularly referral facilities - require more advanced drugs. A number of medical doctors consulted during the study recommended that Amclox (ampilicillin + cloxacillin), some third generation antibiotics (agithromycin) and anti-hypertensive and anti-diabetic drugs be included on the free essential drugs lists for district hospitals and PHCCs.

The incidence of non-communicable diseases (NCD) such as diabetes and hypertension is increasing but there are no drugs on the essential free drug lists to treat them. It should be noted her that some of the listed drugs (16 out of 40) are not prescribed very often (Shrestha et al. 2009) and could be replaced by more commonly useful drugs.

- *Recommendation 1:* Revise the list of free essential drugs to address the particular treatment needs of hypertensive and diabetic patients at district level and below. Consider budget limitations and the technical competency of care providers here (Shrestha et al. 2009; DRC 2012). If it is decided to add suitable drugs to the essential drugs list then the cost of this needs to be incorporated in the next AWPB.

3.2 Ensuring Availability of Essential Medicines

Stock-outs of essential medicines are a longstanding problem in Nepal's health system. The Logistic Management Information System (LMIS) has reports that stock-out rates fell from 34% of facilities in 2005/06 to 20.8% of facilities in 2010/11 (DoHS 2012). The STS 2012 however reported somewhat higher levels of stock-outs.

The most recent evaluation of essential drugs under the free care programme (DRC 2012) reported more stock-outs of free drugs in health facilities (at least once a year) in mountain districts (80%) compared to hill (43%) and Terai (52%) districts.

The large discrepancy seen between LMIS and periodic survey stock-out data is probably due to differences in definitions, methodologies and the number of tracer drugs included. For example:

- The LMIS only records stock-outs lasting for more than two weeks whereas the surveys count any frequency/or length of stock-out.
- LMIS does not report a drug stock-out if a positive balance occurs at the beginning and closing date of the reporting period; while surveys count any point of stock-out regardless of the time of reporting.
- The LMIS monitors the status of only a few essential drugs: albendazole, paracetamol, chloramphenarimine, aluminium hydroxide, metronidazole, chloramphenicol, gamma benzene, amoxycillin, benzoic acid (40), whereas the surveys track all free essential drugs.

All of the survey figures on stock-outs were higher than LMIS figures and many studies have raised questions about the data generated by the LMIS.

- *Recommendation 2:* Reduce stock-outs to the minimal level (to single digit figures) by effectively implementing the pull system of drug management and strengthening the monitoring of drug availability from district to peripheral facility levels.

- *Recommendation 3:* Improve the reliability and validity of LMIS.

Some supply and procurement related issues, drug dispensing/prescribing patterns, budget allocations for drug procurement and the unnecessary use of health care services may cause higher levels of stock-outs.

- *Recommendation 4:* Carry out a study to better understand the magnitude of these problems and identify the underlying causes of drug stock-outs.

3.3 Ensuring Availability of Human Resources

No new recruitment was carried out for vacant health worker positions over the last three years. The passing of the Inclusive Health Workforce Ordinance in 2013 has allowed new recruitment by MoHP. NEAT and RECHPEC (2011) reported that the staff accountable for offering care were present at health facilities for only 36 out of 100 working days. The PHFS 2009/10 (RTI International 2010a) reported that over one-tenth of posted health workers were not at their duty stations due to long leaves, secondment, and attending training and orientations.

- *Recommendation 5:* Introduce financial and non-financial incentives to help retain health workers at health facilities, particularly medical officers and nurses in remote areas.

3.4 Improving Governance and Accountability at the Local Level

The following common problems can only be solved in the long term through improvements in overall governance and accountability practices related to health care service delivery:

- Drug stock-outs in health facilities, including even when supplies are available at district medical stores.
- The stocking of expired drugs at health facilities.
- Short health facility opening hours.
- Chronic staff absenteeism.

- *Recommendation 6:* Implement social audits, score cards, public hearings, and civil society monitoring to improve governance and accountability of local health facilities.

- *Recommendation 7:* Impose *s*tronger management and internal controls within the health system to improve governance and adherence to rules and regulations.

3.5 Ensuring Poor and Excluded Referral Cases Receive Free Care at District Hospitals

The proportion of clients who pay for health care tends to increase at higher level health facilities. Thus the STS 2012 (Mehata et al. 2013a) found that 8% of clients in SHPs, 12% in health posts, 19% in PHCCs and 44% in district hospitals had paid for health care. There is no mechanism to ensure that poor and excluded groups receive referral care free of change at district hospitals. Moreover, transport costs can be a major barrier to those seeking referral care. This limits the access to and use of free care at district hospitals, particularly by poor and excluded group people.

- *Recommendation 8:* Implement a referral system to include transport support. Carry out a feasibility study on introducing a voucher scheme to facilitate effective referral care and the efficient use of referral funds.

3.6 Identifying the Poor

The Free Care Guidelines (DoHS 2006) require that all essential drugs and services should be provided free of charge to poor people with the applicable criteria being food sufficiency for 3-6 months for the very poor and 6 to 12 months for the poor. It is however very difficult for health facilities to assess the food sufficiency of clients and the criteria are somewhat vague. The Ministry of Cooperatives and Poverty Alleviation has initiated a process of issuing identity cards to poor people.

- *Recommendation 9:* PHC-RD should coordinate with the Ministry of Cooperatives and Poverty Alleviation (MoCAP) to identify very poor and poor people for targeted free care.

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Annex 1: Reviewed Studies

See full references in reference list.

	Name of study	Districts covered	Regions covered	Districts and ecological belts covered	Sampling and sample size
1	Bhusal et al. (2009b) Document learning from emerging experiences in universal free health care, particularly those primary level health workers and citizens from marginalized and disadvantaged communities	1 district	Central	Dolakha (mountain) 11 HPs/SHPs	Purposive
2	Bhusal et al. (2011) Report on Status of Free Health Care Services at Heath Posts and SHPs in Nepal	5 districts	Eastern Centre Western Mid-Western Far Western	Siraha (Terai), Ramechhap (hill), Arghakhanchi (hill), Jumla (Mountain) and Kailali (Terai)	Purposive (GoN's Community Drug Programme [CDP]/Non-CDP districts) Two HP/SHPs per district
3	DRC(2012). Evaluation on Essential Drug Procurement and Distribution Program Under Free Health Services.	5 districts	Eastern Centre Western Mid-Western Far Western	Sankhuwasabha (mountain), Mahottari (Terai), Mustang (mountain), Dailekh (hill) and Kanchanpur (Terai)	Purposive HHs: 100 Facilities: 4 district hospitals (DHs), 5 PHCCs (out of 18 PHCCs), 11 health posts (HPs) (out of 55) and 32 SHPs (out of 223)
4	Gurung, G (2009).*Free health care policy in Nepal: Recent trend and challenges*	Review paper	NA		NA
5	Hachette F (2009). *Free Health Care Services in Nepal: Rapid Assessment of the Implementation and Per Patient Expenditure, GTZ/GFA*	3 districts	Mid-Western	Bardiya (Terai), Dailekh (hill) and Jumla(mountain)	Purposive 3 districts
6	NEAT and RECPHEC (2011). *Field Study on Essential Health Care and Free Maternity Services in Nepal Final Study Report*	5 districts	Eastern Centre Western Mid-Western Far Western	Jhapa, Saptari, Myagdi, Salyan and Bajura (15 VDCs)	Purposive
8	RIDA and RECPHEC (2009). *A Case Study on effectiveness of Free Health Service in Nepal*	Qualitative	NA	NA	Purposive
9	RTI International (2009). *Examining the Impact of Nepal's Free Health Care Policy: First Facility Survey Report*.	13 districts	Eastern Centre Western Mid-Western Far Western	Taplejung (mountain), Dolpa (mountain), Udayapur (hill), Doti (hill), Sindhupalchok (hill), Makawanpur (hill), Rolpa (hill), Baglung (hill), Siraha (Terai), Mahottari (Terai), Nawalparasi (Terai), Banke (Terai), Kailali (Terai)	Purposive Facilities: 15 DHs, 15 PHCCs, 47 HPs, 91 SHPs Households: 4,590
10	RTI International, (2009). *Cost and Equity Implications of Public Financing for Health*	7 districts	Eastern Centre Western	Dhankuta (hill) 15 beds; Dhading (hill) 15 beds, Baglung (hill) 25 beds; Doti (hill) 15	7 public hospitals and 5 private hospitals

	Name of study	Districts covered	Regions covered	Districts and ecological belts covered	Sampling and sample size
	Services at District Hospitals in Nepal.		Mid-Western Far Western	beds, Mustang (mountain) 15 beds, Bara (Terai) 25 beds; Bardiya (Terai) 25 beds	
11	RTI International (2010a) Health Facility Survey Report	13 districts	Eastern Centre Western Mid-Western Far Western	Taplejung, Mahottari, Udayapur, Siraha, Makawanpur, Baglung, Nawalparasi, Sindhupalchowk, Banke, Rolpa, Dolpa, Doti, and Kailali	District hospitals, 15, PHCCs, 47 health posts, 91 SHPs 91
12	RTI International (2010b) Household Survey	13 districts	Eastern Centre Western Mid-Western Far Western	Taplejung, Mahottari, Udayapur, Siraha, Makawanpur, Baglung, Nawalparasi, Sindhupalchowk, Banke, Rolpa, Dolpa, Doti, and Kailali	6,000 household members. Two-stage stratified, representative sample of households.
13	Shrestha, B; Sharma, BP; Poudyal, A (2009). *Identification of scaling up strategies for free health services leading to universal health care*.	District hospital, referral hospitals and central level hospital		Rupandehi, Gorkha, Nuwakot, Bardiya, Sunsari, Baitadi. Referral hospitals: Central Hospital: NAMS, Bir Hospital, Lumbini and Koshi Zonal Hospital Community hospitals: Manamohan Memorial Community Hospital and STUPA Community Hospital	Purposive sampling
14	Suvedi, BK; Chand, PB; Marasini, BR; Tiwari, S; Paudel, P; Mehata, S; Pradhan, A; Acharya, LB; Lievans, T; Hepworth, S; Barnett, S (2012). *Service Tracking Survey 2011*	13 districts	Eastern Centre Western Mid-Western Far Western	Panchthar (hill), Solukhumbu (mountain), Sunsari (Terai), Sindhupalchok (hill), Makawanpur (hill), Mahottari (Terai), Syangja (hill), Kapilbastu (Terai), Jajarkot (hill), Mugu (mountain), Banke (Terai), Baitadi (hill), Kailali (Terai)	Sample size: Cluster sampling 169 health facilities 16 hospital, 28 PHCCs, 45 HPs and 80 SHPs 1,017 patients
15	Tiwari, S; Lekhak, SC; Baral, P; Adhikari, R; Poudel, LR; Thapa, MB; Lievens, T(2012). *Budget Analysis 2011/12.*	NA	NA	All 75 districts	NA