Evaluation Report

Evaluation on:

Essential Drug Procurement and Distribution Program Under Free Health Services

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Study Team

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Abbreviations

DDA	: Division of Drug Administration
DH	: District Hospital
DHO	: District Health Office
DPHO	: District Public Health Office
DoHS	: Department of Health Services
DRC	: Development Resource Center
ED	: Essential Drug
FCHV	: Female Community Health Volunteers
FHCP	: Free Health Care Program
FEFO	: First Expiry First Out
FGD	: Focused Group Discussion
GoN	: Government of Nepal
HF	: Health Facility
HFOMC	: Health Facility Operation and Management Committee
HP	: Health post
JICA	: Japan International Cooperation Agency
KII	: Key Informant Interview
LMD	: Logistic Management Division
MDG	: Millennium Development Goal
MoHP	: Ministry of Health and Population
M & E	: Monitoring and Evaluation
NGO	: Non-Government Organization
NPC	: National Planning Commission
NPCS	: National Planning Commission Secretariat
OECD/DAC	: Organisation for Economic Cooperation and Development/Development Assistance Committee
OPD	: Out Patient Department
ORS	: Oral Rehydration Solution
PHCC	: Primary Health Care Center
PHCRD	: Primary Health Care Revitalization Division
PPA	: Public Procurement Act
PPR	: Public Procurement Regulations
RBME	: Result Based Monitoring and Evaluation
RHD	: Regional Health Directorate
RMS	: Regional Medical Store
SHP	: Sub-health Post
SBA	: Skilled Birth Attendants
SMES	: Strengthening the Monitoring and Evaluation System in Nepal
SPSS	: Statistical Package on Social Science
TYIP	: Three Years Interim Plan
VDC	: Village Development Committee
WHO	: World Health Organization

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Executive Summary

Introduction

Despite some progress in key health indicators Nepal is yet to achieve unmet needs of the quality health services. Nepal's existing health plan and policies and the Interim Constitution has expressed commitments to fulfilling people's rights to basic health services free of cost as provided by the law. The free drug program started in 2008 in a changed political context. It has targeted to supporting the general people as well as the special target groups, in particular ultra poor, helpless, senior citizens, children under 14 years of age, people living with disabilities, and FCHVs in saving their lives. As per the provisions, health facilities provide free drugs to all citizens at SHPs, HP and PHCCs. The special target groups receive free health care services at district and referral hospitals. With this program, the GoN believes that the targeted people would benefited and therefore, the health indicators improved and started to yield positive changes in the quality of lives of the people after a reasonable amount of time.

This evaluation study, commissioned to the DRC by the NPC with the support from JICA) under SMES in Nepal Phase II Project, therefore, aimed to "evaluate the essential drug procurement and supply system of GoN on the basis of the five OECD/DAC evaluation criteria (relevance, effectiveness, impact, efficiency and sustainability of the program) and make recommendations for further policy, strategy and program implementation and investment". The study was undertaken by an evaluation team from DRC comprising clinician, pharmacologist, public health expert and social scientist between June and August 2012.

Methodology

The evaluation used descriptive cross-sectional study design based on mixed methodology comprising qualitative and quantitative methods. The study covered four DH, five PHCCs (out of 18 PHCCs), 11 HPs (out of 55), and 32 SHPs (out of 223) from the purposively selected five evaluation districts, namely, Sankhuwasabha (Mountain), Mahottari (Terai), Mustang (Mountain), Dailekh (Hill) and Kanchanpur (Terai) districts of Nepal. In addition to reviews of the available documents, the evaluation team had interviewed 100 randomly selected participants representing the target groups from a mix of caste and ethnicities and gender, 19 individual interviews from the central, regional and district levels and 30 key informant interviews. A total 15 FGDs, five each from service receiver, service provider and a mix group of both service receiver and service providers were conducted. Moreover, a total of 78 health facilities, including RMSs were observed. Data gathered from these methods were analyzed by using SPSS, Excel tools, and manual methods and triangulated accordingly, where relevant.

Essential drug procurement and distribution:

Public Procurement Guidelines (2009) is being followed while at procuring free drug in accordance with the PPA, 2006 and the PPR, 2007. In all five districts surveyed for the evaluation, two kinds of committees (rate fixation and tender evaluation committees) were in place. The procurement process starts with its logically connected sequence such as procurement planning, determination of bidder's list and qualification, invitation of bidding, issuing of bidding documents, pre-bid meetings, bid opening, bid evaluation and selection, contract award and contract implementation. Currently a hybrid model of "Push (central to regional medical store) and pull (district to regional medical store) of drug supply is in place. RMSs send all the free drug by push system to the respective districts. All the D(P)HOs

distribute drugs to the HFs through the pull system (i.e. based on demand). The D(P)HOs receive demand of drugs from all PHCCs, HPs and SHPs through the pull system. To meet the sudden stock out of the free drug s and supply of emergency drugs on time RHD is provided with 2-3 percent of the costs to procure free drugs. At present, LMD has started multi-year procurement to address delayed supply of the free drugs.

Evaluation Results

The main findings of the evaluation are summarized based on the OECD/DAC criteria, i.e. relevancy, effectiveness, efficiency, impact and sustainability.

Relevancy:

The essential drug program under free health service was found highly relevant in terms of its relevancy to implementing GoN's plans, policies and strategies and in delivering basic health services to the targeted groups of people and the general people seeking health services from the PHCC, HP and SHP.

Interviews with the key informants and general population indicated that the free health service was highly relevant in delivering year round availability of essential drugs. However interviews with the target groups (self-reported) indicated only 16.6 percent health facilities from the mountain region, over half of the service users (52.2%) from *Terai* region health facilities and 57.1 percent health facilities in the hill have round the year drug availability. Of the total (N=100) respondents, over two-third (67%) informed that they received all the drugs prescribed by attending health worker and over three quarters of them (78%) reported that they received drugs free of cost. Store inventory records from 52 surveyed HFs reveal that in mountain, hill and *Terai* regions 80, 43 and 52 percents of the HFs respectively had at least one stock out of the free drug in the last fiscal year. On the whole, in 9.1 percent HFs at least one free drug was stock out round the year.

By the type of free drugs, 43 out of 62 (69.3%) drugs were stocked out one time a year in less than five percent of the HFs. Similarly, 13 out of 62 free drugs (20.9%) were stocked out in five to 10 percent of the HFs while three free drugs (4.8%) were stocked out in 11 to 15 percent of the HFs. These all stocked out drugs are from the list of free drug too.

Records of the HFs show that Phenobarbitone tablet (45%), Alprazolam (25%), Aspirin (15%), Gentamycin (15%), Cotrim (6.2%) and Amoxicilline (6.2%) were the most stocked out. Oxytocin (3.7%) and Magnesium Sulphate (5.2%), which are the essential drugs for treatment during delivery were also stocked out, though in small percentages.

Evaluation criteria	Evaluation Result[1]	Main findings (Major fact identified)
1. Relevance	Highly Relevant (A)	Free health service is in consonance of GoN's plans, policies and strategies and is crucial in delivering basic health services to the targeted groups of people and the general people seeking health services. Over two-third (67%) of the interviewees informed they received all the drugs prescribed by attending health worker and over three quarters of them (78%) received drugs free of cost. The intervention logic for program also looks perfect.
2. Effectiveness (Short-term/direct effect)	Effective (B)	Client flow in the HFs/ access of the target groups to health services increased; in 9.1 % HFs at least one free drug was stock out round the year. 78% users reported that they received drugs free of cost, 67% received all the drugs prescribed by attending health worker while a little more than one-fourth (27%) received the prescribed drugs partially. 43 out of 62 (69.3%) of the free drug were stocked out one time in less than five percent of the HFs. 44% clients were highly satisfied and 37% partially satisfied with the free health services.
3. Impact (Long-term/Indirect effect)	Impacted (B)	On the whole, 86 percent service users favored the statement that the free drug program was beneficial to the disadvantaged groups. A significantly higher proportion (84%) of service users believed that there was increase in client flow in the HFs (significant at 0.001). A review of secondary data from the DoHS Annual report 2003/2004 (before introduction of free health (drug) scheme and 2008/2009 and 2010/2011 indicated increase in outpatient visit as percentage of new visits in all five evaluation districts, though in varying proportions. Nearly two-third (62%) informed that free drugs had met their needs (against 24% who did not agree). Qualitative findings indicate improvement in morbidity and mortality situations in the districts.
4. Efficiency (Cost-benefit comparison etc.)	Efficient (B)	Average price of the free drug procured at the central level and the districts was not significantly different, free drug were expired more in HFs (59.6%) with district procurement than in HFs with central procurement (30.7%). 60% opined that free drugs were of good quality but only 30% perceived that drug were in adequate amount at the HF.
5. Sustainability	Sustainable (B)	With the pool funding and government's own resources (technical, physical, financial and administrative), the free health services has been institutionalized as per the commitment of the GoN to provide minimum health care services to the people. Nepal's health system network is quite strong to sustain the free health services up to the community level. However, lack of trust in quality of drugs (40% users perceived it) and misuse of free drugs could compromise the sustainability of the program.
Overall conclusion	Satisfactory (B)	The free drug program seems highly relevant, effective, with good impact in removing access barriers (e.g. cost), efficient and sustainable.

1 Evaluation Result
Relevancy: Highly Relevant (A), Relevant(B), Moderately Relevant(C), Not Relevant(D)
Effectiveness: Highly Effective(A), Effective(B), Moderately Effective(C), Not Effective(D)
Impact: High impacted(A), Impacted(B), Moderately Impacted(C), Not Impacted/Negative Impact(D)
Efficiency: Highly Efficient(A), Efficient(B), Moderately Efficient(C), Not Efficient(D)
Sustainability: Highly Sustainable(A), Sustainable(B), Moderately Sustainable(C), Not Sustainable(D)
Overall conclusion: Highly Satisfactory(A), Satisfactory(B), Moderately Satisfactory(C), Unsatisfactory(D)

Effectiveness:

The participants rated program on free drugs highly effective as it had contributed to increase the client flow in the HFs and increase access of the target groups and general people to the health services. The evaluation focused on assessing short-term direct effects of the program and it indicated that the outputs have supported to achieve the outcome and impact of the program.

The users interviewed informed that they received the free drugs easily, and the free drugs were of good quality and were in adequate amount at the HFs (significant at t-test).

Efficiency:

A narrative analysis of the cost effectiveness the price and comparison of the expiry dates of the centrally purchased and locally purchased free drugs reveal a mixed finding. Some drugs purchased in the districts were found cheaper while some other drugs were purchased in cheaper price at the central level. In contrary to the argument made by the district level stakeholders, 60% of the locally purchased free drugs were expired against 31 percent free drugs procured at the central level. Ciprofloxacin eye ointment was found expired in 15 HFs (out of 52), followed by Amoxicillin and Calamine lotion (in 6 health facilities each). Reasons of having expired drugs found at the HFs include non- use of FIFO system by the HFs, service provider selling drugs from their private pharmacy and distribution of drugs under the push system.

Altogether 18 free drugs had less than six months' expiry date. As reported, the reasons for expiry of the free drugs include; procurement of drugs that have close expiry date, delayed supply from the RMSs to the D/PHOs and down to the PHCCs, HPs and SHPs. It was found that a system to collect drugs having close expiry dates and their destruction was not taking place in the HFs.

More than nine out of ten participants (92.5 % from Terai and mountain and 95% from hill) were aware about the free drugs available at the HFs. Nearly half of the respondents (44 %) seemed very satisfied with the current free drug program and additional 37 percent were found satisfied (significant at <0.001).

The evaluation suggests that 92.2 percent of the HFs had displayed citizen charter including message on free drugs

Impact:

As the program on free drugs have entered fifth year only, it would be too early to determine the long-term effect or impact of the program. However, interviews with the target group members suggest that 86 percent service users favoured the statement that the free drug program was beneficial to the disadvantaged groups. Similarly, a significantly higher proportion (84%) of service users believed that there was increase in client flow in the HFs (significant at 0.001). Nearly two-third (62%) informed that free drugs had met their treatment needs (against 24% who did not agree).

A review of secondary data from the DoHS Annual report 2003/2004 (before introduction of free health (drug) scheme and 2008/2009 and 2010/2011 indicated that outpatient visit as percentage of new visits in the total population has increased in all the five evaluation districts, though in varying proportions. Moreover, interviewees opined that child and maternal mortality has started to decline because of the free health services. However, analysis of the mortality rates is beyond the scope of the study.

Sustainability:

The program seems “sustainable” because of the already established health system of the GoN (and its firm commitment for providing basic health care services to its people institutional sustainability) and the provision of regular budget by the government (financial sustainability). It was informed however that because of the removal of the nominal entrance/registration fee at the HFs, misuse of the free drugs by the users has increased. A less consistent view on misuse of free drug by the service providers had also appeared in the FGD.

Recommendations:

The evaluation findings have informed GoN’s regarding policies and strategies on free drugs and program implementation/program interventions.

1. Recommendations for the policy level

The evaluation suggests continuing the “Push-Pull” model of drug supply management for the next two to three years with a plan on free drugs based on results-based monitoring design. Clear guidelines or procurement and supply management, central bidding and price contract allowing district procurement, provision of split-contract for procuring cheapest items particularly in the district, adoption of multi-year procurement of free drugs, review the list of free drugs in particular for adding drugs and services on NCDs, in particular in the urban areas, and conducting awareness program for proper use of free drugs by the users need to be established. In addition, point of referral and eligibility for financial support also needs to be made clear. In order to minimize misuse of free drugs by the patients as complaint, small amount of registration fees can be levied, as was done in the past. A comprehensive study on cost effectiveness, assessment of logistical capacity of the districts to procure, store and distribute the free drugs along with a capacity development plan is recommended.

2. Recommendations for the program/project interventions

The study recommends continuing multi-year contracts and introducing the concept of central bidding and local purchasing as it addresses disparities in price, quality and quantity of drugs procured by the districts. It needs to be further developed, expanded, and improved together with their capacity building to shoulder the responsibility of procurement and supply at the decentralized levels. Storage and distributive capacity of central, regional and district medical stores therefore needs to be enhanced through the allocation of additional appropriate and trained human resources, adequate infrastructure and procurement, storage and supply system

There needs to be a strong coordination between different levels while procuring drugs and managing their supplies. Each procurement agency i.e. LMD, RHD and the D/PHOs need to establish a close coordination during the planning and procurement of essential drugs. Each agency should establish a line of communication to inform what they are procuring to avoid duplication and over supply of drugs. This will facilitate procurement and supply of the essential drugs such as ORS, Cotrim and other antibiotics on time. Finally, aggressive awareness raising program for proper use of free drugs by the clients, including point of referral and eligibility for financial support is necessary.

Section 1

INTRODUCTION

1.1 Country Context

Nepal is one of the least developed countries where almost 90 percent of its total population live in rural areas, and about 25 percent of them live below the poverty line[1]. There are still significant humanitarian needs in remote areas where poverty, decade long political conflicts and poor health system have adverse impacts on the livelihoods of majority of the people who are poor and socially marginalized. Nepal has made strides of progress in some health indicators over the last decade. However, maternal mortality ratio is still high as 281 per 100,000 live births[2]. According to WHO estimates, reproductive ill health accounts for 33 percent of the total disease burden in women (compared to 12.3% for males). In Nepal, the SBA conducts only 18 percent of all deliveries[3]. Eight in ten births (80%) occur at home and 56 percent of births receive no prenatal visit. More than two third of the maternal deaths occur due to preventable obstetric complications[4].

Keeping the above health situation of the country in view, the GoN, MoHP) has been implementing FHCP through integrated district health program since 2005 to focus to ultra poor, poor, helpless, senior citizens, children under 14 years, people living with physical and psychological disabilities, and FCHVs. Although the program is focused to targeted group, the free health service has been delivered to all citizens with provision of essential drug since 2008 as it is clearly mentioned in the Interim constitution that every citizen shall have the right to get basic health services at free of cost from the state as provisioned in the law.

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The overall objective of the free health service is to improve the health condition of the entire people with the following specific objectives:

- To ensure the basic health right of the people,
- To ensure the basic health right of targeted people and increase the accessibility of health service to them,
- To reduce the mortality and morbidity rate of people at nation through providing the health service to the people,
- To provide the quality emergency health service with effectively, and
- To ensure year round availability of quality essential drugs at all level of health institution.

The GoN has been investing large amount of budget to procure and supply essential drugs from centre, regional and district level to achieve the above mentioned objectives every year. The free drug program is one of the major programs of GoN. Every year NPC evaluated the high priority and people concern program and project from independent evaluator. The NPC is implementing result based monitoring and evaluation system in Nepal and RBME guidelines has been already prepared and implemented through Ministries.

In line with the government policy, NPC decided to carry out evaluation of “Essential Drug Procurement and Distribution Program under Free Health Service” through the third party evaluator with the technical and financial support of SMES Phase II. DRC, a national NGOs working in the field of program and project evaluation, research and development since 1999 in Nepal, was awarded to undertake an evaluation on Essential Drug Procurement and Distribution Program in 2012.

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[1] Census 2011

[2] Family Health Division (2009). Nepal Maternal Mortality and Morbidity Study 2008/09. Ministry of Health & Population, Kathmandu, Nepal; Ministry of Health and Population [MOHP], New ERA, and Macro International Inc., Demographic Health Survey,2007).

3 Institute of Medicine and UNFPA (2006). Status of Reproductive Morbidities in Nepal.

4 Shakya G (2002). “Monitoring Maternal and Neonatal Health in Nepal”, Family Health Division, Ministry of Health, Kathmandu, Nepal.

The evaluation was undertaken by a team of four evaluators on behalf of DRC. They include; Dr. Bhimsen Devkota (Team Leader-Public Health Expert), Dr. Rajendra BC (Team Member- Health Service Researcher), Dr. Shyam Lohani (Team Member-Pharmacologist) and Mr. Buddhi Man Shrestha (Coordinator- Social Scientist). All of them have an extensive experience in conducting and evaluating variety of health project evaluation in Nepal.

1.2 Basic Information of Essential Drug Program, Drug Procurement and Distribution Process

Free Health Program

The Three TYIP 2007-2010 refers to the Interim Constitution of Nepal (2006) which recognizes basic health as a fundamental right of all citizens. Considering the provision in the Interim Constitution (2006), the MoHP/GoN decided to provide essential health care services (emergency and in-patient services) at free of cost to targeted people (ultra poor, poor, helpless, senior citizens, people living with physical and psychological disabilities, and FCHVs at the level of SHPs, HPs, PHCCs and DHs[5]. The main health related goal of Three-Years Plan (Approach Paper: 2010 – 2013) is to increase the utilization of quality health services by ensuring availability and accessibility of free health services to the citizens of all the geographical regions, class, gender and ethnicity[6].

After the implementation of FHCP, the number of patients seeking services at the primary level health facilities has been increased. Thus, the policy has been considered instrumental to increase the health service utilization rate. However, barriers to accessing higher (secondary and tertiary) level health facilities have been found to be still prominent due to weak referral system. Moreover, existing illiteracy and poverty presents major challenges to providing effective health care services to the target groups[7].

Although Nepal has made significant progress in providing free essential health care services, essential drug delivery, transport subsidy for safe delivery, legal basis for safe abortion, increased family planning, immunization and various mother and child health programmes through policy changes and program initiatives, quality health services are yet to reach to the targeted groups. Therefore, it has been argued that health care services including essential drugs are not available for universal coverage to reach to all the citizens of the country. In addition, whatever health services including essential drugs and other determinants are available, large share has been claimed by the well off population.

Drug Procurement and Distribution

A significant fraction of the national health budget in Nepal has been used for the purchase of essential drugs. Drug procurement involves various steps such as information collecting, advertisement (tender notice), contact with suppliers, tendering, quotations, and direct procurement with an aim to provide quality drugs at the lowest possible cost. As the GoN has developed rules and regulations for procurement after enactment of the procurement act (2007), it must have to follow the procurement cycle, wherein the first step is a procurement planning, then comes to determination of bidders' qualification, invitation for pre-qualification for bidding, issuing of bidding documents, pre-bid meeting, bid opening, bid evaluation, bid selection, contract award and its implementation. The pre-qualification and tendering procedures are described in the tender notice. Although procurement act has made the procurement system simpler and more flexible, it has discouraged fragmented procurement practices in an attempt to reduce the price of goods and services. Moreover, funds have been transferred to the districts to address the immediate needs for drugs. Various types of tendering mechanisms and direct procurement are in practice in Nepal[8].

[5]Government of Nepal (2007). Three-Years Interim Plan, 2007-2010, National Planning Commission, Singhadurbar, Kathmandu.
[6]Government of Nepal (2010). Three-Years Plan (Approach Paper), 2010-2013, National Planning Commission
[7]Hachette F (2009). Free Health Care Services in Nepal: Rapid Assessment of the Implementation and Per Patient Expenditure, GTZ/GFA Consulting Group GmbH, Kathmandu, Nepal.
[8]Government of Nepal (2009). Public Procurement Guidelines, Ministry of Health and Population, Kathmandu.

In Nepal, more than half of all the drugs have been imported either from India or Bangladesh, while domestic products meet less than half of the total drug demand. There is no single domestic a pharmaceutical company is able to supply all the essential drugs demanded by the public sector[9]. Therefore, Nepal enters into international competitive bidding process, which is usually the way to obtain drugs at the lowest possible prices. This is lengthy process and it is sometimes associated with the delay of drug delivery[10].

The second long term health plan (1997-217) aimed to provide essential health services at the district to 90 percent of the population within 30 minutes travel time[11]. For the effective implementation of FHCP, year round availability of essential drugs in the public health facility is very important. Most of the studies have indicated that government supplies of essential drugs are not sufficient to meet the requirement of the communities. The unavailability and stock-outs of the drug may be due to factors related to the drug procurement and distribution management system. Moreover, the frequency and rate of drug procurement at health facilities varies from one to another[12].

1.3 Objectives of the Evaluation

The main objective of the evaluation is to "evaluate the essential drug procurement and supply system of GoN on the basis of five OECD/DAC evaluation criteria and make recommendations for further policy, strategy and program implementation and investment" of the Essential Drug Procurement and Distribution Program under Free Health Service in Nepal with the following scope of evaluation;

1.3.1 Find the facts of the program

- The year round availability of quality essential drugs in the service centres (DH, PHC, HP, SHP),
- Essential drug procurement and supply management in the government system
- Awareness and satisfaction of community and targeted people about essential drugs
- Service and its accessibilities
- National mortality and morbidity rate (from existing documents)

1.3.2 Evaluate relevance, effectiveness, impact, efficiency, and sustainability of the program

- **Relevance:** Consistency with government policies and logicality of intervention.
- **Effectiveness:** Short term and or direct effects
- **Impact:** Long term and or indirect effect
- **Efficiency:** Cost-benefit comparison or narrative cost-efficiency
- **Sustainability:** (i) Financial, (ii) Technical, (iii) Organizational Arrangement, and (iv) Environment

1.3.3 Whether the program target was met or not in-terms of procurement and supply of essential drugs to the targeted people, and

1.3.4 Give recommendations to improve implementation and further plan of similar programs

[9]Government of Nepal (2009). Central Bidding and Local Purchasing: A Discussion Paper, Ministry of Health and Population, Kathmandu.
[10] WHO (2008).
[11]Second long term health plan (1997-2017).
[12]Stoermer M, Sharma SS, Napierala C and Silwal PR (2009). Essential Drug Procurement and Supply Management System in Nepal, GTZ/GFA Consulting Group GmbH, Kathmandu, Nepal.

Section 2

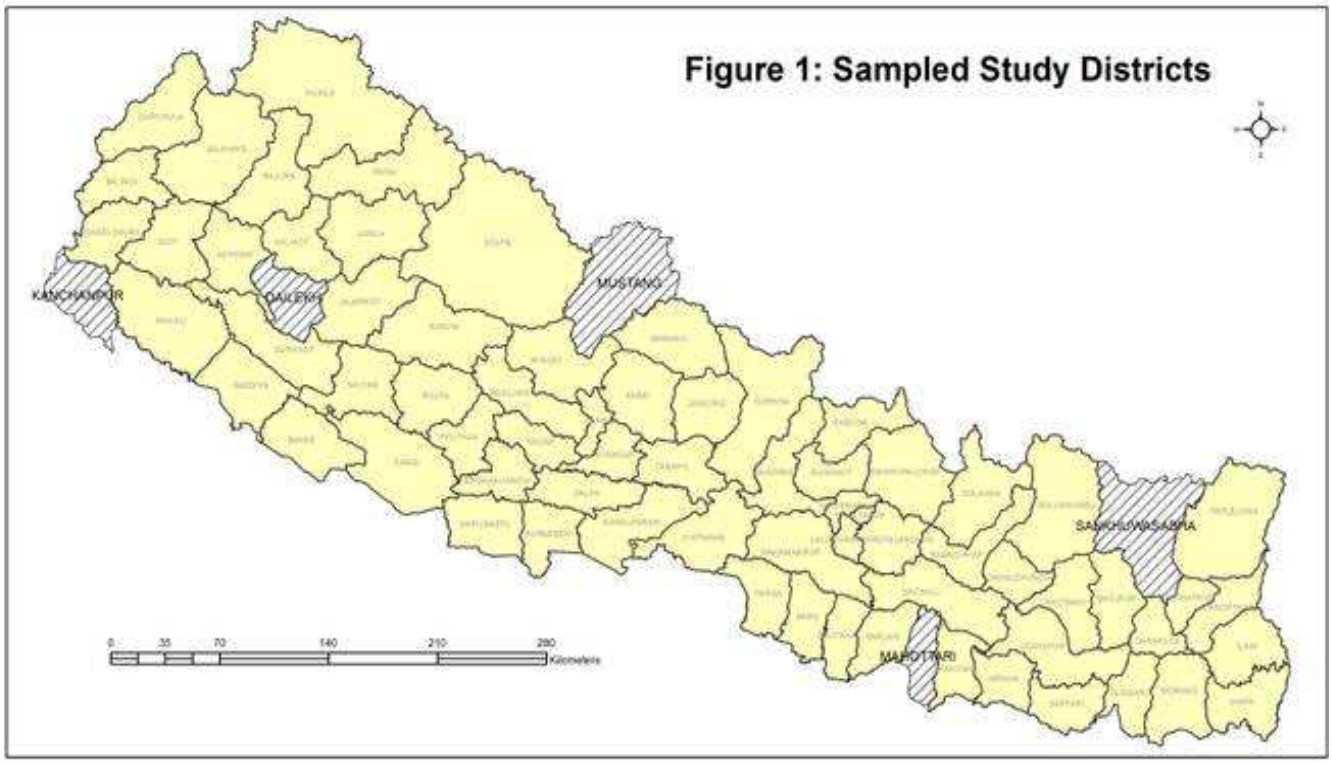
EVALUATION METHODOLOGY

2.1 Evaluation Methodology

The evaluation used descriptive cross-sectional study design based on mixed methodology. The sample size, selection of sample, study methodology and tools, data collection techniques, data entry and analyses and report finalization, compilation and dissemination process are given below:

2.2 Study districts and Sample Size

As stipulated in the ToR, the sample district and sample size was selected and calculated on the basis of geographical and ecological regions of the district. One district from each development region of Nepal covering Mountain, Hill and Terai ecological regions were selected for the sample. Figure 1 Nepal map shows the sampled study districts.



While selecting the sample, at least 20 percent health facilities from the total existing health facilities of the five study districts were chosen. In case of DH and PHCC, the study team has included at least one of the HFs in the sample. In Kanchanpur, there is no DH and therefore we could not include a DH. Except in case of single DH and PHCC, all other HFs were selected randomly to achieve at least 20% of the HFs. Table 1 shows the sample districts with total number of existing health facilities and population of the district.

Table 1: Number of health institutions included in the sample

District Names	Population*	Total No. of Health Facilities				No. of HFs visited				Total
		DH	PHCC	HP	SHP	DH	PHCC	HP	SHP	
Sankhawashava	159,203	1	2	12	25	1	1	3	4	9
Mahotari	553,481	1	3	6	67	1	1	2	14	18
Mustang	14,981	1	3	10	5	1	1	2	2	6
Dailekh	225,201	1	3	8	50	1	1	2	10	14
Kanchanpur	377,899	0	3	18	10	0	1	2	2	5
Total	**1,330,765**	**4**	**14**	**54**	**157**	**4**	**5**	**11**	**32**	**52**

*Census 2011, preliminary results

In addition to the above mentioned health facilities, five RMSs, PHC, PHCRD, and LM were also visited to collect data and review their records.

2.3 Study Methods

The proposed evaluation employed both qualitative and quantitative methods for the evaluation of the program. It collected data from both primary and secondary sources. The secondary sources the published literature as well as past studies, reports and the secondary/institutional data available in the central, regional and district levels such as MoHP, LMD, DDA, PHCRD, RMSs, DHO and DH. The primary data was generated through the individual interviews with targeted people.

Following methods and tools were used to collect data for the program evaluation:

2.3.1 Quantitative Methods

i) Individual Interview

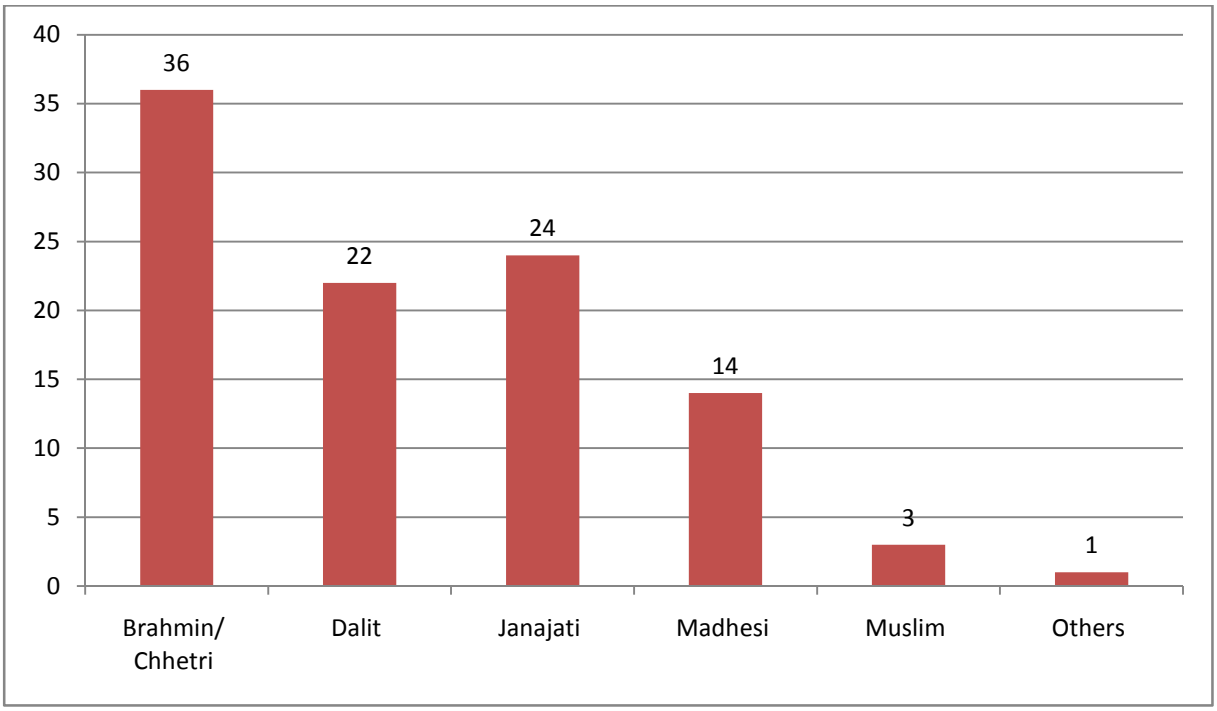
Individual interview was taken with service receivers/ takers such as general people who received free drugs from health facilities and selected target groups such as ultra poor, poor, helpless, people living with disabilities, children under 14, senior citizens, and FCHVs who are getting free health services from district, regional, and referral hospitals. The interviewees were selected from nearby the visiting HFs purposively. However, they were interviewed only after confirming that they had received health services from the HFs. Individual Interview with service providers and management personnel about management and supply of essential drug was also conducted. The service providers interviewed included in-charges of the HFs and/or their subordinates in case they were not present during the study visits.

Table 2: Respondents who took part in individual interviews

Target Groups	Number	Percent
<14yrs	18	18
Person with disability	13	13
Senior citizen	17	17
FCHVs	16	16
Dalit	18	18
General people	18	18
Total	100	100

The total of 100 participants participated in the individual interviews. Equal number of participants (n=18) from the targeted groups and general people participated in the interviews. Similarly 13 participants from person with disability, 17 participants from senior citizen and 16 participants from FCHVs had participated in the individual interviews by using interview schedule (Please refer Appendix 1 for the interview tools)

Fig. 2: Caste/ethnic composition of the service users interviewed



One third of the total participants (36%) belonged to Brahmins/Chhetries. About one-fourth of the participants (24%) were from Janajati group. Similarly 22% from Dalit, 14% from Madeshi and 3% from Muslim groups were interviewed (Figure 2).

ii) Questionnaire Survey

The questionnaire survey was conducted with the representative of MoHP, LMD, DDA, PHCRD, RMSs, DHO and DH. Institutional survey was also done to take interviews and observe storage and supply mechanism of the drugs in particular at the RMSs and stores of the DH, PHCC, HPs and SHPs. List of the individuals interviewed is given in Appendix 2.

iii) Review of Existing Document

The study team reviewed existing documents such as plan, policies, available related appraisal reports, procurement and supply management procedure, and M&E reports. The list of the documents reviewed by the study team is given in the list of the references.

iv) Field Observation

Field observation was done to find out quantity, quality and the degree of utilization of free health service and essential drug demand and supply. This was done among RMSs, DHOs, DHs, PHCCs, HPs and SHPs included in the sample.

2.3.2 Qualitative Methods

i) Focused Group Discussions (FGDs)

Qualitative methods such as FGDs were conducted with service receiver/takers and service providers at PHC level. A mix group FGD of service receiver and providers was also conducted. Service receiver includes targeted population i.e. ultra poor, poor, helpless, people living with disabilities, under 14 children, senior citizens, and FCHVs and service provider include health worker working at PHCC. A total 15 FGDs, five each from service receiver, service provider and a mix group of both service receiver and service providers were conducted. Total of 132 participants participated in the FGD (Table 3).

Table 3 : Details of FGD Participants

District	No. of Participants			
	Service Receiver	Service Provider	Mixed group	Total
Shankhuwasabha	8	9	9	26
Mahottari	8	8	11	27
Mustang	10	10	9	29
Dailekh	8	7	10	25
Kanchanpur	11	7	7	25
Total	45	41	46	132

ii) Key Informant Interviews (KII)

KII was taken with DHOs/DPHOs, local level leaders of different political parties and social workers and managers and members of civil societies and NGOs. Details of the participants are given in Appendix - 2.

2.4 Sampling Frame and Sampling Procedures

Table 4 clearly shows the sampling frame and its procedure that was applied in the evaluation.

Table 4: Methods and tools applied for data collection

S.N.	Methods	Target Group/Respondents	No. Interviewed
1.	Individual Interview	• Selected targeted people: ultra poor, poor, helpless, people living with disabilities, under 14 children, senior citizens, and FCHV	100
2.	Questionnaire Survey/Key informants	• MoHP - 1 • LMD - 1 • PHCRD - 1 • DDA - 1 • RMSs - 5 • DHOs - 5 • DHs /PHCCs - 5	19
3.	Key informant interviews	• Local level leaders of different political parties – 20 • Social workers and managers and members of civil societies and NGOs – 10	30
4.	Review of existing document	• Plan, policies, available related appraisal reports, • project performance audit reports, • Procurement and supply management procedure, and • Monitoring and Evaluation (M&E) reports.	Variable
5.	Field Observation	• RMSs - 5 • DHOs - 5 • DHs -4 • PHCCs - 9 • HPs -11 • SHPs - 44	78
6.	FGDs	• Service Receiver - 5 • Service Providers at PHCC level - 5 • Mix Group of both Service Receiver and Service Provider - 5	15

2.5 Development of the Evaluation Tools

The evaluation team developed all evaluation tools; Individual Interview, questionnaire survey, field observation checklist, FGD guideline and KII guideline. The evaluation team reviewed the tools first at DRC and submitted it to the sub-taskforce at NPCS for comments and feedback. After receiving the comments, the evaluation team again reviewed it and finalized the draft tools and methodology and shared it with sub-taskforce at NPCS for final approval.

2.6 Training of the Evaluation Team

Two days' orientation to the field researchers, enumerators and the core team members was conducted at DRC. The DRC invited concerned team members of the sub-taskforce of NPCS to orient the core-team members and field researchers about the programme and evaluation objectives in a meeting in Kathmandu. The field researchers and enumerators practiced mock sessions on administering the questionnaire and also practiced FGD in order to familiarize them with the questions, interview technique and filling out interview questionnaire and writing of FGD notes and interviews. The evaluation tools were also field-tested. Three persons one each from SMES Phase-II, NPCS and MoHP observed the field test process and provided their feedback. The evaluation team finalized the evaluation tools incorporating the input received from the pilot-testing.

2.7 Data Collection

Five teams one team for a sample district comprising of two enumerators lead by an evaluation core team member collected data from the sampled districts. Four members of the evaluation core team were involved in the entire data collection process. An evaluation manager had coordinated the field team members.

A post survey discussion was organized with the field research team at DRC office for getting insight of the qualitative information and reflecting on the overall process and situation of the evaluation data, including key observations. This debriefing helped prepare framework for data analysis.

2.8 Data Processing and Analysis

2.8.1 Qualitative Data

The qualitative information was analyzed manually. The notes transcribed during FGDs and key informant interviews were translated into English for the purpose of coding, sorting and analysis. The findings was coded and desegregated into different themes accordingly. The qualitative findings were analysed through content analysis/framework analysis method.

2.8.2 Quantitative Data

First of all, the edited questionnaire data was entered into EPI data and then transferred it to SPSS version 17 software for further analyses. The Statistician and the Team Leader cross-checked and oversaw the data quality during data cleaning, entry and analyses.

Qualitative data was complement and supplement the quantitative data. Where appropriate, self reported data based on interview and questionnaire survey was also contrasted with the findings from observation.

2.9 Quality Assurance/Checks

A number of quality check mechanisms was used at the central, regional and district level. In each district, one core team member accompanied the field research team. The team leader supervised and conducted KII while the other core team members supervised the data collection and conduct interviews with the key informants.

The data was checked at different levels. At first, the field researchers/enumerators checked the completed questionnaire after each interview, which was double checked in the evening by the core team member. The core team members provided onsite feedback. While at entering and processing data in Kathmandu, quality assurance methods such as range checks and skip instructions was developed, which helped to detect errors during the data entry process. Data entry was done directly from the questionnaires. The quantitative data was entered by the data assistant, verified and analyzed by the data assistant, statistical manager and the team leader respectively.

Qualitative and quantitative data sets were double checked during triangulation process. For data validation, findings obtained from different tools and methods were triangulated.

2.10. Study Limitations

The study was conducted around the end of the fiscal year (June-July). Therefore, it was difficult to meet most of the health workers in their offices because they had left to the district headquarter for meetings and reports submission. Similarly, due to the farming season, gathering community people for FGDs and also accessing them for interviews was found difficult. The health facilities were in different locations in the district and were scattered making it difficult to travel within the limited time. Observation of medical stores and getting their drug related data were time consuming. In a few health facilities, it was not possible to get these data because of unavailability of store keeper/accountant at the health facility.
And the sampled districts are composition of two districts from mountain, two from Terai and one from hills which may not represent the national scenario.

Section 3

EVALUATION RESULTS

This section presents findings of the evaluation based on scope of evaluation given in the ToR; fact finding of the program, evaluation (relevance, effectiveness, efficiency, impact and sustainability) and procurement and supply of free drug. The findings are discussed below under the separate headings.

3.1 Fact Finding of the Free Drug Procurement and Supply

3.1.1 The year round availability of quality essential drugs

The study team visited health facilities, reviewed drug stock records of all 52 health facilities and conducted KII, individual interviews and FGDs in order to find out year round availability of free drugs. The study findings on year round availability of essential drugs at the service delivery points have been triangulated and presented in the report.

Table 5 shows data from 100 service users regarding the year round availability of free drugs (self-reported), which was generated by combining two options-"highly agree" and "agree" together. The data shows that year round availability of essential drugs (self-reported) was 16.6 percent in health facilities from the mountain region, whereas over half of the service users (52.2%) in Terai region HFs and 57.1 percent HFs in the hill have round the year drug availability (Table 5).

Table 5 :Year round availability of EDs (reported by the service users)

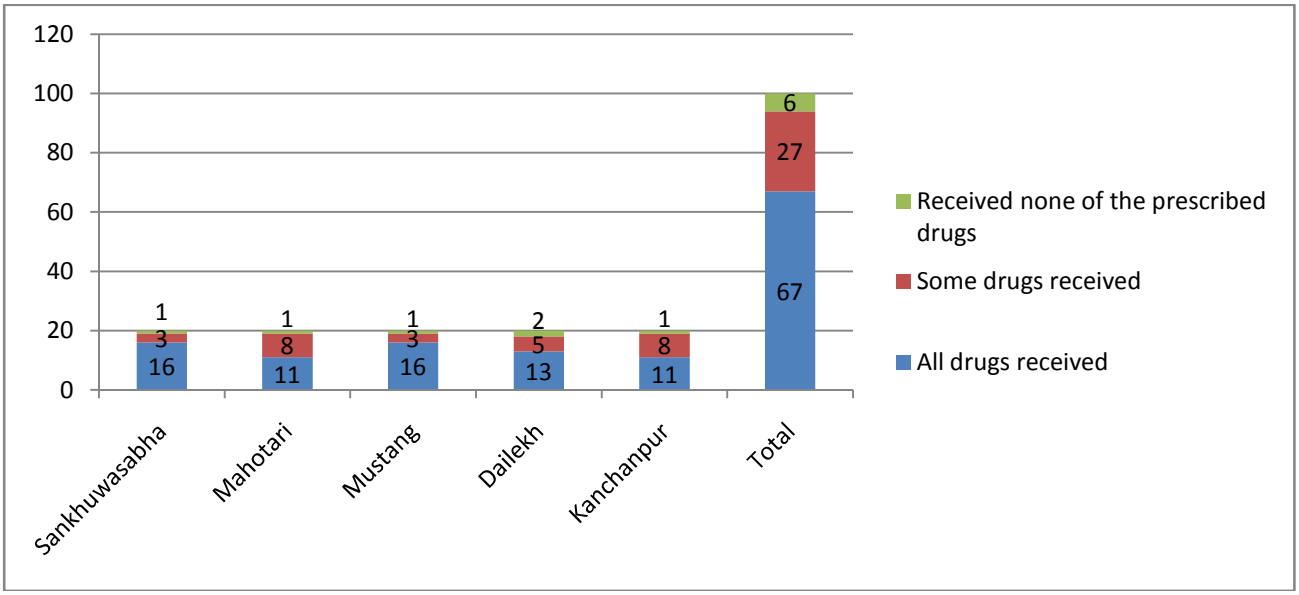
Variables	Percent
1. By ecological region	
Mountain	16.6
Hill	57.1
Terai	52.2
2. By types of health facility	
DHs	25
PHCCs	40
HPs	36.6
SHPs	21.9
3. By Sex	
Female	59.6
Male	65.2
4.Caste/ethnicity	
Brahmin and Chhetri	66.6
dalit	54.6
Janajati	58.3
Madheshi	17.4
Muslim	6.5
Others	2.2
Total	62.0

By health facilities, only a quarter (25%) of the service users interviewed from the DHs informed that there was year round availability of quality EDs whereas 40 percent service users from PHCCs reported this. Similarly, a little more than one-third (36.6%) from HPs and one-fifth (21.9%) from SHPs reported having year round availability of drugs.

By sex, a little more males (65.2%) than females (59.6%) reported that health facility they had visited had year round availability of drugs. By ethnicity, two-third of the Brahmins and Chhetri (66.6%) followed by Janajati (58.3%) and dalit (54.6%) expressed a consensus view that free drugs were available round the year in the health facility they had visited. Least proportions of Madheshi and Muslim, on the other hand, self-reported year round availability of free drugs, i.e. 17.4 and 6.5 percents respectively.

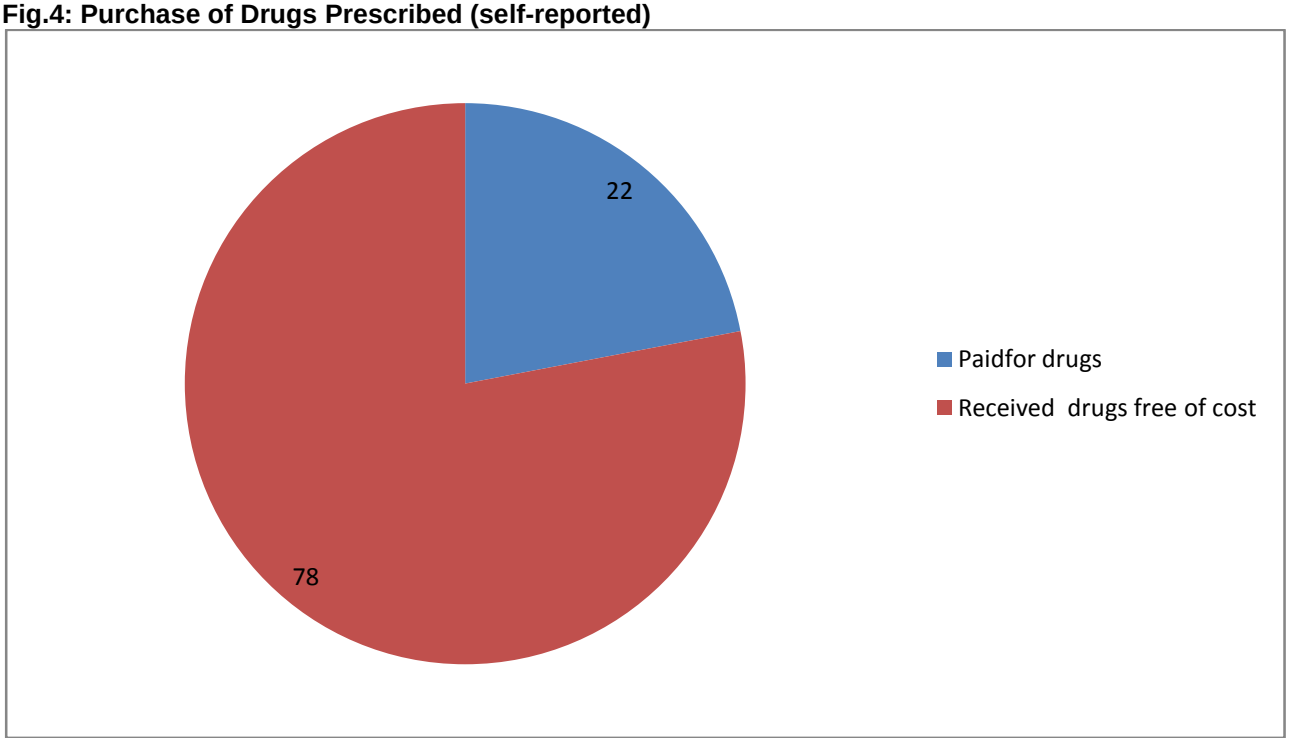
Of the total (N=100) respondents, over two-third (67%) informed that they received all the drugs prescribed by attending health worker while a little more than one-fourth (27%) had received the prescribed drugs partially and rest six percent argued that they did not receive any drugs prescribed from the Health Facility (HF) (Figure 3).

Fig. 3: Prescription versus Distribution of Free Drugs (self-reported)



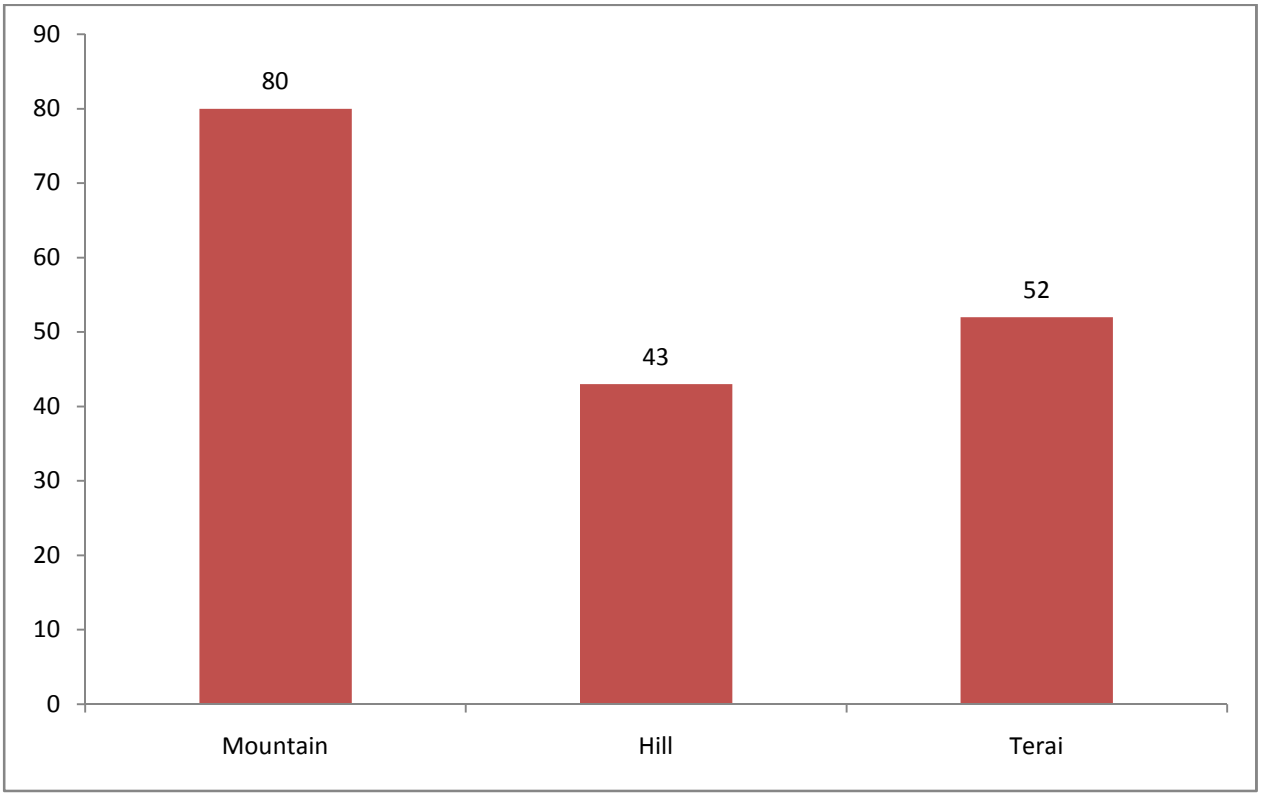
Over three quarters of the service user participants(78%) reported that they received drugs free of cost while rest others paid out of pocket for purchasing drugs from the private clinics/pharmacies (Fig.4). However in the absence of prescriptions among the patients, it was not possible to ascertain the number of free drugs and other drugs.

Fig.4: Purchase of Drugs Prescribed (self-reported)



Store inventory records from 52 surveyed HFs reveal that in mountain, hill and Terai regions 80 (12 out of 15 HFs), 43 (6 out of 14 HFs) and 52 (12 out of 23 HFs) percents of the HFs respectively had at least one stock out of the free drugs in the last fiscal year. The data shows highest stock out in mountain followed by Terai and hills (Figure 5).

Fig.5: Stock out of free drugs in health facilities at least one time in the year



By health facilities, DHs, PHCCs, HPs, and SHPs with at least one stock out of free drugs were 100, 60, 64 and 53 percents respectively (Figure 6).

Fig. 6: Stock out of free drugs at least one time in the year by health facilities

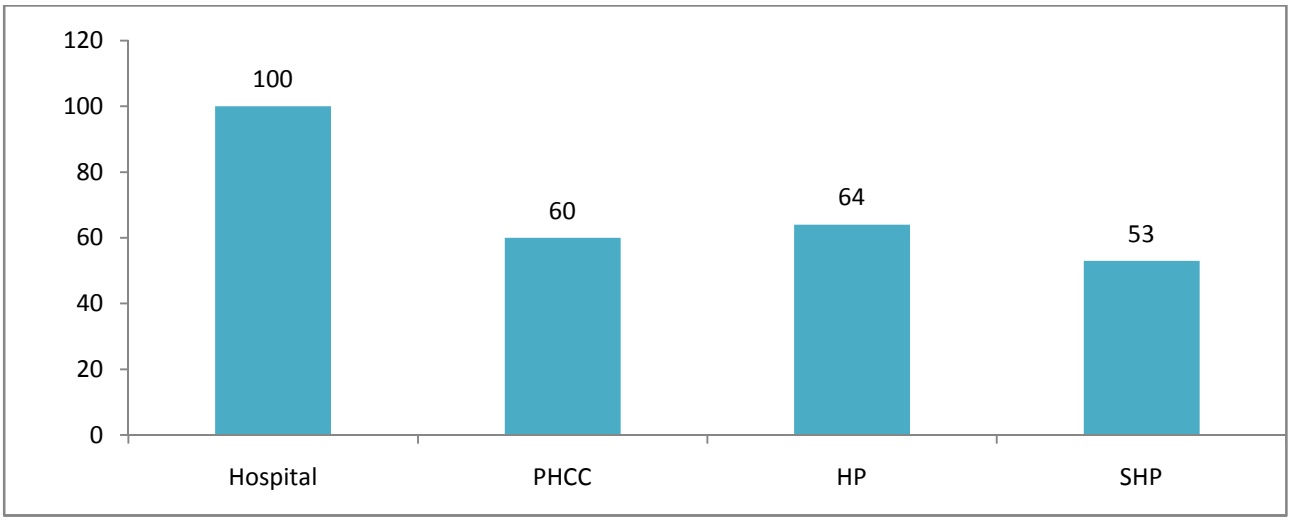
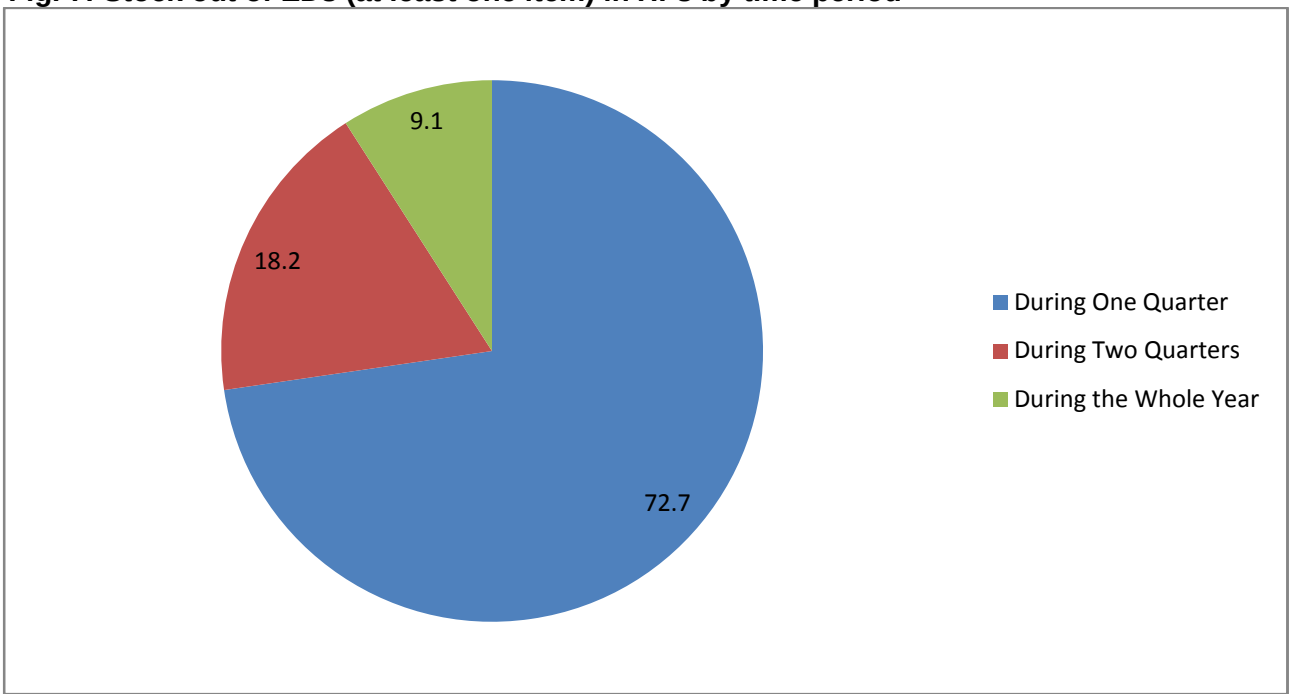


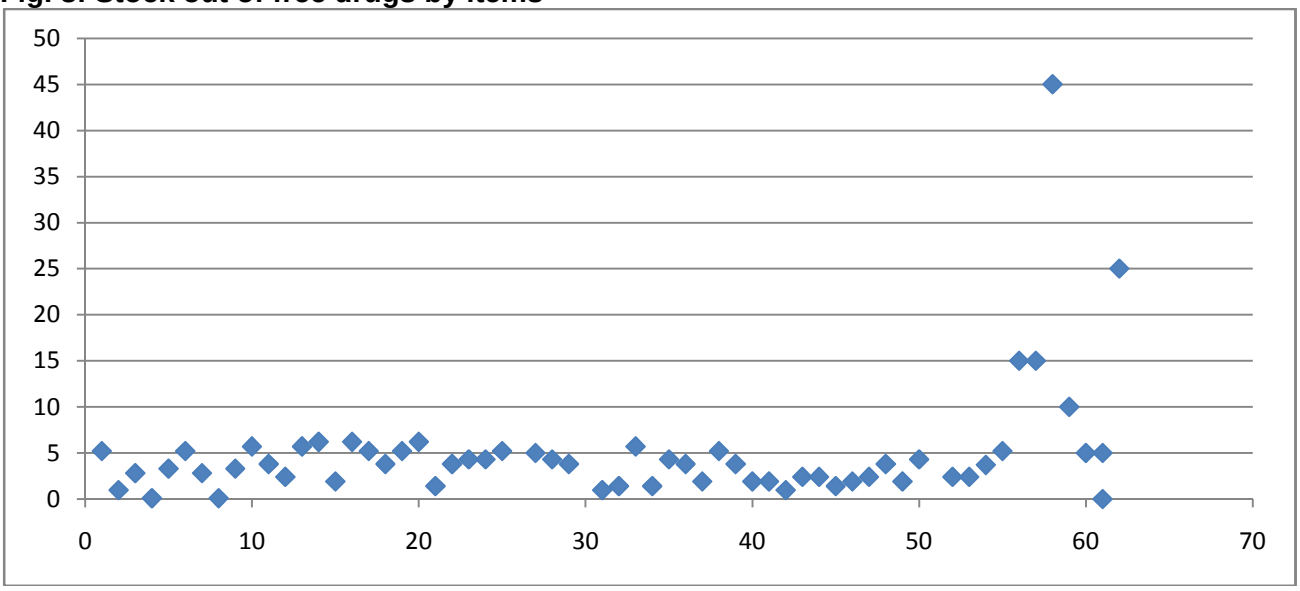
Fig. 7: Stock out of EDs (at least one item) in HFs by time period



The free drugs were stocked out for one quarter in nearly three quarter (72.7%) of the health facilities while less than one-fifth (18.2%) of the HFs had stocked out of at least one free drug for two quarters. On the whole, in 9.1 percent HFs at least one free drug was stock out of round the year (Figure 7).

By the type of free drugs, 43 out of 62 (69.3%) of the free drugs were stocked out one time in less than five percent of the HFs. Similarly, 13 out of 62 free drugs (20.9%) were stocked out in five to 10 percent of the HFs while three free drugs (4.8%) were stocked out in 11 to 15 percent of the HFs. One free drug each was stocked in 16 to 25 percent and 45 percent of the DHs (Fig.8).

Fig. 8: Stock out of free drugs by items



Records of the HFs show that Phenobarbitone tablet (45%), Alprazolam (25%), Aspirin (15%), Gentamycin (15%), Cotrim (6.2%) and Amoxicilline (6.2%) were the most stocked out essential drugs. Oxytocin (3.7%) and Magnesium sulphate (5.2%) ,which are the most essential drugs

during delivery were also stocked out in some HFs. (Please see Appendix 6 for the free drugs stocked out).

Key informant interviews indicated consistently that free drugs were available at the study HFs. Few statements about drug availability are given below.

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

A less consistent view was like this:

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

However, FGDs with community people and service users yielded mixed response. Majority of the people said that EDs were available to them while for the rest it was not.

3.1.2 Essential Drug Procurement and Supply Management Mechanisms

Table 6 presents different models on procurement and supply management of the free drugs. Before 2003, push system was used while after 2003 the GoN shifted to pull system that provides more flexibility and control for enhancing availability of the free drugs. Particularly after 2008, the GoN has introduced free health services that include selected items free drugs and other services.

Table 6: Procurement and Supply Management under Different Models

Options	Transparency	Quality	Cost effectiveness	Supply management
1.Central bidding central procurement(Full Push/Rationing system)	Transparent criteria is used for tendering, bidding, supplier selection and ED selection as per Public Procurement Act,	Quality is tested by the LMD	Economies of scale, saving transportation cost increases efficiency loss	Lengthy procurement and supply process, many drugs get expired by time of receipt at the HF(but not significantly different compared to district procurement), completely centralized system
2. Central bidding district procurement	Transparent criteria is used for tendering, bidding, supplier selection and ED selection as per Public Procurement Act,	Quality is tested by the LMD	Economies of scale, saves transportation cost increases efficiency loss	Lengthy procurement and supply process, drugs can be purchased with at least 18 months validity date during time of receipt at the HF(but not significantly different compared to district procurement)
3. District bidding and district procurement(Full Pull/decentralized system)	Due process such as e-bidding, transparent bidding and procurement process not followed	No proper quality testing and supervision and monitoring mechanism in place	Economies of scale, transportation cost may increase efficiency loss, however no significant difference in price of EDs purchased at the central and district level	District owns full procurement role/fully decentralized but quality assurance from bidding to purchase and testing of quality of EDs seems compromised , districts lack procurement capacity, stock levels at district might be unmanageable, role of RMS in balancing district requirement under pull system is lost, participation of big suppliers may be discouraged
4. Hybridization: Central bidding central procurement(Push system) + Central bidding district procurement (Pull System)	Transparent criteria is used for tendering, bidding, supplier selection and ED selection as per Public Procurement Act,	Quality is tested by the LMD	Economies of scale, transportation cost decreases efficiency loss, Centre can add transportation cost on the contract amount for each district, no significant difference in price of drugs purchased	Multi-year procurement at the centre and procurement of selected EDs at the district, budget remains both at the centre and in the district, clear guideline on types of EDs to be procured by the centre and the district and budget allocation not in place

At present a hybrid 'push-pull' system has been in place with a provision of procurement budget remaining both at the central, regional and district levels. In this model, big scale procurement is done at the central level while the procurement in the regional and district levels are made in small number. Quality assurance of the free drugs is the responsibility of the LMD at central level which has become a challenge due to stretching resources, lack of supportive supervision and monitoring, and lack of transfer of skills to the district.

The pull system/full district procurement, as favoured by a couple of key informants from the districts, tends to be constrained due to absence of proper quality assurance, skilled human resources and economies of scale lost while procuring small number of free drugs. In order to address the gaps in each of the push and pull system of procurement and maintain regular supply of free drugs at the respective levels, a combination of pull and push system could be promising.

Drug Procurement Procedure

Procurement is an important step for an efficient drug procurement and supply management. In Nepal, a considerable fraction of the national health budget is used for the purchase of drugs and medical equipments[13]. A total of NPRs. 950,000,000 is allocated in FY 2011/12 for free drug program and of the total budget NRs.60,000,000 is distributed for drug procurement.

Over half of all drugs are imported from India and Bangladesh, while domestic products meet less than half the total drug demand. Domestic pharmaceutical companies produce only limited number of drugs and no single domestic producer is able to supply all the free drugs demanded by the public sector[14].

Nepal's MoHP has introduced Public Procurement Guidelines in August 2009. This Guideline is being followed while at procuring goods, services and works in accordance with the PPA- 2006 and the PPR-2007[15].

In all five districts surveyed for the evaluation, two kinds of committees (rate fixation and tender evaluation committees) were in place. As reported and observed, the procurement process starts with its logically connected sequences such as procurement planning, determination of bidder's list and qualification, invitation of bidding, issuing of bidding documents, pre-bid meetings, bid opening, bid evaluation and selection, contract award and contract implementation[16].

The MoHP allocates funds for the procurement of drugs to both the central and district levels. The regional level also gets some funds to purchase buffer stock, but the amount tends to be small (2-3%). Generally, central bidding takes a long time (9-13 months) due to time taken for pooling demands of drugs by the districts, preparation of bidding documents, bidding time, inspection and lab tests and transportation[17]. The evaluation finding was similar to the previous findings.

> Central bidding and local purchasing is a mechanism in which the demand of all the districts is pooled and bidding occurs at the central level. In exchange, districts purchase drugs at a centrally agreed rate. Central bidding ensures lower prices, while district level purchasing ensures the availability of drugs at the local level (KII central level).

NHSP-IP II has plans to improve and implement the central bidding and local purchasing for EDs to address disparities in price, quality and quantity of medicines including the districts procurements[18].

13 Government of Nepal, Ministry of Health & Population (August 2009). Public Procurement Guidelines, NHSP, HeSRU, PPICD, MoHP.

14 Government of Nepal, Ministry of Health & Population (May 2009). Central Bidding and Local Purchasing: A Discussion Paper.

15 Government of Nepal, Ministry of Health & Population (August 2009). Public Procurement Guidelines, NHSP, HeSRU, PPICD, MoHP.

16 Government of Nepal, Ministry of Health & Population (August 2009). Public Procurement Guidelines, NHSP, HeSRU, PPICD, MoHP.

17 Government of Nepal, Ministry of Health & Population (May 2009). Central Bidding and Local Purchasing: A Discussion Paper.

18 Government of Nepal, Ministry of Health & Population (April 2010).

As reported by the LMD, the Government has decided to introduce multi-year procurement of drugs, which is expected to address the issues of short supply of drugs and short expiry date of the drugs purchased. Table shows the steps of current procedure in place to procure drugs to ensure quality and cost effectiveness of drugs.

Table 7: Process of procurement and supply of free drugs

Procurement process	Activities	Responsibility
1. Planning & tendering	Requisition: Defining free drug items for procurement	LMD
	Collect quantity of free drugs requirement	RHD,DHO/DPHO,HF
	Compile total national requirements	LMD
	Prepare list of free drug & approval for procurement, plan budget	LMD
	Receive funds	RHD/RMS,DHP/DPHO
	Selection of supplier: see approved list, past suppliers	LMD, RHD/RMS,DHP/DPHO
	Call for tender: Advertise tender in national newspaper, collect sample from supplier, determine time and place to submit tender, delivery schedule, insurance, description of drug in specific language, not for sale, stamp donated by	LMD, RHD/RMS,DHP/DPHO
	Submit tender**:** Evaluation committee evaluates tender(at least 3), price with GMP certificate	Supplier
	Sign contract	LMD, RHD/RMS,DHP/DPHO
2. Quality Assurance & Receipt	Pre-shipment inspection & lab test	Supplier
	Receive/supply free drug as per contract	RHD/RMS,DHP/DPHO
	Confirm free drug delivery and arrange for payment	RHD/RMS,DHP/DPHO
	Post-shipment inspection	RHD/RMS
	Make payment /receive payment for free drug	LMD, RHD/RMS,DHP/DPHO, supplier
3. Distribution/Supply	Receive free drug requests and deliver/receive free drug trimester	RHD/RMS,DHP/DPHO,HF
4. Storage	Store entry (e.g. Hastantar Faram, Jinsi Khata number 52), store free drugs on raised platform, shelf, locked cabinet, keep free drugs in order	RHD/RMS, DHO/DPHO,HFs
5.Monitoring and Evaluation	Review and update free drugs requirements and supplies, update records	LMD, HD/RMS,DHP/DPHO,HF

Drug Supply Management

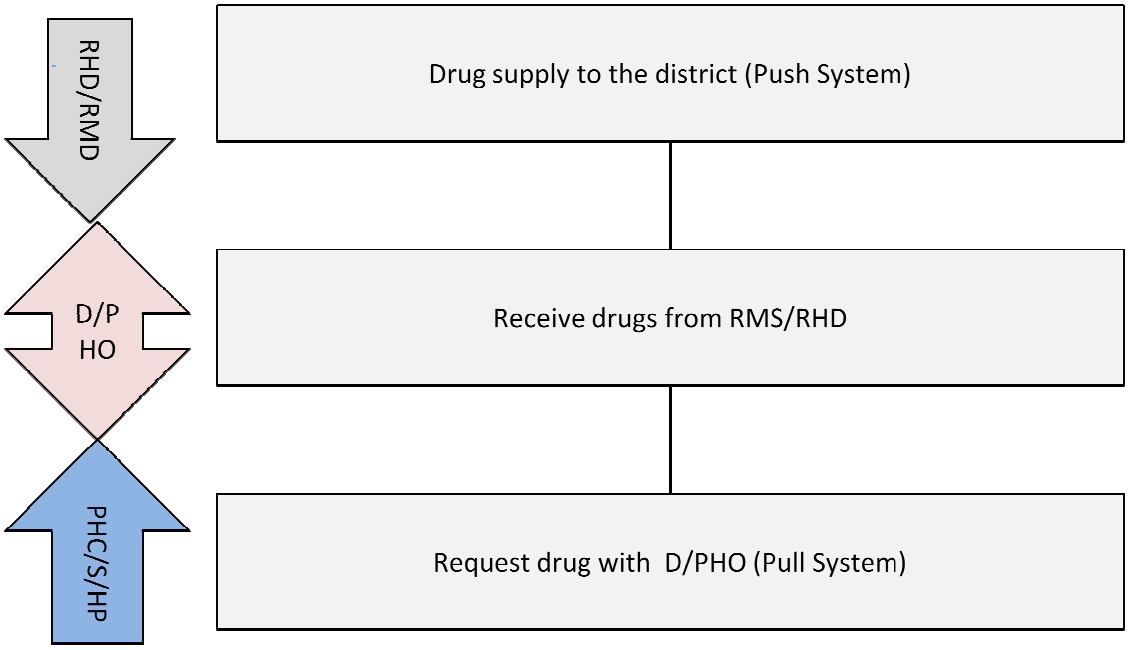
Once the supplier/s is selected (split-contracting is in place based on item-wise price), the contracted suppliers supply all the drugs purchased by the LMD to the Central Medical Store stationed at Pathalaiya, Bara district of Nepal. The Central Medical Store follows Push System to supply all the drugs to the five RMSs. The RMSs also send all the drugs by push system to the respective districts. All the D(P)HOs distribute drugs to the HFs through the pull system (i.e. based on demand). The D(P)HOs receive demand of drugs from all PHCCs, HPs and SHPs through pull system. The following figure shows the current system of drug supply.

'Push system' is to allocate free drugs based on historical consumption patterns and equitable rationing of national drug stocks. Although this push system grew more sophisticated over the years, it increasingly failed to ensure reliable availability of free drugs within the Ministry's expanding network of HFs; the main reasons being that it could not accommodate any significant increase in demand such as epidemics and that frequently drugs that were not in high demand would expire and become wasted.

A **pull system** is a demand-based approach for ensuring the reliable availability of free drugs at all service delivery points within a health system.

A hybrid **'push-pull'** system designed specifically for Nepal — half the annual estimated Consumption of an HF is dispatched directly to the facility. The remaining half is stored at district level for demand-based supply. Health facilities use the established Logistics Management Information Systems (LMIS) to forward their demands quarterly to the appropriate district store. Meanwhile, RMSs maintain buffer stocks of free drugs to supply to the district stores as per need. All HFs maintain six-month maximum stock levels.

Fig. 9: Combination of push and pull system



District Procurement:

As reported, procurement of drug is done by the centre and due to long bidding process, free drugs often do not reach to the intended health institution in time. The key informants suggested that there is a need of central bidding and local purchasing. The LMD at the centre can suggest the lists and fix the price which can be procured by the district. The DHO of Kanchanpur said, "There are problems of storage due to lack of qualified human resources and also we cannot assure the quality of drugs sent from the centre".

> *"We publish tender notice on national print media, and bidders are selected as per their quotation, GMP certification and at least 18 months valid 'expiry date of the drugs'. We regularly update inventory, requisition form, needs and demand of the HFs. We follow FEFO system while distributing the drugs. E- bidding has helped here for immediate demand and regular supply of drugs. The thrust of supply is the pull system. EDs are supplied regularly as well as on demand". (DHO, Mahottari)*

> *"EDs procured at the central level is cheaper and of good standard because of bulk purchase made through the competitive bidding. If you look at the districts, there is lack of competitive bidding. We have started multi-year split item purchase. It will resoleve the problem of delayed supply and price factor" (KII, MoHP)*

As reported, D(P)HOs receive the free drugs from RMS in different times in different districts. As for example, in Kanchanpur and Dailekh, it was received every trimester, quarterly in Mahottari, and half yearly in Sankhuwasabha while in Kanchanpur, it was delivered any time of the year. However, the drugs provided to one district (Mahottari) were not based on the district need. One key informant from Mahottari reiterated thus:

> *"The drugs received in the district are not as per our demand and it should be based on pull system" (KII Mahottari)*

In contrary to this, key informants at the central level reported that "demand of free drugs from the district is collected (web-based) from the district and discussed in the pipeline meeting held at LMD

every three months. We also review the past year's record and ensure that there is no shortage and oversupply of the EDs" The D(P)HOs and the health facility in-charges consistently expressed that many drugs sent to the districts happened to be nearly expired.

> *"Sometime we get medicines which are near to expiry date and some of them could be even expired" (KII, Dailekh)*
>
> *"While the central level KIIs claimed that LMD makes sure that at least 18 months expiry date should remain while procuring drugs and quality of the drugs is tested by ISO certified laboratory" (JEST for example) (KII LMD).*
>
> *One key informant reiterated: "There should be single point of procurement (at the central level). In order to minimize the transportation and staff cost private sector should be contracted out for drugs distribution/supply. At the grass roots level, there should be pull system as well". (KII, LMD)*

As reported by the D(P)HOs, the amount of budget spent in procurement of drugs varied from 10 percent (Kanchanpur) to 60 percent (Mustang district). The D(P)HOs have also followed the process as given in Table 7. The main steps involved are:

- Fill the demand form considering previous three months' stock (Kanchanpur, and DHO demand based on our requirement to the Centre (Sankhuwasava)
- A separate procurement committee is formed for the purpose of procurement process
- Call tender from the suppliers (at least 3). Only GMP certified companies can bid the tender
- Approve tender and procure the drugs from suppliers
- Also purchase emergency medicines but in very limited quantity (Sankhuwasava)

The sources of fund for district procurement of drugs, as reported, were regular government budget, money reimbursed by the government as per the list of patients registered (Rs 5 per patient) and VDC funding (Dailekh for example). In Kanchanpur district, there was a very limited local purchase as the drugs provided by the centre were sufficient to meet the need of the free drugs in the district.

Regarding the current practice of procurement of free drugs, participants also mentioned that procurement procedure before and after introduction of free health services were not different, rather it was better before. One HFOMC argued that: "In the past the drug committee used to get list of essential drugs from the Hospitals and it used to buy drug and sale it to the patients with 40% discount. These days, tender of drugs is called at the centre and the drugs purchased, there might be a compromise in quality of the drugs".

> *"It was difficult to transport drugs during rainy season from the centre and sometime staff had to fetch drugs from the DHO" (Health worker FGD, Kanchanpur)*
>
> *"Drugs purchased at the centre have short expiry date". (FGD, Dailekh)*

A comparison of store records for 13 free drugs purchased at the district and central level shows that each eight free drugs were found expired during the time of the evaluation. Eight free drugs procured at the central level were found expired in 16 out of 52 health facilities (30.7%) and eight free drugs procured at the district level were found expired in 31 out of 52 HFs (59.6%) (Figure 10).

Fig. 10: Percent of HFs having eight free drugs expired under central and district purchase

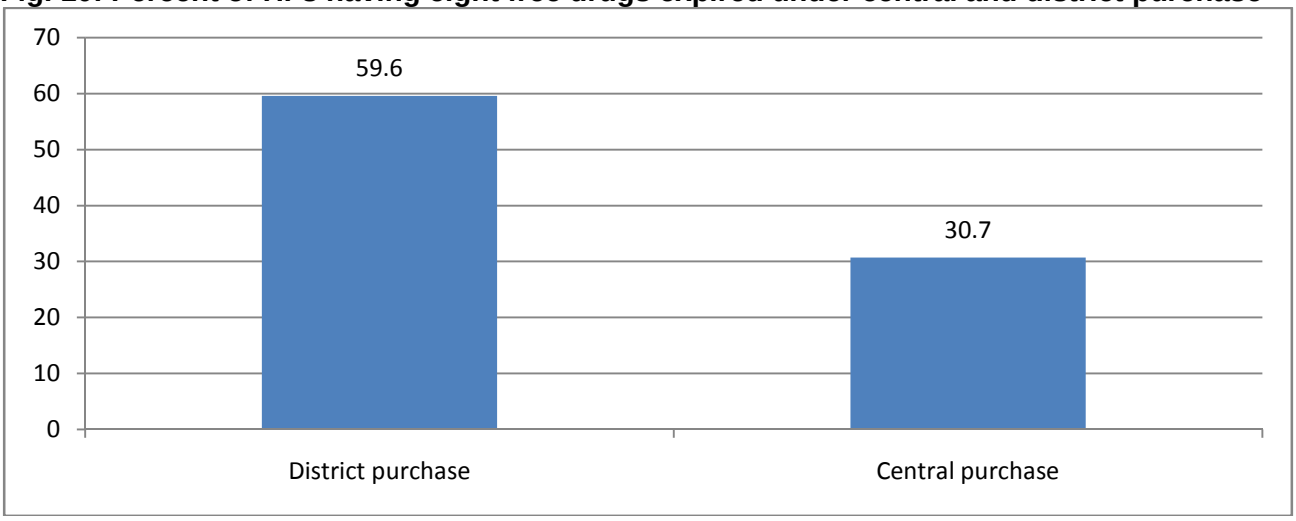


Table 8 shows that on the whole, 28 free drugs (out of 60 items) were found expired at least one HF during the time of the evaluation. Seven free drugs were found expired at least one HF and five free drugs were found expired in two HFs. Similarly, six free drugs were expired in three HFs. The rest six of the free drugs are available were found expired in four to 15 HFs.

Table 8: No. of free drugs expired and having less than 6 months' validity period

S.N.	Essential Drugs	Expired	Percent	<6 months	Percent
1	Ciprofloxacin Eye ointment 0.3% w/v	15	28.8	9	17.3
2	Ciprofloxacin/Sulfacetamide Eye & Ear drops 0.3% w/v	3	5.8	2	3.8
3	Ciprofloxacine Tab 250mg	2	10.0	1	5.0
4	Dextrose Solution Inj 5% Dextrose Solution	1	25.0	0	0.0
5	Frusemide Tab 40mg	3	15.0	2	10.0
6	Salbutamol Tab 4mg	3	15.0	2	10.0
7	Calamine lotion 1% (30ml bottle)	6	11.5	1	1.9
8	Sodium chloride Inj Sol 0.9% Isotonic (154 mgl of Na+ and Cl- each)	2	10.0	2	10.0
9	Dexamethasone Inj 4mg/1ml ampoule	2	10.0	1	5.0
10	Chloramphenicol Eye Applic. 1%	5	9.6	12	23.1
11	Amoxicillin Cap 500mg	6	11.5	0	0.0
12	Amoxicillin Dispersible Tab 125mg	4	7.7	2	3.8
13	Amoxicillin Dispersible Tab 250 mg	2	3.8	0	0.0
14	Amoxicillin Cap 250mg	0	0.0	3	5.8
15	Calamine lotion 1% (540ml bottle)	4	7.7	0	0.0
16	Pheniramine Inj. 22.75 mg (Maleate)/ml	3	5.8	1	1.9
17	Povidinelodine Solution 5% 450 ml	3	5.8	4	7.7
18	Clove oil	3	5.8	0	0.0
19	Charcoal activated Powder 10gm in Sachet	1	5.0	0	0.0
20	Atropine Inj 1mg (sulphate) of60.5mg in 1ml ampoule	1	5.0	0	0.0
21	Sulfamethoxazole + Trimethoprim (Cotrim) Tab 100mg + 20mg (P)	2	3.8	0	0.0
22	Sulfamethoxazole + Trimethoprim (Cotrim) Oral Sus 200mg + 40mg/5ml	1	1.9	0	0.0
23	Sulfamethoxazole + Trimethoprim (Cotrim) Tab 400mg + 80mg (SS)	0	0.0	2	3.8
24	Magnesium Sulphate Inj 1gm/2ml (50% w/v)	1	3.4	18	62.1
25	Gentamycin Inj 80mg/2ml vial	1	3.4	0	0.0
26	Oral Rehydration Solutions (ORS) Powder 27.5gm/litre	1	1.9	4	7.7
27	Metoclorpropamide Inj 5mg/ml in 2ml ampoule	0	0.0	7	13.5
28	Aspirin tab 300mg	0	0.0	1	25.0

Ciprofloxacin eye ointment 0.3 percent w/v was found expired in 15 HFs (out of 52), followed by Amoxicillin Cap 500 mg and Calamine lotion 1 percent (30 ml bottle) (in 6 health facilities each).

Altogether other 18 free drugs had less than six months' expiry date. As reported, the reasons for expiry of many drugs include; purchase of drugs that have close expiry date, delayed supply from the RMSs to the D/PHOs and down to the PHCCs, HPs and SHPs. It was also reported that a system to collect drugs of close expiry dates and their destruction was also not taking place in the HFs. Reasons of expired dated drugs found at the HFs are not use of FIFO system by the HFs, service provider sales drugs from their private pharmacy and distribution of drugs by push system.

3.1.3 Awareness and Satisfaction of Community and Targeted Groups about free drugs service

Awareness on free drug program

Table 9 shows service receivers' higher levels of awareness about the free drug program by different variables. Of the total respondents from mountain and Terai region, 92.5 percent each expressed that they were aware about the free drugs available at the HFs while 95 percent of hill respondents were aware about it.
Similarly, out of the total female respondents, 92.9 percent knew about the free drug program whereas 93 percent of male respondents knew the same.

By caste/ethnicity, 97% Brahmins/Chhetries were found aware about the free drug program while from Janajati and Muslim 87.5 percent and 88.8 percent respectively were aware about the same. In addition, 95 percent of Dalits and 93 percent of Madhesi reported that they were aware about the free drug program.

Table 9 :Knowledge of free drugs

Variables	Percent
1.Region	
Mountain	92.5
Hill	95
Terai	92.5
2. Sex	
Female	92.9
Male	93
3. Caste/ethnicity	
Bramhin /Chhetri	97
Dalit	95
Janajati	87.5
Madhesi	93
Muslim	66.6

The mixed group FGD in Dailekh, Mustang, Kanchanpur and Sankhuwasabha informed year of start of the free drug scheme (2065 BS) and a mixed FGD from Mahottari could not tell the start date but they thought that it was started two-three years prior to the evaluation. However, FGD with community people in Sankhuwasabha indicated low level of awareness about the free drug services.

> *Due to widespread advocacy through radio about the free drug program, number of people seeking health care at HP has increased (HP Management Committee, Sankhuwasava).*
>
> *As reported, most of the participants knew it through Radio (KII Dailekh, Mahottari, Mustang).*
>
> *However, community people and the health workers had perceptions that drugs given free of cost from the HFs could be cheaper and of poor quality (DH, Mahottari).*

Knowledge about other Free Health Services

Interviewees were asked whether they were aware about the free health services other than the free drugs in particular registration, health check-up, immunization, de-worming and vitamins being provided by the health facilities in their areas. The following table shows respondents' knowledge on free health services other than free drug by caste/ethnicity. The table clearly shows that of the total respondents from Brahmins and Chhetries group, majority were aware about other free health care services.

Table 10 : Knowledge of other free health services by sex and caste/ethnicity

Ethnicity	Knowledge of other free health care services (in %)				
	Registration	Free health check up	Free immunization	Free de-worming	Free Vitamin A
1.Sex					
Female	51	56.4	44.4	46.1	46.1
Male	38	41.5	27.8	33.7	28.1
2.Caste/Ethnicity					
Brahmins/ Chhetries	94.4	97	64.8	62	73.6
Dalits	95	100	68	76.9	76
Janajatis	87.5	95.8	72	92	65
Madhesis	71.4	100	100	100	100
Muslims	66.6	100	100	100	100

On the whole, about 42 percent knew free health services other than free drugs, and 39.5 percent of male respondents knew the same. As compared to males, females tended to be more aware on free registration (51 % vs 38%), free health checks (56.4% vs 51.4%), immunization (46.1% vs 33.7%) and Vitamin A (46.1% vs 28.1%) (Table 10).

Interview with the health facility managers (N=52) informed that only 16 out of 52 health facilities (31.4%) had aired FM radio programs on free drugs in order to inform people about it. However, 47 out of 52 health facilities visited (92.5%) had citizen charter placed in their premises.

3.1.4 Satisfaction of the target groups towards free drug distribution program

Special target group people were asked to rate their satisfaction on the free drug program. It was rated in five-point scale ranging from very satisfied to satisfied, cannot say/uncertain, dissatisfied and very dissatisfied. Of the total participants, 44 percent seemed very satisfied with the current free drug program and additional 37 percent were found satisfied (significant at <0.001) (Figure 10). About one out of ten service users (11%) had some reservations about the free drug program. Similarly, nearly two-third (63%) opined that they would strongly recommend their friends and relatives to visit the health facility he or she had visited recently. Another 30 percent stood in favour of such recommendations (significant at 0.001 level) (Figure 12)

Fig 11: Client satisfaction towards free drugs

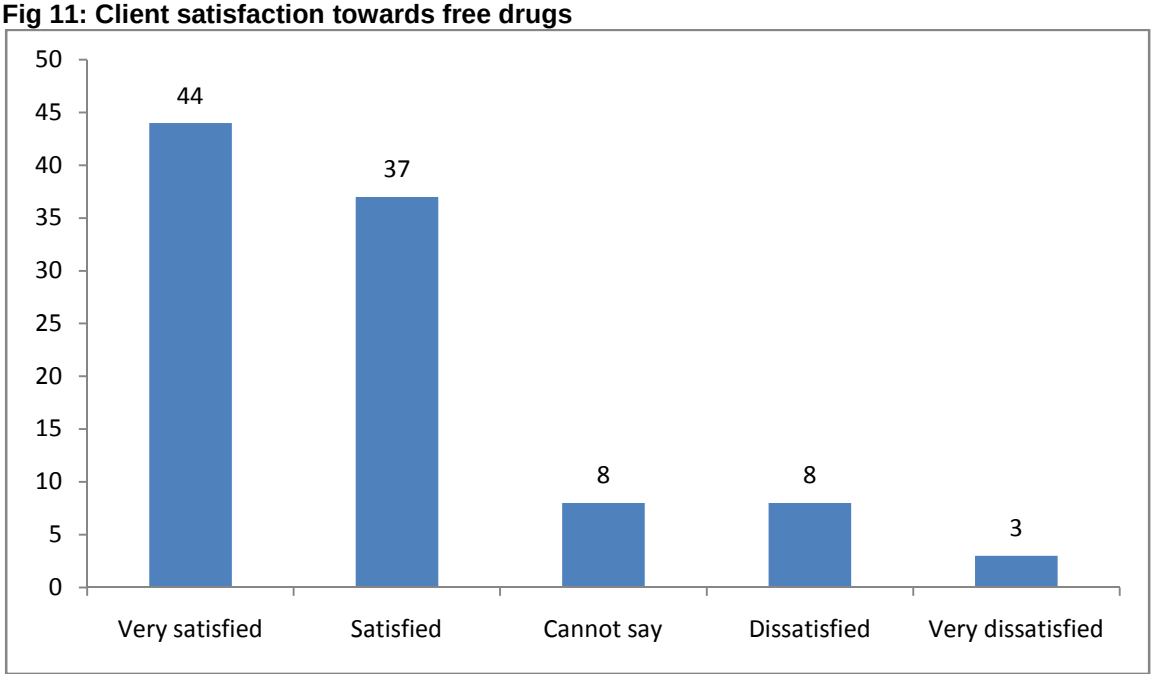
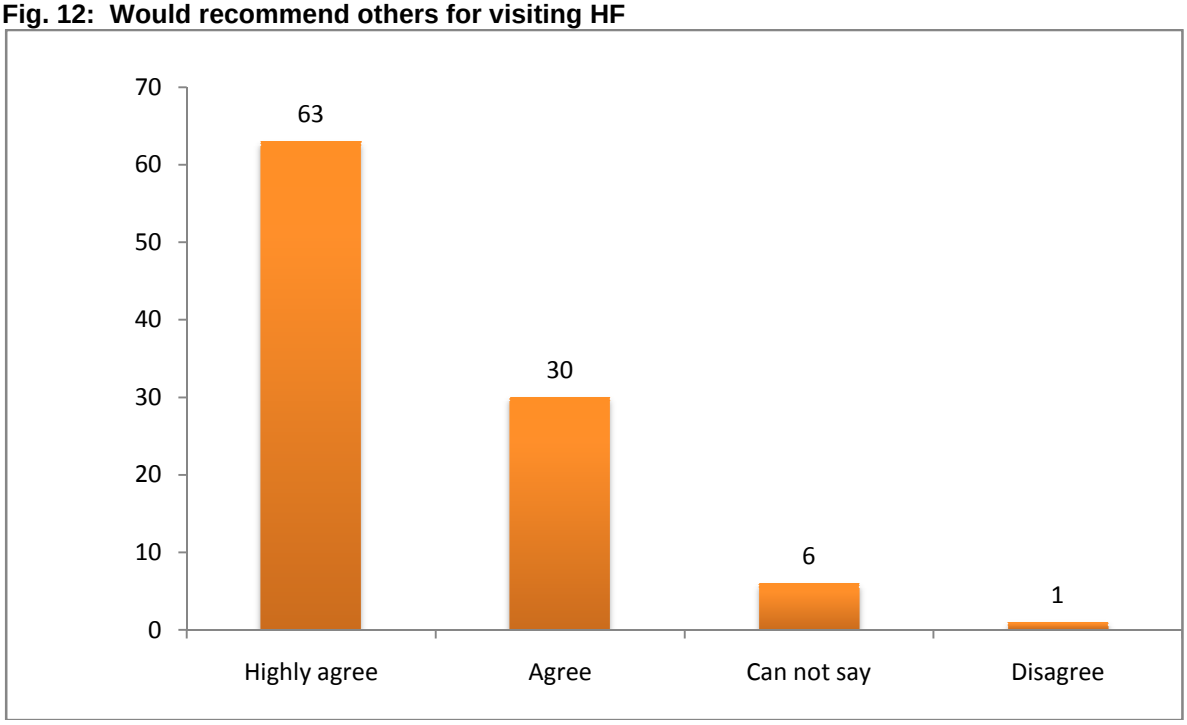


Fig. 12: Would recommend others for visiting HF



FGDs reveal that majority of the respondents were satisfied with the free drug distribution from the health facilities. Participants from Kanchanpur, Mahottari, Sankhusabha, Mustang and Dailekh reported that they were satisfied with the distribution of the free drugs. However, participants thought that HFs should provide all the drugs prescribed by the attending health worker. They also demanded to include more drugs to the list of free drugs. Below are few statements regarding participant's expressions;

> *"We are satisfied with the free drugs provided by the health institutions"*
> *FGD, Sankhuwasabha, Mustang*

> *"Pregnant women are more satisfied with the provision of free drugs"*
> *FGD, Dailekh*

> "We are satisfied but the government should increase the number of free drugs made available to us"
> FGD, Mahottari

One FGD participant from Mahottari however expressed her dissatisfaction thus:

> *"The drugs are not available all the time at the PHCC. Rich people can buy drugs but the poor cannot. Poor people are dying with minor ailments. Kag lai Bel Pakyo Na harsa na Bismat".*
> *Mahottari, FGD*

Absence of doctor (Dailekh, Sankhuwasabha), not getting all drugs (Dailekh, Mustang), lack of ambulance at the PHCC (Kanchanpur) and lack of lab test facility (Mahottari) were the expressed reasons behind low or no client satisfaction. Moreover, perception of people that free drugs are substandard was a major factor determining client satisfaction. One statement given below clarifies it.

> *"Free drugs provided by the Government are substandard"*
> *FGD, Mustang*

3.2 Evaluation of the Free Drug Program

This section presents findings of the evaluation based on the key research criteria given in the ToR; relevance, effectiveness, efficiency, impact and sustainability. The findings are discussed below under the separate headings.

3.2.1 Relevance:

Under free health policy, the GoN has provided free health check-up and provision of free drugs to its citizens as directed by the interim constitution. The free drug program has supported GoN's health policies as well as contributed to meet needs of the target beneficiaries. The free drug program extensively contributes to GoN's health policies, strategies and priorities as stipulated in the Tenth Plan (2002/03-2006/07) and the Nepal Health Sector Program II (NHSP) 2010-2015.

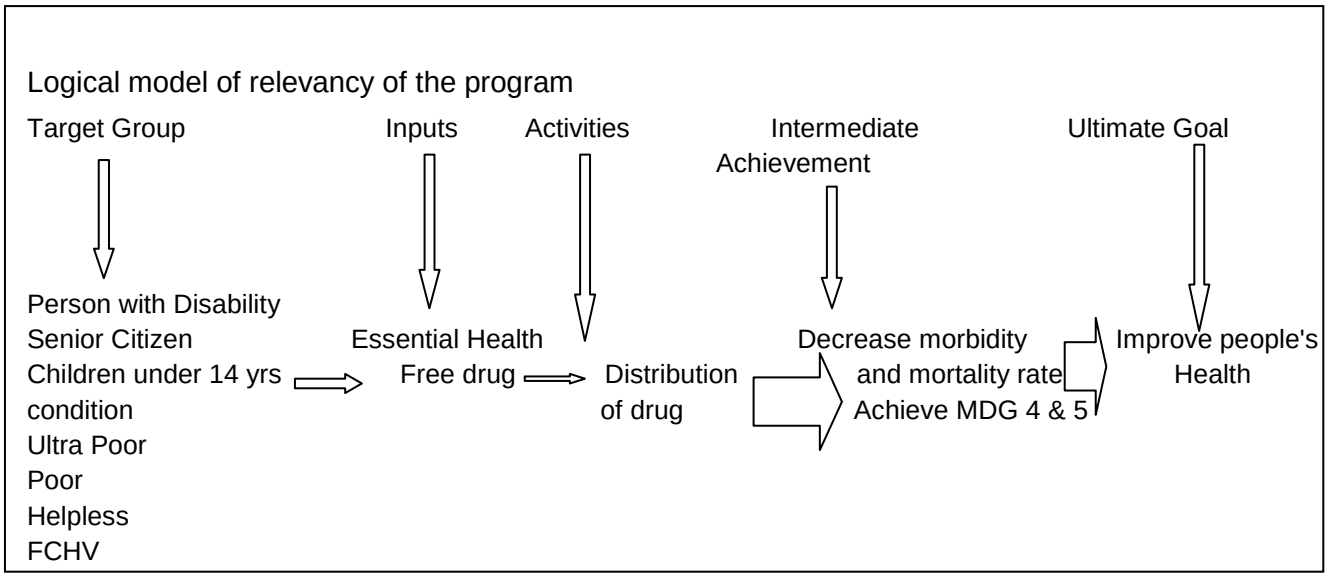
The free drug program is supporting to the general people specially the target groups, in particular ultra poor, helpless, senior citizens, children under 14 years, people living with disabilities, and FCHVs in saving their lives, which is in line with the spirit of the interim constitution.

In the interim constitution, Article 16 is about right regarding environment and health. Two separate rights (i) Every person has the right to live in a clean environment and (ii) Every citizen shall have the right to basic health services free of cost from the State as provided for in the law. The free drug support program is relevant to fulfil the second right.

GoN has introduced free drug distribution since 2008. This program was initiated by the newly elected government in order to meet the political commitment of the government as enshrined in the interim constitution. This program however started without having any structured planning document such as the result-based management being used by the NPCS. As per the provisions, health facilities provide free drugs to all citizens at SHP, HP and PHCC. The special target groups receive free health care services at district and referral hospitals which are contributing to achieve MDG Goal 4: reduce child mortality and Goal 5: improve maternal health. This program has specially provided services to the targeted people. With this program, it is believed that the targeted people have benefited and therefore, the health indicators expected to be improved and started to yield positive changes in quality of lives of the people after a reasonable amount of time.

The figure 13 given below based on the evaluation findings portrays logicality of the free drug program in Nepal.

Fig. 13: Logic Scheme of the Free Drugs Program



Interviews with the key informants, FGDs with service providers, service receivers and the community people indicated that GoN started free drug distribution program on the basis of prevalence of diseases in 2007. In the beginning, free drugs were provided to the target groups and during the time of the evaluation the EDs are free. Moreover, majorities of the participants informed that free drugs match the common health problems of the district, as for example, ante-natal care, delivery family planning, vaccine, drugs for worm infestations, Skin Diseases, Diarrhoea, Pneumonia, and incidence of Malaria (Kanchanpur, Mahottari), Chest Infection, Eye Infection, Hypertension, Accidents (Mustang), free for delivery case , Skin, GI, Accidents, Arthritis, TB, Leprosy, Bronchitis, Pneumonia and Depression (Dailekh), Fever, Cough, Cold, Diarrhoea (Mahottari), Chest infection, Diarrhoea, Typhoid, UTI, and GI problem (Sankhuwasava)

The KII and FGDs, commended the free drugs scheme saying that it was a timely and exemplary program of the Government. However they opined that people were yet deprived of the free drugs due to difficult geography. They added that GoN should provide more free health services such as emergency service, X-ray and lab services. According to them, coverage of the free drugs service was not up to the mark due to limited number of drugs in the essential drug list. Moreover, health policy, as reported, has not put emphasis on providing free drugs for NCDs. The study team believes that the government needs to strengthen health system before introducing free drugs for NCDs, and it should be more important to introduce it in the urban areas in the beginning.

3.2.2 Effectiveness

This section explores how far the intended outputs have been achieved. It is notable however that the GoN started the free drug program with the cabinet level decision, and it does not have any results-based framework in place. Therefore, findings under effectiveness are presented in different thematic areas.

During the evaluation, many health service providers indicated that there was increasing trend of people visiting health facilities because of the provision of free drugs and free health services. This program, as reported, was found to be beneficial to the people, especially the poor, marginalized caste and ethnic groups in terms of access and utilization of health services. These findings are indicative that the outputs have supported to increase the outcome as well as impact of the program. As for example, there was low access to health services due to cost factors before the introduction of free health services and free drugs. With the free health services, there was increased access to health services.

The evaluation participants made following statements about the effectiveness of the free drugs:

> *"It is (FHS) a good work of the government and everyone should admire it. Not only poor and marginalized people have benefitted but also the general citizens have benefited from this". (DHO, Mustang)*

> *"We provide all facilities from this sub-health post free of cost. Poor and marginalized people have benefitted mostly from the free drugs. The drugs based on disease pattern". (SHP, Dailekh)*

One HP from Mahottari informed that there was an increase in the number of patients after the free drug scheme. "Service sector is effective but we are unable to give all drugs needed.

> *"People have very positive response to free drug program"*
> *SHP, Dailekh*

"Especially to the poor who cannot afford private hospitals, it is more useful. Free health service decreased severity of illness and has decreased morbidity and mortality". DPHO, Mustang

"Yeah... it is effective program. There used to be very few patients in the past but now patient flow has increased. Budget is enough and supply system is good
KII, DHO

"About 60 percent people have benefitted who come for treatment and all people have equal opportunity. Every people from all walks of life are getting benefit"
DHO, Mahottari

One key informant from a district reported:

"Free health services have become effective. Patient flow has increased drastically after the introduction of this service. However the increase is not higher like in the beginning of the program"
DHO, Mustang

Participants made some comments as well. Participants in one FGD shared;

"People repeatedly come to the health institution. Patients show a tendency of hoarding in medicines at home as registration at the health institution is free"
HFOMC, FGD, Sankhuwasava

"With the local level political/leadership influence, the health facilities provide more drugs to the relatives and influencing persons and there have been many instances that the drugs are not provided to the most needy and poor populations".
"There is demand of out of list drugs. All people are getting benefit from FHS however increased misuse has occurred. It was necessary therefore nominal registration charge should be considered"
DHO, Mustang

The evaluation findings based on individual interviews suggest that the coverage of free drugs has been increased from certain target groups to the general people.

Fig. 14: Time taken to reach the health facility

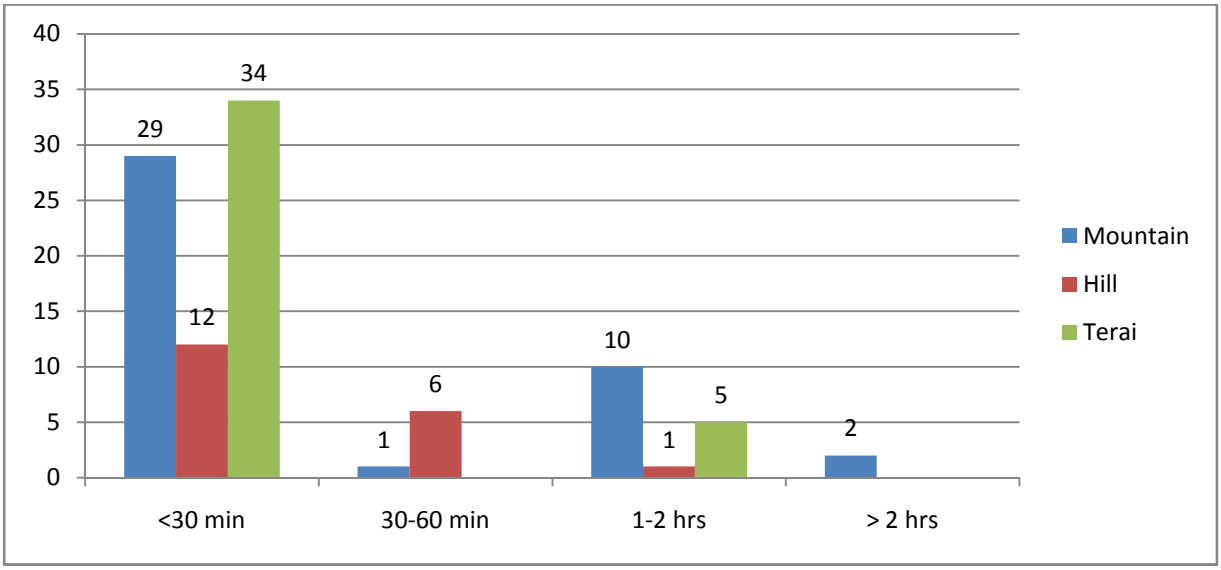
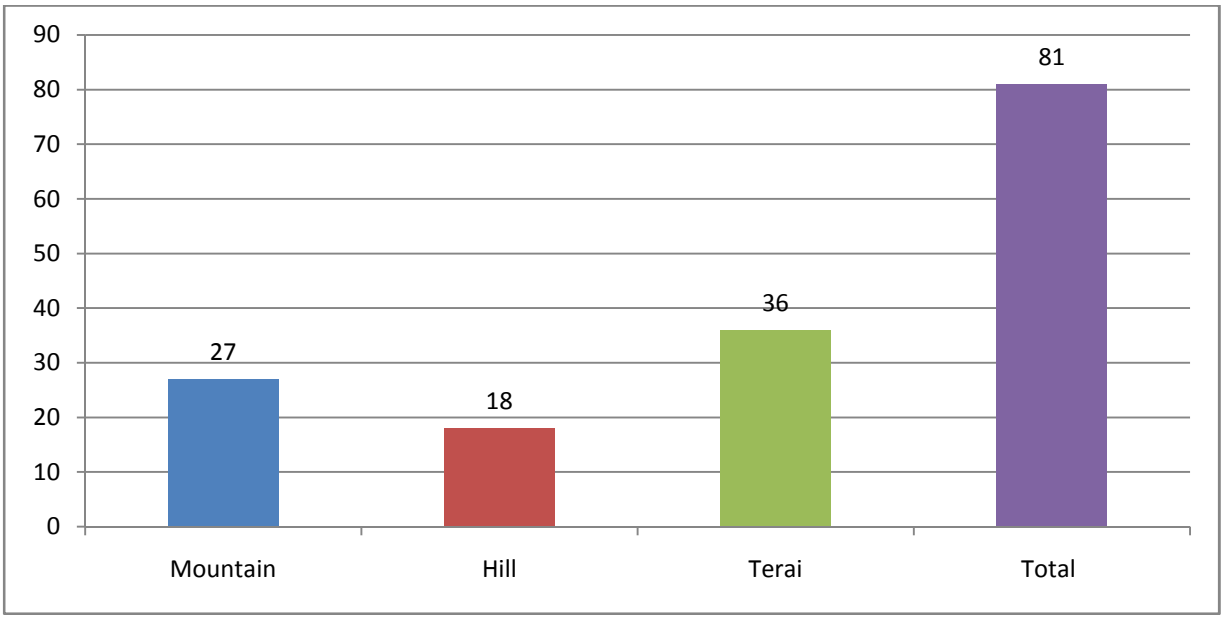


Fig.15: Clients having access to road facility



Unit Cost of Selected Free Drugs

Drugs are being procured in different level. The LMD procure drugs and sent it to the RMS as push system. The regional health directorate feel some gaps in pull and push system and it also procures the buffer list of drug to bridge the gap of pull and push system. The evaluation team collected the list of some drugs procured by district and found the following seven common drugs procured in three districts from different ecological regions. Out of seven drugs, it was clearly found that price of four drugs are lower while procuring drugs centrally (Please refer to Appendix 4 for a table showing the price difference).

Table 11: Comparison of unit cost of selected drugs

SN	Name of Essential Drugs (ED)	Dosage Form	Per Unit price NRs			
			KTM (Central)	Mahottari (Terai)	Dailekh (Hill)	Sankhuwasabha (Mountain)
1	Amoxycilline	Cap 250mg	1.11	0.85	1.10	
		Dispersible Tab 125mg	0.80	0.80	1.60	3.5
2	Sulfamethoxazole + Trimethoprim(Cotrim)	Tab 100mg +20mg (P)	0.26	0.36	0.30	
3	Oral Rehydration Solutions (ORS)	Powder 27.5gm/litre	4.74	4.80	5.50	
4	Ciprofloxacin	Eye ointment 0.3% w/v	17.48	7.95	9.0	
5	Compound solution of Sodium lactate (Ringers' Lactate)	Compound solution of Inj	39.0	20.00	25.0	
		Sodium lactate (Inj Sol)	39.0	20.00	25.0	
		Sodium lactate compound	39.0	20.00	25.0	
6	Oxytocin	Inj 10 IU in 1ml ampoule	2.90 IRs. 4.64 NRs	8.48	10.0	
7	Gentamycin	Inj 80mg/2ml vial	2.95	6.95	10.0	7.0

The price of the free drugs s purchased in Kathmandu (centrally purchased) and purchased at district (locally purchased) has been compared (Table 11). To apply t-test, centrally purchased price has adjusted transportation cost adding 10 percent (assuming transportation cost as 10% of the price). The results of the t-test are shown in Table 12.

Table 12: t-test between central and district price of the essential drugs

Description	Average price Kathmandu(added with 10% transportation cost)	Average price of compared area	t-value (t-critical one-tail)	P-value P(T<=t) one-tail
Price of drugs (10 drugs)between Kathmandu and Mahottari(Terai)	30.56035	8.2452	1.71088	0.13489
Price of drugs between Kathmandu and Dailekh(Hill)	12.23324	12.53333	1.75305	0.47048
Price of drugs (2 drugs) between Kathmandu and Sankhuwasabha (Mountain)	10.63469	27.231	1.81246	0.06779
Price of drugs between Kathmandu and all three districts' average	11.63744	11.093791	1.70113	0.44525

A comparison of the average price of the drugs purchased at the central level and the three study districts, namely, Mahottari (from Terai), Dailekh (from Hill) and Sankhuwasabha (from Mountain) was compared statistically. The average price between Kathmandu and Sankhuwasabha indicate that it was statistically significantly higher in Sankhusabha district than in Kathmandu (P=0.06). While comparison of average price of the drugs between Kathmandu and Mahottari shows tendency for statistical significance, although it is not statistically significant (P=0.13). Similarly, the average price of drugs between Kathmandu and Dailekh was not statistically significantly different. Overall, the average price of compared drugs procured at the central level and the districts was not statistically different (P=0.44). It means the prices were almost the same.

3.2.3 Efficiency

The free drug program had been planned and implemented with the cabinet level decision. The free drug program is being implemented through the health facilities in the country. Logistic management division (LMD) under the DoHS has been playing crucial role in procuring and supplying quality EDs in the country; however regional health directorate and D(P)HO is also procuring drugs to meet the un meet need of the drug at ~~in~~ the district level. All procurement procedure is being followed while procuring drugs at ~~in~~ central level, but it is not fully followed while D(P)HO procure drugs.

Health workers working in mountain and hill regions are frequently absent from the duty station. Participants of FGD from mountain region clearly stated thus:

> *"Our HP building is very good in condition and there are drugs too but because of frequent transfer of health workers, we are not getting proper health care services from our HP"*

The absence of health workers at the facilities has greatly affected the efficiency of the program. There have been frequent short stays of the health workers in the HFs, as most of them are engaged in their own private pharmacies. Many Government health staff have private pharmacies, and have a potential conflict of interest through an incentive to prescribe drugs that must be bought from them rather than supplied for free.

Lack of motivation to health workers, storage facilities of the drugs, cleanness, and physical facilities especially for SHP needs to be improved. During the district visit, it was found that some of the HFs

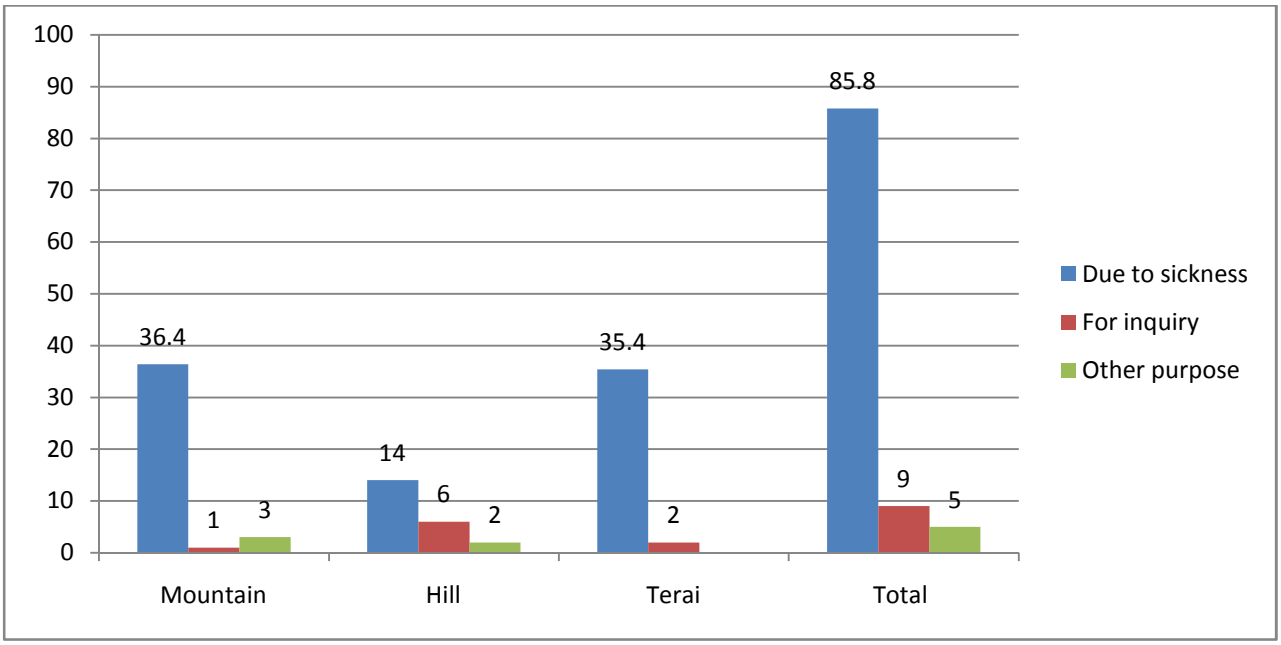
were established and run in temporary buildings provided by VDC or other local government institutions. Procurement of drugs as other commodities with provision of giving contract to the lowest bidder has affected the supply of quality drugs.

One of the DHOs informed that;

> *"We have high security threats and it is very difficult to receive the bids and open the same. A high level of security is needed during the processing of bidding, opening and award of contract. Request for donation by the underground groups from the health service providers has affected the morale of the service providers".*

The D(P)HO has the authority to procure free drugs, but there is question of supply of quality drugs, as many health services providers interviewed informed that they have received many complaints from the patients that the medicines did not work properly.

Fig. 16: Reasons for health facility visit



About the quality of drugs purchased at the district, almost all the district level participants stood in favour of district procurement as it was cheaper and timely procured.

> *"We ask for sample and send it to DDA for quality control and purchase. We do quality check while receiving medicines at the store".*
> *DPHO, Sankhuwasava*

> *"We don't receive drugs due to lack of budget, human resource and road transportation. Now we have stock out of medicines for ARI and Pneumonia"*
> *SHP, Sankhuwasava*

Contrasting views were also emerged:

> *"We are having problems while bidding at the district level. Therefore, we suggest central bidding local purchasing. Also developing management committee at district level with some funds will help us purchase drugs as per the local need. Now there are incidences of misuse of drugs as people store free drugs at their home even if it is not*

needed. We supply drugs every two-three months which is sufficient, but during epidemic, we face problems of supplying the needed drugs
DHO, Kanchanpur

"After free drug scheme, number of patients have increased but there is misuse of medicines"
Mustang, Sankhuwasava, Mahottari

"We had acute shortage of ORS and Iron tablets in the past but local purchasing of ORS and central supply of Iron tablets solved the problem".
DHO, Mahottari

"We don't receive fund to purchase drugs ourselves and sometime we need to prescribe drugs not included in the drug list".
"The central purchase is better than local purchase. Drugs purchased should have long half life. ORS and Iron tablets generally run out of stock".
DHO, Mahottari

"We face rare situation of out of stock of drugs at district level".
DPHO, Mustang

"Poor and pro-poor need to be well defined, targeted group need to be given certified card and health insurance for disadvantage group is needed".
DHO, Mahottari

"Drugs should be made available according to population size and disease pattern. Centre should allow district to purchase drugs according to the need of the people".
DH, Mahottari

"Delayed supply of drugs has become a problem faced by the HP and SHP at present"
DH, Mahottari

It was reported that because of removal of registration fee to be paid by the patients, people make unnecessary visits to collect drugs at home as it is not necessary to bring the registration slip in the follow up visits. Because of this, it is even quite hard to know the medical history of the patients.

As shown in Table 12, users received the essential drugs easily, they were of good standard, and in adequate amount (significant at t-test).

Table 13: Perception of the respondents regarding efficiency of free drugs services (%)

S.No.	Statements	Highly agree	Agree	Cannot say	Disagree	Highly disagree	Chi-square
1.	Received the free drugs easily	39	46	6	8	1	0.089
2.	Free drugs are of good quality	27	33	21	13	6	0.001
3.	There are adequate drugs in the health institution	8	22	38	29	3	0.009

Monitoring

As reported, monitoring committee (MC) was formulated in over two-third (68.6%) of the HFs and in about one-third of the HFs (31.4%), it was not in place. One out of ten (9.8%) HFs had very active MCs and nearly four out of ten (39.2%) had fairly active MCs. One-fifth of the HFs (19.6%) had MCs but they were not active.

Fig 17: Formation of monitoring committee and its activities

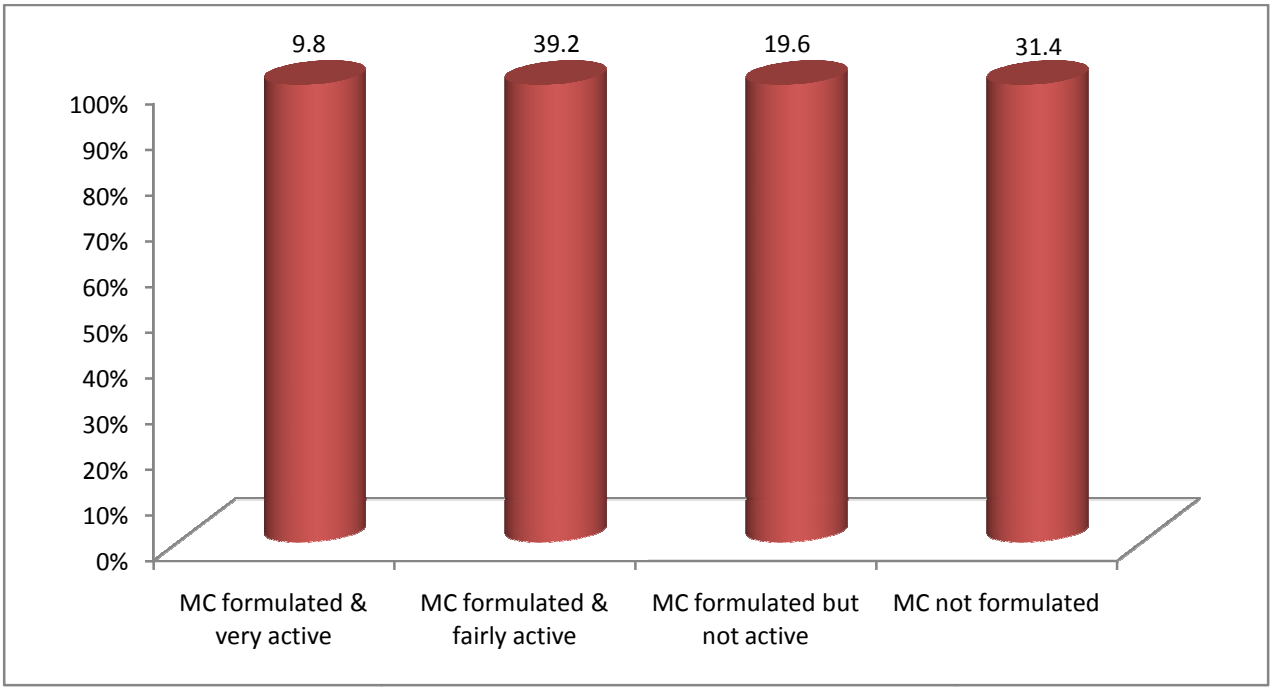
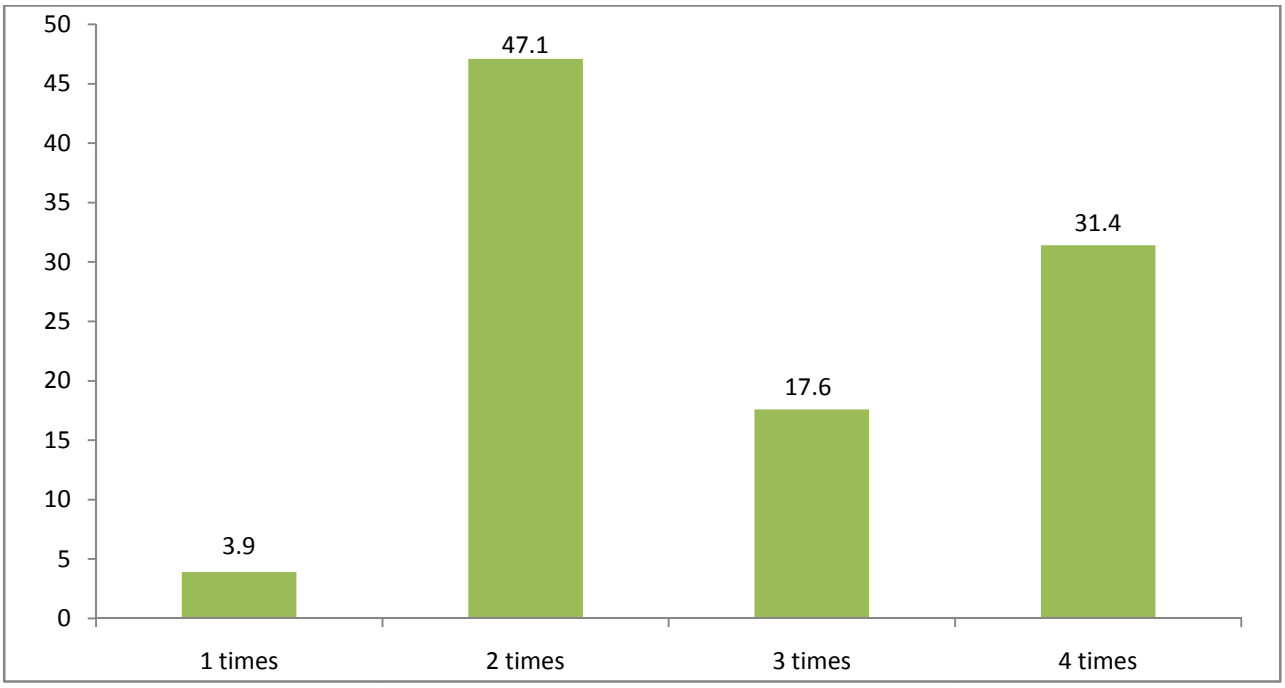
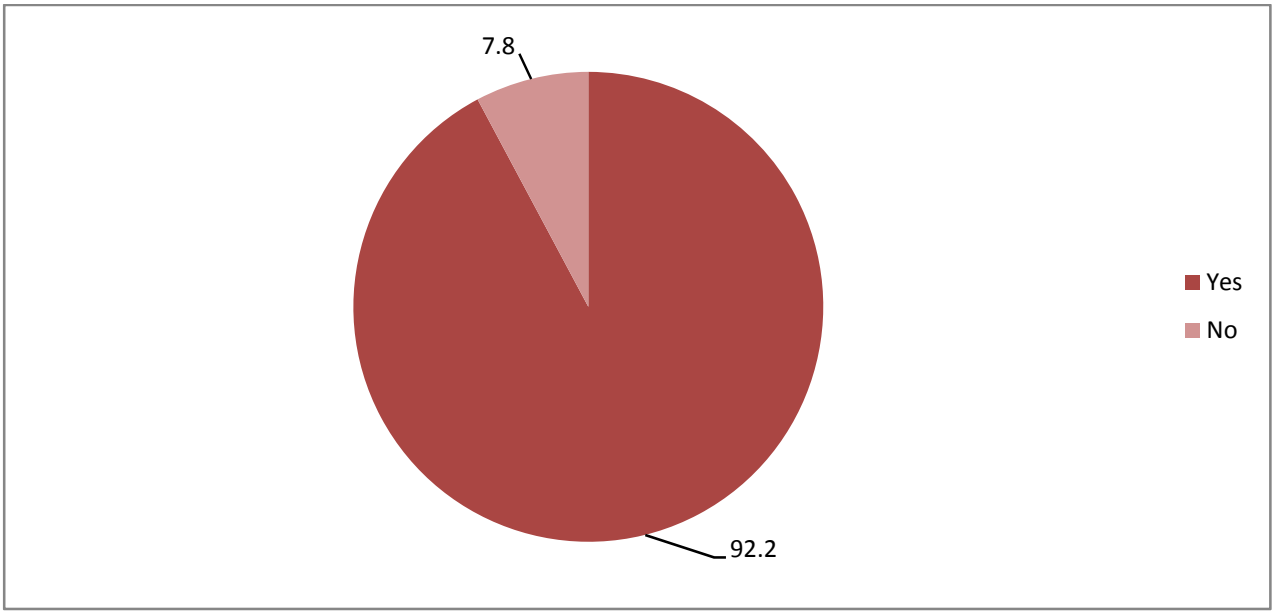


Fig. 18: Number of monitoring committee meetings held in last three months



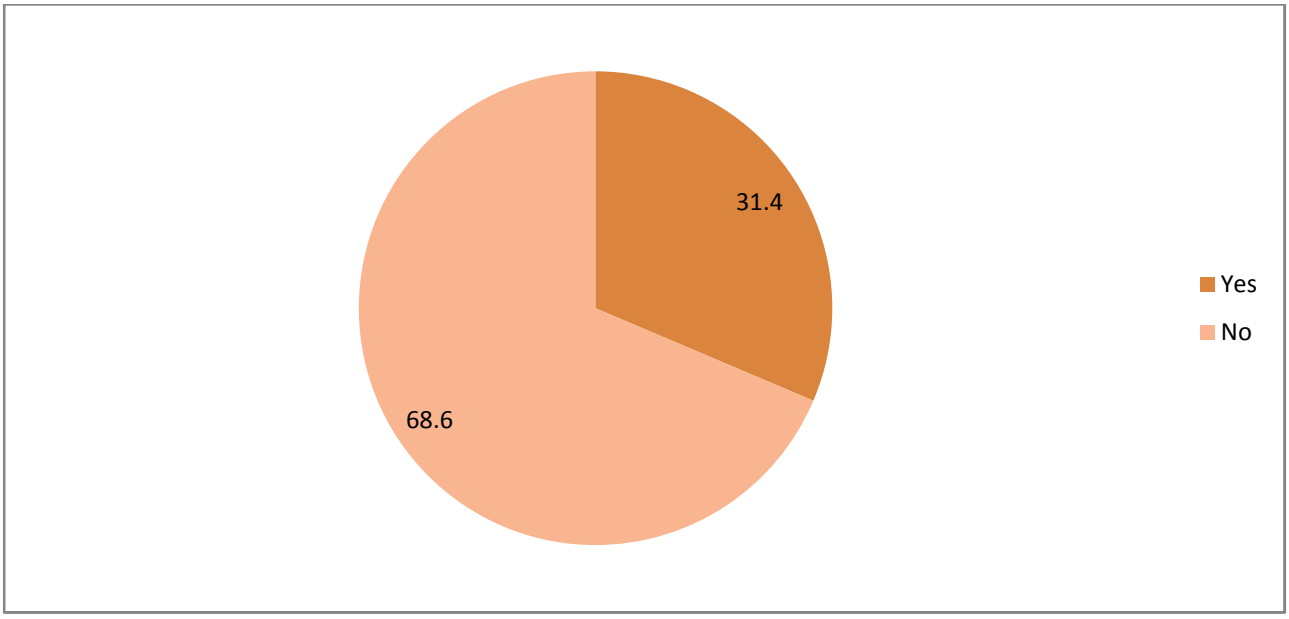
By number of meetings held in the past three months preceding the survey, in 47.1 percent HFs, two meetings were held while in 17.6 percent and 31.4 percent HFs three and four meetings were organized respectively (Figure 18).

Fig. 19: Availability of citizen charter on free drugs



The evaluation suggests that 92.2 percent HFs had displayed citizen charter including message on free drugs (Table 19).

Fig. 20: Focal person on free health services assigned



Focal person at D(P)HO to look at the free health services was assigned in less than one-third (31.4%) of the HFs (Figure 20).

3.2.4 Impact

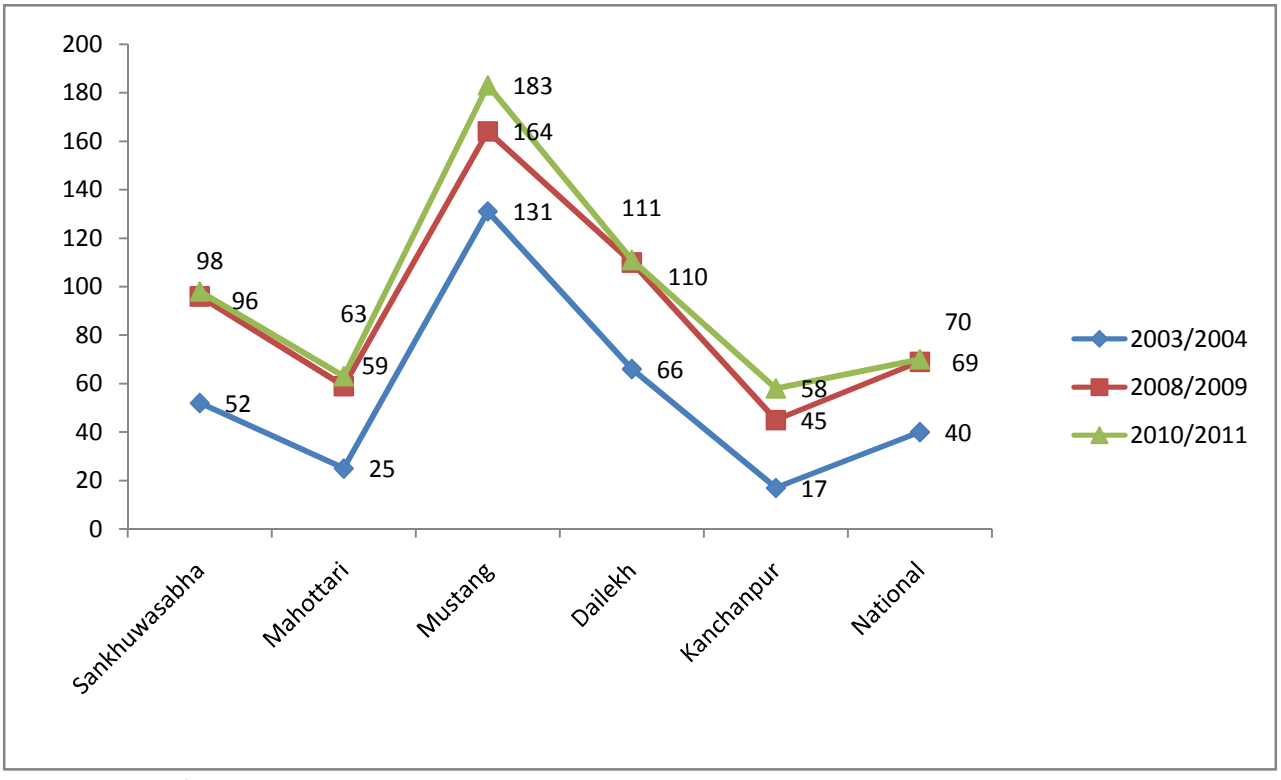
It might be too early to assess the impact of the program as it is running in fifth year. It is a national program with diverse target groups covering all the regions and population of the country. However, people especially who are ultra poor, socially excluded from any services being provided by the government are getting free drug to save their lives.

Participants especially target group members during the evaluation process were posed some statements related to the impact of the project. A total of 100 community people were interviewed on three different areas related to free drug program. On the whole, 86 percent service users favoured the statement that the free drug program was beneficial to the disadvantaged groups while nine percent did not show their agreement to this. Similarly, a significantly higher proportion (84%) of service users believed that there was increase in client flow in the HFs (significant at 0.001). Nearly two-third (62%) informed that free drugs had met their needs (against 24% who did not agree).

Table 14: Perception of target beneficiaries regarding impact of the free drug program (%)

S.N.	Statements	Highly agree	Fairly agree	Cannot say	Fairly disagree	Highly disagree	Chi-square
1.	Beneficial to disadvantaged groups	39	47	5	5	4	0.007
2.	Free drugs provision has increased number of patients in health facilities	54	30	15	1	0	0.001
3.	Free drugs have met our needs	19	43	14	13	11	<0.001
3.	Free drugs have helped decrease mortality	26	52	20	2	0	0.189

Fig. 21: OPD as percentage of new visits of the total population



Source: Annual Reports, DoHS, MoHP

A review of secondary data from the DoHS Annual report 2003/2004 (before introduction of free health (drug) scheme and 2008/2009 and 2010/2011 indicated that outpatient visit as percentage of new visits in the total population has increased in all the evaluation districts, though in varying proportions. The percentage of OPD visit has increased at the national level as well; from 40 percent in 2003/2004 to 69 percent in 2008/2009 and 70 percent in 2010/2011 (Figure 21).

Interviews and FGDs reveal positive impact of free drugs. The following statements indicate this:

"Free health service has brought radical changes in health sector. There is tremendous increase in number of people seeking health services especially poor, Janajati and Dalit are benefitting the most".

"People are seeking health care increasingly and know about free drug program. Those who can't afford private health services are mostly benefitted by the program"
PHCC, Mahottari

"Free health service is a master work of GoN. It is essential and available to all people including poor and marginalized".
PHCC, Dailekh

"Free health service has made significant impact in Mahottari district in reducing mortality. Specific groups of people such as disabled, children, FCHVs, elderly, poor and marginalized, and Janjatis have benefitted at the most".
District Hospital, Mahottari

"At least people won't die due to minor illnesses like fever, diarrhoea".
DH, Mahottari

"Free health service has contributed directly to improving child health, reducing maternal mortality and controlling major public health problems".
DHO, Mahottari

"Free drug has increased the number of patients visiting health facilities"
District Health Management Committee, Sankhuwasava

"It has tremendous impact on maternal health. After free health service, there is decreased morbidity and mortality. Poor and marginalized have benefitted at the most."
PHCC, Mustang

"Patients flow had increased after FHS drastically"
Mahottari, Mustang, Kanchanpur, Dailekh

"There is a positive change among community people in health seeking behaviour"
Kanchanpur, Dailekh, Mahottari, Sankhuwasava

However, a less frequent response was obtained on the bottle necks of the free drugs program:

"Same patients come again and again; therefore a lot of misuse is done by the patients"
Kanchanpur PHCC

"There is no significant change. All drugs are not supplied as per need of the people"
HPI, Mustang

"Government has not supplied emergency drugs"
KII Kanchanpur, Dailekh

"Although GoN has good intention in providing free drugs few of the drugs distributed are not worth".
PHCC In-charge
"Some of the free drugs are sold from the private clinic"
FGD Mahotari

"We will have to face pressure from political people and affluent people to distribute drugs and needy people won't get medicines when needed".
DH, Mahottari

3.2.5 Sustainability

After 2009, essential health care was made free for all at HP, SHPs and PHCCs. As per the provision, 22 free drugs at SHP, 32 free drugs at PHCC and HP and 40 EDs at DHs are provided free of cost. Three more free drugs are also provided for HFs having birthing centres. Moreover, institutional deliveries are also made universally free of charge at all public hospitals. The government has already institutionalized the provision of free health care services and free drugs to HFs below district level. With the pool funding and government's own resources (technical, physical, financial and administrative), the free health services has been institutionalized as per the commitment of the GoN to providing minimum health care to the people.

In order to make the procurement process transparent and to ensure quality, NHSP-II has plans to introducing a quality control mechanism, including WHO GMP certified producers for the procurement process. Similarly, the NHSP-II aims to strengthen the present capacity of the DDA and the LMD to have capacity to conduct mobile lab tests on-site to ensure quality of free drugs. Public-Private Partnership (PPP) with private-sector laboratories will be milestone to strengthen the testing of health commodities and drugs.

The LMD has been implementing pull system for year round availability of free drugs and other health commodities in the entire country. However, it has been found that staff at the SHP, HP and PHC was unfamiliar with the LMIS forms and at many times, these forms were not filled properly. This has made D(P)PHO difficult to review and analyse the LMIS forms of the HFs below the district level and cope with the pull system to ensure timely and effective delivery of free drugs at these HFs health facilities. Furthermore, no follow-up has taken place for maintaining effective supply chain management. This is where a proper monitoring system is needed from central, regional and district levels to strengthen and ensure effective management of free drugs and thereby to ultimately protect the rights of the citizens as per the constitution.

"Sufficient human resource, economic incentives to staff, training opportunity, increased number of drugs, health insurance system, PPP and involvement of pharmacists are the few steps the government should provide for sustainability of the programs"
Key informants D(P)HOs and PHCC

"Consumer awareness about free health service should be addressed. DDA should be involved for quality and management committee should inspect free health services"
DHO, Dailekh

Participants suggested creating awareness for sustainability and effectiveness of the free drug program thus,

"A lot of awareness campaign was done through radio, school program and FCHVs. For its sustainability, drug should be made available in time and with sufficient amount".
SHP, Sankhuwasava

"There are many challenges to sustain the program. Public awareness is very important as people still don't know about free services. For its sustainability, local people can play significant role".

DHO, Kanchanpur

"The Government should take responsibility of making continuous improvement and strategies to sustain the free drug program even after withdrawal of external support, if any "
DPHO, Mahottari

Few participants opined that sustaining FHS was still a challenge.

"Continuity is a big challenge (DHO Kanchanpur). There are a lot of challenges; we need to launch awareness campaign".
Mahottari

Few others suggested to add more drugs in the list of free drugs thus:

"The number of drugs included in the free drugs *lists should be increased. Drugs should be supplied as per the need of the population. Awareness program targeted to the community should be launched ".*
Mahottari

*"*Free drugs *lists needs to be updated (Sankhuwasava) and drug supply should be as per the actual need of the patients".*
Sankhuwasava

"Free drugs should be updated. Referral center such as district hospital should have more drugs. Many supplied drugs get expired and Push system should be replaced by pull system".
Sankhuwasava

Health facility staff and service recipients consistently stressed that the GoN should add certain services such as blood tests for non-communicable diseases such as diabetes, hypertension and blood groupings.

"Life saving drugs should be made easily and sufficiently available (Kanchanpur). There should be a charge for OPD registration. There should be pharmacy trained manpower for drug distribution".
Kanchanpur

Store management and staff capacity building was also suggested by some participants.

"Storage condition should be improved (Mustang). Health staff needs to be given refresher training and staff should be permanent".
Mustang

Lack of district capacity for procurement, receipt, storage, supply of EDs and test for quality were the other bottle necks for sustainability of the free health services as suggested by the key informants.

Section 4

CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

This chapter summarise the key findings based on the evaluation findings generated through both the qualitative and quantitative tools and methods.

Availability of Drugs:

User perception on free drugs show that they were not available round the year as reported by 57 percent interviewees in hill and only 16.6 percent in mountain. By health facility Service Users, perceived availability of free drug was highest at PHCC (40%) and least at SHP (21.9%). More than two-third (67%) of the service recipients informed that drugs prescribed by the attending clinician during their last health facility visit were received free of cost. Only 22 percent informed that they paid for the drugs or purchased prescribed drugs in medical store.

Store inventory data revealed that in mountain, hill and Terai 80, 43 and 52 percents of the free drugs respectively were stocked out at least one time. By health facility, almost all DHs , 60 percent PHCCs, 64 percent HPs and 53 percent SHPs had at least one stock out of the free drugs. These findings clearly show that availability of free drugs tends to be lowest at SHPs level and mountain region. The reason behind it was reported to be lack of transportation to the SHP as they are located at remote locations and there is no road access to the mountain region.

Of the free drugs stocked out, 72.7 percent were stocked out for one quarter,18.2 percent % in two quarter and rest 9.1 percent round the year.

By items of free drugs, less than five percent 5 HFs had 69.3 percent of the free drugs stocked out, five to 10 percent of the HFs had 20.9 percent of the free drugs stocked out while 11-15 percent of the HFs had 4.8 percent of the free drugs stocked out.

Findings from the KIIs indicate that free drugs were available in the HFs round the year.

Drug Procurement and Supply Management:

The evaluation is indicative that district and central level KIIs had differing views regarding the procurement and supply of free drugs. District level KIIs consider that free drugs procured at the district level are cheaper, have extended expiry date and timely supply while the central level key informants claim that because of procurement in big amount (i.e. economies of scale), transportation cost, transparent bidding and procurement, quality assurance in central purchasing was more effective. The evaluation findings suggest that these claims hold partially true.

The centre has capacity and system in place for procurement, supply and quality assurance of free drugs. However, supportive supervision and monitoring and a functional supply system was starkly evident. On the other hand districts have low capacity to follow the competitive bidding (even they have security threats for bidding!), procurement as well as store management and quality assurance system. Despite the claims, districts have not been able to procure free drugs with longer validity period as compared to the free drugs procured at the central level. The evaluation findings also suggest that there was no significant difference in the price of the selected free drugs procured at the district and central levels.

Regarding the most appropriate and efficient model of procurement and supply of free drugs, the evaluation findings is indicative that the existing hybrid model combining Pull and Push System tends to be promising in terms of transparency in procurement, cost and quality of drugs, and organizational capacity for procurement and supply management. There was no significant difference in the cost and expiry dates of the drugs purchased at the central and district levels. However, there are gaps in monitoring and supervision, capacity building of the staff and timely procurement and supply of the free drugs to the district levels. There was no clear guideline for allocation of budget between the central and district levels. As a result, duplication, over stocking and confusion had existed. The list of free drugs was not considered appropriate in the changing disease profile in the communities. For example, it did not include drugs and services for NCDs such as hypertension and diabetes.

LMD, RMS regional medical store, and district have not managed internal movement of free drugs between and among HFs and districts/regions with excess amount to districts in need. The service providers and key informants reported that removal of OPD registration fee has resulted misuse of free drugs by the clients.

While assessing the knowledge level of the people, there was universal awareness (over 90%) of the free drugs by ecological region, sex and caste/ethnicity. It was found that the people living in mountain region and Janajati groups showed relatively low awareness of the free drug program. However, only four in ten participants knew free health services other than the free drugs. Radio and FM radio was the main source of information. A vast majority (92%) of the respondents reported that they information on free drugs was written on the citizen charter placed at the health facilities.

Client Satisfaction:

About 44 percent service users were highly satisfied with the free drugs and another 37 percent fairly satisfied. Nearly two-third wanted to strongly recommend others to visit the HFs next time while another 30 percent stood in favour of such recommendations. However, they stressed to add more other drugs in the list of free drugs. They rather demanded for regular presence of doctors, lab test facility and ambulance. A few respondents held perceptions that free drugs were substandard.

Evaluation of the Free Drug Program:

Relevancy of the free health service was found very high in respect to the fulfilment of people's right to health care, particularly the disadvantaged groups as enshrined in the interim constitution and the commitments made by the GoN at international forums and its policy instruments. The program, as reported by the key informants, FGDs and individual clients, was very effective in increasing number of patients in the health facility. However, health workers had complaints that due to removal of registration fee, people do not keep their previous prescription (ticket) and fetch drugs for stocking purpose at home. A comparison of unit cost of selected drugs procured at the central and district level suggest mixed result. That means cost effectiveness of drugs varied by districts and free drugs items. Similarly, no significant difference was observed in the expiry dates of the free drugs procured at the central and district levels. Six out of ten service users thought that free drugs were of good quality and 39.2 percent clients informed that a fairly active management committee was in place in the health facilities.

Table 15: Summary of evaluation findings

Evaluation criteria	Evaluation Result	Main findings (Major fact identified)
1. Relevance	Highly Relevant (A)	Free health service is in consonance of GoN's plans, policies and strategies and is crucial in delivering basic health services to the targeted groups of people and the general people seeking health services. Over two-third (67%) of the interviewees informed they received all the drugs prescribed by attending health worker and over three quarters of them(78%) received drugs free of cost. The intervention logic for program also looks perfect.
2. Effectiveness (Short-term/Direct effect)	Effective (B)	Client flow in the HFs/ access of the target groups to health services increased; in 9.1 % HFs at least one free drug was stock out round the year. 78% users reported that they received drugs free of cost, 67% received all the drugs prescribed by attending health worker while a little more than one-fourth (27%) received the prescribed drugs partially. 43 out of 62 (69.3%) of the free drugs were stocked out one time in less than five percent of the HFs. 44% clients were highly satisfied and 37% partially satisfied with the free health services.
3. Impact (Long-term/Indirect effect)	Impacted (B)	On the whole, 86 percent service users favored the statement that the free drug program was beneficial to the disadvantaged groups. A significantly higher proportion (84%) of service users believed that there was increase in client flow in the HFs (significant at 0.001). A review of secondary data from the DoHS Annual report 2003/2004 (before introduction of free health (drug) scheme and 2008/2009 and 2010/2011 indicated increase in outpatient visit as percentage of new visits in all five evaluation districts, though in varying proportions. Nearly two-third (62%) informed that free drugs had met their needs (against 24% who did not agree). Qualitative findings indicate improvement in morbidity and mortality situations in the districts.
4. Efficiency (Cost-benefit comparison)	Efficient (B)	Average price of the free drugs procured at the central level and the districts was not significantly different, free drugs were expired more in HFs (59.6 %) with district procurement than in HFs with central procurement (30.7%).60% opined that free drugs were of good quality but only 30% perceived that drug were in adequate amount at the HF.
5. Sustainability	Sustainable (B)	With the pool funding and government's own resources (technical, physical, financial and administrative), the free health services has been institutionalized as per the commitment of the GoN to providing minimum health care services to the people. Nepal's health system network is quite strong to sustain the free health services up to the community level. However, lack of trust in quality of drugs (40% users perceived it) and misuse of free drugs could compromise the sustainability of the program.
Overall conclusion	Satisfactory (B)	The free drug program seems highly relevant, effective, with good impact in removing access barriers (e.g. cost),efficient and sustainable.

Only 9.8 percent interviewees reported that management committee was formed at the HF and it was active while a fairly active. In less than one-third of the health facilities (31.4%) a focal person to look after the matters relating to free drugs was appointed.

An overwhelming proportion (86%) felt that disadvantaged groups have benefitted from the free drug program also suggest that. Similar proportion (84%) opined that there was an increase in client flow in the HFs. Qualitative findings also confirm positive impact of the free drugs program. Moreover, a secondary analysis of the OPD data showed an increasing trend of patients over time.

Finally, the GoN implemented free drug program as its compliance to the interim constitution and safeguarding people's right to health services. The program came into operation without having a results-based monitoring tool. Therefore, it was not possible to assess outputs and outcomes of the program in a structured way.

There is enabling institutional arrangements, technical capacity and policy environment for sustaining the free drug program in the future. However, procurement and supply capacity at the district and below levels was considered inadequate because of lack of trained logistic personnel in the district and below levels and frequent staff transfers and staff vacancies. In the absence of transparency, quality assurances, clear guidelines and inadequate supportive supervision and monitoring including accountability for district store personnel, procurements under pull system have jeopardized.

4.2 Recommendations

The study has made following recommendations as ways forward:

4.2.1. Recommendations for the policy

Given the commitment of the GoN to providing free quality health services to the people and fulfil their rights to health services and the relevancy, effectiveness and likely impact of the program, GoN should continue the free health services with some modifications in the future.

i) The current "push-pull" model of procurement and supply management should be continued with the following improvements:

- Clear guideline on proportion of budget to be allocated to the district, procurement and distribution system
- Central bidding and price contract allowing district procurement
- Provision of split-contract for procuring cheapest items particularly in the district
- Multi-year procurement of selected free drugs
- Third party quality assurance/lab test of free drugs with provision of mobile labs
- Review the list of free drugs in particular for adding drugs and services on NCDs, in particular in urban areas

ii) Conduct a study on pricing of all free drugs s, cost implications of district procurements, and indirect/opportunity costs involved with accessing the free health services

iii) Assess logistical capacity of the districts to procure, store and distribute the free drugs along with a capacity development plan.

iv) It is high time that the GoN develop a plan on free free drugs by following results-based monitoring design so that the effectiveness and impact of the program can be demonstrated objectively in the future.

v) Quality control mechanism needs to be expanded up to at least regional level as there is high price variation to the same strength of drugs according to the producing company. An independent third party can be assigned to check the quality of drugs at the destination point.

4.2.2. Recommendations for the program/project interventions

Multi-year contracts and introducing the concept of central bidding and local purchasing seem appropriate as emphasized by all the health workers at the district level. The practice of Central Bidding and Local Purchasing for essential drugs, which was recently initiated to address disparities in price, quality and quantity of medicines procured by the districts must be further developed, expanded, and improved together with their capacity building to shoulder the responsibility of procurement and supply.

Multi-year contracts must be made well entrenched in order to ensure timely procurement of medical supplies, as well as lessen the burden of time and effort involved in recurrent bidding processes every fiscal year for procuring the same type of commodities and drugs. Storage and distributive capacity of central, regional and district medical stores therefore needs to be enhanced through the allocation of additional resources.

During the interview with key informants especially service provider at the local level, they clearly reported that there is an increasing trend of non-communicable disease in the community but the drugs for these diseases are not included in the list of free drugs. Therefore it is highly recommend including at least one type of drug of each communicable disease in the list of free drugs under the free health service. The study recommends to pilot distribution of selected free drugs for NCDs above PHC levels in urban areas along with strengthening of health services delivery system.

During the evaluation, participants consistently raised the issue of coordination, monitoring and supportive supervision. Therefore there needs to be a strong coordination between different levels while procuring drugs and managing their supplies. Each procurement agency i.e. LMD, RHD and District need to establish close coordinate during the planning and procurement of essential drugs. Each agency should establish a line of communication to inform what they are procuring to avoid duplication and over supply of drugs. This will facilitate procurement and supply of the essential drugs such as ORS, Cotrim and antibiotics.

Finally, aggressive awareness raising program for proper use of free drugs by the clients, including point of referral and eligibility for financial support to the clients is necessary. It is high time also to discuss re-introducing nominal registration fees in order to prevent misuse of free drugs in the future.

References:

Family Health Division (2009). Nepal Maternal Mortality and Morbidity Study 2008/09. Ministry of Health & Population, Kathmandu, Nepal

GoN/ CBS (2011). Preliminary findings of the Census 2011

Government of Nepal (2009). Public Procurement Guidelines, Ministry of Health and Population, Kathmandu

Government of Nepal (2008). Public Procurement Rules,

Government of Nepal (2009). Central Bidding and Local Purchasing: A Discussion Paper, Ministry of Health and Population, Kathmandu

GoN, Second Long Term Health Plan (1997-2017).

Government of Nepal (2007). Three-Years Interim Plan, 2007-2010, National Planning Commission, Singhadurbar, Kathmandu.

Government of Nepal (2010). Three-Years Plan (Approach Paper), 2010-2013, National Planning Commission

Hachette F (2009). Free Health Care Services in Nepal: Rapid Assessment of the Implementation and Per Patient Expenditure, GTZ/GFA Consulting Group GmbH, Kathmandu, Nepal.

Institute of Medicine and UNFPA (2006). Status of Reproductive Morbidities in Nepal

Nepal Family Health Programme/USAID (2007).Logistic Management Information System, technical Brief No.12

Shakya G (2002). Monitoring Maternal and Neonatal Health in Nepal, Family Health Division, Ministry of Health, Kathmandu, Nepal

Stoermer M, Sharma SS, Napierala C and Silwal PR (2009). Essential Drug Procurement and Supply Management System in Nepal, GTZ/GFA Consulting Group GmbH, Kathmandu, Nepal.

Appendix-1

Government of Nepal
National Planning Commission Secretariat (NPCS)
Singhadarbar, Kathmandu, Nepal
Strengthening the Monitoring and Evaluation System in Nepal, Phase II
Evaluation of Essential Drug Procurement and Distribution Program
Under Free Health Service
2069

District (insert)	**VDC of Health Facility** (insert)	**Type of Health Facility?** (circle)	**Location Name** (insert)
		Hospital PHC HP SHP	

1. General Information

1.1. Name of health facility:

1.2. Is health facility designated as birthing centre: Yes ( ) No ( )
1.3. Name of Health Facility In-charge:

1.4. Total number of Beds:

1.5. Sources of Essential Drugs (ED) Supply in the FY 2068/69 (multiple answer)

(Observe the Hastantar Faram, Jinsi Khata number 52, LMIS report and other related report in order to fill in the respective column)

Total ED items received

(1) Logistics Management Division (LMD) ( ) .....
(2) Epidemiology and Diseases Control Division (EDCD) ( ) .....
(3) Regional Health Directorate Office (RHDO) ( ) .....
(3) Regional Medical Store (RMS) ( ) .....
(4) District (Public) Health Office [D(P)HO] ( ) .....
(4) District Development Committee (DDC) ( ) .....
(5) Village Development Committee (VDC) ( ) .....
(6) Locally purchased ( ) .....
(7) INGO/NGO ( ) .....
(7) Other(s) (specify) ....
(8) Don't know ( ) .....

2. Mention the frequency of ED stock in during different trimester of the FY (2068/2069)

(Observe the **Hastantar Faram, Jinsi Khata number 52, LMIS report** and other related report in order to find out the number of ED **stocked in** and fill in the respective column of particular trimester. If any EDs have been found to be **stocked in** each month of each trimester, please add all the number of specified ED with particular doses form and then write in the respective column of particular trimester)

(Mark √ if not received in the particular trimester)

SN	Name of Essential Drugs	Dosage Form	Stock during the beginning of the FY	Shrawan to Aswin		Kartik to Paush		Magh to Chaitra		Chaitra to Ashar	
				Stock in	Not Received	Stock in	Not Received	Stock in	Not Received	Stock in	Not Received
1.	Lignnocaine	Inj 2% (HCL) in Vial									
		Inj 1% (HCL) in Vial									
2	Paracetamol	Tab 500mg									
		Inj 150mg.ml									
		Syrup 125mg/5ml									
3	Chlorpheniramine	Tab 4mg (Maleate)									
4	Pheniramine	Inj. 22.75 mg (maleate)/ml									
5	Albendazole	Chewable Tab 400mg									
6	Metronidazole	Tab 200 mg									
		Tab 400 mg									
		Oral Sus 100mg/5ml (as Benzoate)									
		Oral Sus 200mg/5ml (as Benzoate)									
7	Amoxycilline	Cap 250mg									
		Cap 500mg									

		Dispersible Tab 125mg									
		Dispersible Tab 250mg									
8	Sulfamethoxazole + Trimethoprim (Cotrim)	Tab 100mg +20mg (P)									
		Tab 400mg +80mg (SS)									
		Tab 800mg +160mg (DS)									
		Oral Sus 200mg+40mg/5ml									
9	Ferrous salt + Folic acid	Tab 60mg +250mg									
		Tab 60mg +0.4mg									
10	Calamine lotion	Lotion 1% (30ml bottle)									
		Lotion 1% (540ml bottle)									
11	Gamma benzene hexachloride/Benzyal Benzoate	Cream/lotion 1%									
12	Povidine Iodine	Solution 5% 450 ml									
13	Aluminium hydroxide + Magnesium Trisilicate	Tab 250mg+250mg									
14	Hyoscine butylbromide (Buscopan)	Tab 10mg									
		Tab 20mg									
15	Oral Rehydration Solutions (ORS)	Powder 27.5gm/litre									
16	Ciprofloxacin/Sulfacetamide	Eye & Ear drops 0.3% w/v									

		Eye & Ear drops 10% w/v									
17	Ciprofloxacin	Eye ointment 0.3% w/v									
18	Chloramphenicol	Eye Applicaps 1%									
19	Clove oil										
20	Vitamin B complex										
21	Metoclorpropamide	Inj 5mg/ml in 2ml ampoule									
22	Compound solution of Sodium lactate (Ringers' Lactate)	Compound solution of Inj									
		Sodium lactate (Inj Sol)									
		Sodium lactate compound									
23	Sodium chloride	Inj Sol 0.9% Isotonic (154 mmol/l of Na+ and Cl- each)									
24	Charcoal activated	Powder 10gm in Sachet									
25	Atropine	Inj 1mg (sulphate) of60.5mg in 1ml ampoule									
26	Ciprofloxacine	Tab 250mg									
27	Benzoic acid + Salicylic acid (Whitefield ointment)	Ointment of cream 6%+3%									
28	Atenolol	Tab 50mg									
29	Frusemide	Tab 40mg									
30	Promethazine (Avomine)	Tab 25mg									
31	Dexamethasone	Inj 4mg/1ml ampoule									

32	Salbutamol	Tab 4mg									
33	Oxytocin	Inj 10 IU in 1ml ampoule									
34	Magnesium Sulphate	Inj 1gm/2ml (50% w/v)									
35	Gentamycin	Inj 80mg/2ml vial									
36	Aspirin	Tab 300 mg									
37	Phenobarbitone	Tab 30 mg									
38	Chloramphenicol	Cap 250mg									
		Cap 500mg									
		Anhydrous power for oral sus 125 mg (anhydrous) 5ml									
39	Alprazolam	Tab 0.25mg									
40	Dextrose Solution	Inj 5% Dextrose Solution									

Special instruction:

ED SN 1-22 applicable for Sub-Health Post (SHP)
ED SN 1-22 plus 33-35 applicable for SHP designated as Birthing Centre
ED SN 1-32 applicable for Health Post (HP)
ED SN 1-32 plus 33-35 applicable for HP designated as Birthing Centre
ED SN 1-35 applicable for Primary Health Care Centre (PHCC)
ED SN 1-40 applicable for 25 bedded hospital

3. Which drugs were most frequently out of stock during the year? (observe the Jinsi Khata number 52 and fill in the respective column)

(Observe the **Jinsi Khata number 52** in order to find out the number of ED **stocked out** and fill in the respective column of particular trimester. If any EDs have been found to be **stocked out** each month of each trimester, please add all the number of specified ED with particular doses form and then write in the respective column of particular trimester)

SN	Name of drugs	Dosage Form	Shrawan to Aswin	Kartik to Paush	Magh to Chaitra	Chaitra to Ashar
			Frequency of Stock Out	Frequency of Stock Out	Frequency of Stock Out	Frequency of Stock Out

(Use extra sheet if there are many EDs stocked out)

4. How frequently has the health facility experienced stock outs of the above mentioned ED in the particular quarter where frequency of such ED has been found to be stocked out?
(Mark √ in one of the following options)

In Quarter Shrawan to Aswin

At least monthly ( )
At least weekly ( )
Never ( )
Don't Know ( )

In Quarter Kartik to Paush

At least monthly ( )
At least weekly ( )
Never ( )
Don't Know ( )

In Quarter Magh to Chaitrah

At least monthly	( )
At least weekly	( )
Never	( )
Don't Know	( )

In Quarter Baisakh to Asar

At least monthly	( )
At least weekly	( )
Never	( )
Don't Know	( )

5. Is there community drug scheme for non-free drugs list? (Mark √ in one of the following options)

Yes	( )
No	( )
Don't Know	( )

6. Is there an annual review of the drug supply? (Mark √ in one of the following options)

Yes	( )
No	( )
Don't Know	( )

7. Where are the **most of the EDs** stored? (Observe in the store)

Directly on the floor	( )
On the raised flat form	( )
In a shelf	( )
In a locked cabinet	( )
Other (specify)	

8. Are there **any ED items** placed directly on the floor? (Observe in the store)

Yes	( )
No	( )

If yes, please mention the names of such EDs along with its doses form.

.....
.....
.....

9. What is the storage conditions like for **most of the EDs**? (Observe in the store)

Exposed to direct sunlight	( )
Exposed to damp/water	( )
Stored in cool and dry place	( )
Other (specify)	

10. Are there **any ED items** exposed directly to the sunlight/damp/water? (Observe in the store)

Yes ( )
No ( )

If yes, please mention the names of such EDs along with its doses form.
.....
.....
.....

11. Are **most of the EDs** placed **in order**? (Observe in the store)

Yes ( )
No ( )

12. Are there **any ED items** placed **not in order**? (Observe in the store)

Yes ( )
No ( )

If yes, please mention the names of such EDs along with its doses form.
.....
.....
.....

13. Is there a refrigerator available?

Yes ( )
No ( )

If yes, what is the temperature of the refrigerator? .....

If yes, does the fridge have a guaranteed power supply for 24 hours?

Yes ( )
No ( )

14. Mention the all the dates (manufacturing and expiry) for each category of the respective ED items available in the store and dispensary of the health facility (Observe in the store and dispensary)

SN	Name of Essential Drugs (ED)	Dosage Form	**Availability in Store/ Dispensary**(mark √)		**If yes, i.e. (if available)** (take randomly one of the ED items of the respective category and read its manufacturing and expiry date as well as manufacturing company name, then write it accordingly into the respective column)			**If procured at district Unit price NRs**
			Yes	**No**	**Manufacturing Date (yy/mm/dd)**	**Expiry Date (yy/mm/dd)**	**Names of Manufacturing Company**	
1.	Lignnocaine	Inj 2% (HCL) in Vial						
		Inj 1% (HCL) in Vial						
2	Paracetamol	Tab 500mg						
		Inj 150mg.ml						
		Syrup 125mg/5ml						
3	Chlorpheniramine	Tab 4mg (Maleate)						
4	Pheniramine	Inj. 22.75 mg (maleate)/ml						
5	Albendazole	Chewable Tab 400mg						
6	Metronidazole	Tab 200 mg						
		Tab 400 mg						
		Oral Sus 100mg/5ml (as Benzoate)						
		Oral Sus 200mg/5ml (as Benzoate)						
7	Amoxycilline	Cap 250mg						
		Cap 500mg						
		Dispersible Tab						

		125mg						
		Dispersible Tab 250mg						
8	Sulfamethoxazole + Trimethoprim (Cotrim)	Tab 100mg +20mg (P)						
		Tab 400mg +80mg (SS)						
		Tab 800mg +160mg (DS)						
		Oral Sus 200mg+40mg/5ml						
9	Ferrous salt + Folic acid	Tab 60mg +250mg						
		Tab 60mg +0.4mg						
10	Calamine lotion	Lotion 1% (30ml bottle)						
		Lotion 1% (540ml bottle)						
11	Gamma benzene hexachloride/Benzyal Benzoate	Cream/lotion 1%						
12	Povidine lodine	Solution 5% 450 ml						
13	Aluminium hydroxide + Magnesium Trisilicate	Tab 250mg+250mg						
14	Hyoscine butylbromide (Buscopan)	Tab 10mg						
		Tab 20mg						
15	Oral Rehydration Solutions (ORS)	Powder 27.5gm/litre						
16	Ciprofloxacin/Sulfacetamide	Eye & Ear drops 0.3% w/v						
		Eye & Ear drops 10% w/v						
17	Ciprofloxacin	Eye ointment 0.3% w/v						

18	Chloramphenicol	Eye Applicaps 1%						
19	Clove oil							
20	Vitamin B complex							
21	Metoclorpropamide	Inj 5mg/ml in 2ml ampoule						
22	Compound solution of Sodium lactate (Ringers' Lactate)	Compound solution of Inj						
		Sodium lactate (Inj Sol)						
		Sodium lactate compound						
23	Sodium chloride	Inj Sol 0.9% Isotonic (154 mmol/l of Na+ and Cl- each)						
24	Charcoal activated	Powder 10gm in Sachet						
25	Atropine	Inj 1mg (sulphate) of60.5mg in 1ml ampoule						
26	Ciprofloxacine	Tab 250mg						
27	Benzoic acid + Salicylic acid (Whitefield ointment)	Ointment of cream 6%+3%						
28	Atenolol	Tab 50mg						
29	Frusemide	Tab 40mg						
30	Promethazine (Avomine)	Tab 25mg						
31	Dexamethasone	Inj 4mg/1ml ampoule						
32	Salbutamol	Tab 4mg						
33	Oxytocin	Inj 10 IU in 1ml ampoule						
34	Magnesium Sulphate	Inj 1gm/2ml (50% w/v)						
35	Gentamycin	Inj 80mg/2ml vial						
36	Aspirin	Tab 300 mg						

37	Phenobarbitone	Tab 30 mg						
38	Chloramphenicol	Cap 250mg						
		Cap 500mg						
		Anhydrous power for oral sus 125 mg (anhydrous) 5ml						
39	Alprazolam	Tab 0.25mg						
40	Dextrose Solution	Inj 5% Dextrose Solution						

Other issues

1. Minimum stock level for different drugs?(range) …….
2. Monitoring committee is formulated or not(verify by asking):
   Formulated and very active [ ]
   Formulated and active [ ]
   Formulated but not active [ ]
   Not formulated [ ]
3. Number of monitoring committees meetings in the last 3 months (verify by minute register if possible): [ ] Total no. of meetings
   Highly frequently [ ]
   Frequently [ ]
   Less frequently [ ]
   Not at all [ ]
4. Have free health service been mentioned in the citizen charted board(observation): **Yes/No**
5. Has the focal person for free health care been assigned(verify by asking): **Yes/No**
6. Is free drug scheme advertised in FM radio (asking with staffs and users) ?: **Yes/No**

FGD Guideline for service receiver/beneficiary

Namaste, my name is ……..and my friend's name is..... . We are here on behalf of national planning commission to collect information on **Essential Drug Procurement and Distribution Program Under Free Health Service** in your area. The information provided by you will be used to evaluate the free drug program only. The discussion will take approximately 1.5 hrs. With the group kind consent, we would like to ask you some questions to start the group discussion. Name of all will remain confidential with us. Please feel free to express your feelings openly, and ask us if you have any quarries.

Note: discuss in groups of men and women with different ethnicity, caste and marginalized groups in the communities. If possible include participants from different target group of the free drug program.

1. District:
2. VDC/Municipality
3. Ward
4. Number of participants (8-12)

Participant characteristics:

SN	Name	Gender	Age	Caste/ethnicity	Occupation	Literacy level
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

1. Awareness and attitude of communities/service receivers towards free essential health care services

1.1 Where do most people go for health care services when people are sick or ill in your community?

1.2 What kinds of health services are available in the local health facilities?

1.3 Do you have to pay for the health care services in the health facilities? (Hospital/PHC/HP/SHP) ? If yes, in which items you have or need to pay?

1.4 Have you ever heard of free drug support from health institution of the government?

1.5 Have you ever utilized free drug services in the health facilities? What are your experiences before and after the free drug support program? Any differences?

(Please, try to have one or two cases in each FGDs)

1.6 In your opinions, who (category of populations) are most benefited with the free health services and why?

1.7 Has the free drugs policies helped improve access to health care of those who are poor, socially disadvantaged and marginalized in the communities?

2. Community perceptions on implementation of free drug support program at the local health facilities?

2.1 Have you ever felt any differences in the attitudes of health care workers while providing the health services before and after the free drug support program? (Probe more on the implementation of the policy and the motivation of health care workers to provide the services)

2.2 In your opinions, are you happy with the ways the health care facilities are providing free drug support for needy people? Why?

2.3 What are the key problems and challenges of free health care services to implement more effectively and efficiently ?

2.4 Do you have any suggestions or comments on the implementation of free health services ? How can these services be improved ?

Wrap up: Thank the participants and provide refreshments.

Government of Nepal

National Planning Commission Secretariat (NPCS)

Singhadarbar, Kathmandu, Nepal

Strengthening the Monitoring and Evaluation System in Nepal

Phase II

Evaluation of Essential Drug Procurement and Distribution Program

Under Free Health Service

2069

Interview Questionnaire with the beneficiary

Namaste, my name is …….. . I am here on behalf national planning commission to collect information on **Evaluation of Essential Drug Procurement and Distribution Program Under Free Health Service** in your area. The information provided by you will be used to evaluate the free drug program only. The interview will take 20-30 minutes. It is important that your answers are honest and clear so that they may be used better to serve the community needs. With your kind consent, I would like to ask you some questions. Your name will remain confidential with me. Please feel free to express your feelings openly, and ask me if you have any questions.

Date.....

Interview Time: From…….to……..

District (circle)	**Types Health Facility** (Circle)	**Location of health facility** (insert)
Shankhawasava, Mahotari, Mustang, Dailekh, Kanchanpur	Hospital PHC HP SHP	

Background of respondent:

Caste / Ethnicity (Circle)	**Age** Yrs.	**Gender** (Circle)	**Residence VDC/Mun.** (insert)	**Road access to health facility?** (Circle)	**types of beneficiary** (Circle)
B/C JJ MDH Dalit MUS Others...		M F		Y N	Children under 14 yrs, people with disable, senior citizen, FCHV

1. When did you visit health facility last time?

2. What was reason/health problem to visit health facility?

2. 1. Illness

2. 2. Injury

2. 3. Others(specify)…..

3. Ask for the prescription and drugs dispensed and fill in the following table:

1	Items of drugs prescribed	

2	Items of drugs prescribed from EDL	
3	Items of drug dispensed	Full/ Partial/None

4. Did you pay any amount of money for care or services and for purchasing drug?
   1. Yes 2. No(**Go to - 7**)
5. If Yes, how much:……..(in rupees)
   For what ?.....

6. Did you get any drug at free of cost?

7. Could you please tell me the services the government health facilities provide free of cost?
   - Registration fee…….. 01
   - Check up…….. 02
   - Immunization…….. 03
   - De-worming tablets…….. 04
   - Vitamin capsule…….. 05
   - Other medicines…….. 06
   - Delivery/maternity transportation cost ……..... 07
   - Post-natal checks…….. 08
   - Others (specify)…….. 09
   - Do not know/can not say…….. 99

8. **From what source did you know about the free health services?**
   - FCHV…… 01
   - Wife/husband……..02
   - Friends/relatives……03
   - Radio…….. 04
   - TV…… 05
   - Newspaper…….. 06
   - Brochures/posters…… 07
   - Health workers…….. 08
   - Teachers…….. 09
   - Mothers group…… 10
   - Others (specify)…….. 99

9. How are you paying for medicine?
   - Self ……..…. 01
   - Loan……..…….. 02
   - Emergency Fund……..…….... 03
   - Exemption on……... 04
   - Poor Fund……..…….. 05
   - Others (specify) ……..……... 99

10. Would you recommend your family members, relatives and friends to visit this health institution in future?
    - Yes……..……01
    - No……...02

11. What did you like/dislike most about the services here and why?

SN	Components	Reasons for liking	Reasons for disliking
1	Health worker's behaviour		
2	Drug availability		
3	Privacy of services		
4	Facilities available in health facility		
5	Others (specify)……..		

12. Please give your suggestions as to how we may improve services?

1.
2.
3.
4.
5.

Name of the interviewer:
Date:

Note: At the end of the interview please administer the following perception checklist of the respondent compulsory

Sr.	Perception areas	Five scale rating				
		Strongly agreed	Agreed	**Undecided**	**Disagree**	**Strongly disagreed**
1.	All the drugs provided by the GoN is available at the health facility round the year					
2.	Drugs freely provided by the government have helped poor and marginalized people					
3.	There is no misuse of drugs provided by the GoN freely					
4.	Drug provided free by the government are good standard					
5.	Drug provided free of cost at present should be continue					
6.	We receive free drugs prescribed from the health facility					
7.	I could recommend my family members, relatives and friends to visit health facility in future					

8.	There has been increase in the number of patient after provision of free drug in the health facility					
9.	Free drugs provided by the health facility is appropriate to the health problem of the people					
10.	There is enough drugs in the health facility to provide free of cost to the patient					
11.	The free drugs have helped improve access of poor, socialy disadvantaged and marginalized communities					
12.	Free drugs have contributed to decrease mortality and morbidity rate					
13.	Free drugs are procured					
14.	I am satisfied with the free health care service					

Thank the participant

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Strengthening the Monitoring and Evaluation System in Nepal
Phase II

Evaluation of Essential Drug Procurement and Distribution Program Under Free Health Service
2069

Interview Guideline for LMD/ DDA/PHCRVP/Regional Medical Stores/District Health Office/District Hospital

Namaste, my name is …….. . I am here on behalf national planning commission to collect information on **Evaluation of Essential Drug Procurement and Distribution Program Under Free Health Service** in your area. The information provided by you will be used to evaluate the free drug program only. The interview will take 20-30 minutes. It is important that your answers are honest and clear so that they may be used better to serve the community needs. With your kind consent, I would like to ask you some questions. Your name will remain confidential with me. Please feel free to express your feelings openly, and ask me if you have any questions.

Date.....

Interview Time: From…….to……..

Name of the health institution:
Address:
Name of respondent:

Relevance

1. Could you please highlight on the free health service of the GoN?
2. Consistency of the FHS with government policies?
3. Significance of the FHS with respect to specific needs and rights of the disadvantaged, people with disability, children under 14 years, pregnant women, senior citizens and FCHVs?
4. What is the policy of the GoN for Procurement and distribution of Essential Drugs under Free Health Service?
5. What were drug procurement procedure before and after the free drug support program ?
6. How do you assess needs /demands for procurement of drugs?
7. How is the drugs for FHSs stored ?
8. What are the procedures for supply of drugs under FHSs?

Efficiency:

9. How far budgetary, personnel, regulatory, administrative, time, other resources and procedures contributed to or hindered the procurement and supply of drugs under FHSs?
10. Have the programme inputs (human, technical and financial) been used efficiently? Was the financing arrangement supportive for the efficient implementation?
11. How well did the financial systems work?
12. Have there been any other ways of designing the programme in a more cost effective manner without diminishing the quality of outputs?

13. How well did the coordination and management arrangements work and how did they develop over time?
14. How were the DHO/PHO, hospitals etc were involved, how effective was this and what have been the benefits of or difficulties with this involvement?
15. Were the risks properly identified and well managed?
16. How do you ensure quality of the drugs during procurement, storage and supply ? How do you monitor and report?
17. Are there any drugs run out of stock? How many drugs and what is the reason?

Effectiveness:

18. How effective and appropriate was the FHSs to increase access and utilization of EHSs ?
19. What were the facilitating and constraining factors, which created supportive environments or hampered the program? What were the effects of these factors on program effectiveness and efficiency?
20. To what extent you have documented good practices, success stories, and knowledge gained from the FHSs?

Impact:

21. Could you please highlight, if any, broader economic, social, and political consequences of the FHSs and how it contributed to address the rights of the people to health services overall?.
22. What was the overall impact of the FHSs and how did this compare with what was expected?
23. Which of the Millennium Development Goals did the project contribute to?
24. Did the FHSs address the intended target group and what was the actual coverage?
25. Who were the direct and indirect/wider beneficiaries?
26. What difference has been made to the lives of the target groups?

Sustainability:

27. Potential for the continuation of the impact achieved and of the delivery mechanisms, following the withdrawal of external support
28. What are the prospects for the benefits of the project being sustained after the external funding stops?
29. Were the roles of key stakeholders, including the beneficiaries and the government well defined?
30. Was the communication, visibility and information activities done adequately?

Lessons learned on FHSs

31. Were there any significant changes in the program design ? What were the reasons for these and can any useful lessons can be learned?
32. How did the project engage with poor and marginalised groups and support their empowerment most effectively?
33. How has the design of the program been amended because of lessons learned during implementation?

Thanks to the respondent and end the interview

Appendix-2

Details of key informant interview participants

Central/District	Name	Position	Contact no.
LMD	Dr. Naresh Pratap KC	Chief	
PHCRD	Mr. Madan Shrestha	Chief	
Eastern Region	Mr. Bharat Shah,	Acting Chief (Pharmacist), Regional Medical Store	
	Mr. Puskar Nath Dhakal,	Store Incharge	
Central region	Mr. Mohan Mahato (Shah)	Store In-charge, Central Medical Store, Pathlaiya	
	Mr. Raman Shah	Chief, Regional Medical Store, Hetauda	
Western Region	Mr. Saroj Kumar Jha	Store Keeper-Regional directorate Pokhara	98461 40324
	Mr. Namonarayan Belbase	Store Keeper- Regional drug Store- Butwal	98470 47648
	Mr. Buddhi Raj Kafle	Pharmacologist- Regional drug Store- Butwal	98570 20805
Sankhuwasabha	Dr. Bishnu B. Basnet	DHO	029 560187
	Mr. Yadav Rijal	Business person, Chainapur	029 560187
	Mr. Dambar Bikram Pradhan	2nd class non graduated officer, DHO	029 560187
	Mr. Pranaya Kumar Upadaya	DPHO	029 560189
	Ms. Narayani Khanal	ANM, Barabise, SHP	
	Mr. Tirtharaj Bhattarai	Chair, Dhupu HP Mgmt. committee	
Dailekh	Dr. Khagendra Jung Shah	DHO	089 420 127
	Mr. Pratiman Sharma	Members of Tribeni HP mgmt. committee	
	Mr. Karunakhar Khatri	In charge- Badalamji SHP	
Mustang	Mr. Harihar Prasad Sharma	Sr. PHO 9841266321	
	Dr. Achut bhakta Aacharcya	DHO	98560 34678
	Dr. Madan Khadaka	PHCC, Lete	98460 44743
	Mr. Yadav Paudel	Non gazatted first class officer	9756700106
	Mr. chandra Bahadur Sherhan	Chair, PHC mgmt. committee	
Mahottari	Mr. Vijaya Kumar Jha	Sr. PHO	98540 30161
	Dr. Dwarika Prasad Shah	DHO	044 520170
	Mr. Binaya Kumar Karna	Store Keeper	9844029761
	Mr. Dharmendra Kumar Ray	Chair, DH Mgmt. committee	
	Mr. Hari Mandal	Journalist, NTV	
	Mr. Kanlesh Mandal	Journalist, Rajdhani daily	
Kanchanpur	Dr. Shiva Datta Bhatta	DHO	

Appendix-3

Table: T-test between costs of EDs at central vs local/district purchase

Name of EDs	Central	District
Ciprofloxacine Tab 250mg	1.18	4.47
Amoxycilline Cap 500mg	2.24	4.7
Ciprofloxacin/Sulfacetamide Eye & Ear drops 0.3% w/v	7.44	14.57
Gamma benzene hexachloride/Benzyal Benzoate Cream/lotion 1%	15.91	22.5
Povidinelodine Solution 5% 450 ml	72.16	137.5
Sulfamethoxazole + Trimethoprim (Cotrim) Tab 100mg +20mg (P)	0.28	0.15
Chlorpheniramine Tab 4mg (Maleate)	0.13	0.2
Chloramphenicol Eye Applicaps 1%	0.88	1
Amoxycilline Cap 250mg	1.23	0.55
Oral Rehydration Solutions (ORS) Powder 27.5gm/litre	5.21	2.75
Ciprofloxacin Eye ointment 0.3% w/v	19.22	4.5
Oxytocin Inj 10 IU in 1ml ampoule	5.1	5
Compound solution of Sodium lactate (Ringers' Lactate) Compound solution of Inj	42.9	12.5
Compound solution of Sodium lactate (Ringers' Lactate) Sodium lactate (Inj Sol)	42.9	12.5
Compound solution of Sodium lactate (Ringers' Lactate) Sodium lactate compound	42.9	12.5
Aluminium hydroxide + Magnesium Trisilicate Tab 250mg+250mg	0.42	52
Salbutamol Tab 4mg	0.15	0.24
Metronidazole Tab 200 mg	0.37	0.28
Metronidazole Oral Sus 200mg/5ml (as Benzoate)7.42	1.91	0.28
Paracetamol Tab 500mg	0.38	0.3
Vitamin B complex	49	0.35
Sulfamethoxazole + Trimethoprim (Cotrim) Tab 400mg +80mg (P)	0.85	0.7
Hyoscinebutylbromide(Buscopan) Tab 10mg	2.02	1.85
Metronidazole Oral Sus 100mg/5ml (as Benzoate)	15.33	12.49
Average (Mean)	27.02	11.09

Appendix: 4

Table: Name of expired drugs by No. Of HFs

Name of expired drugs	**No. of HFs(N=52)**
Pheneramine	3
Amox cap 500	6
Dispersible tab 150	2
Dispersible tab 250	4
Sulphamethoxazole+ Trimethoprim/cotrim	
Tab 100 mg+20 mg	2
Oral sus 200mg+250mg	1
Calamine lotion 1% 30 ml	6
Lotion 1% 540 b0ttle	4
Povidine Iodine	3
ORS powder 27.5 gm/ltr	1
Eye & ear drops 0.3%w/v	3
Ciprofloxacin eye ont 0.3% w/v	15
Choleramphenical eye app 1%	5
Clove oil	3
sodium chloride inj sol 0.9%	2
Charcoal activated powder 10 gm	1
Atropine inj 1 mg	1
Ciprofloxacine tab 250 mg	2
Frusemide Tab 40mg	3
Dexamethasone inj 4mg	2
Salbutamol tab 4mg	3
Magnesium sulphate inj 1 gm	1
Gentamycin inj 80mg/2 ml	1
Dextrose solution inj 5%	1

Appendix: 5

Table: Stock out of Essential Drugs by Items

ED	Category	% Stock out
Lignnocaine	Inj 2% (HCL) in Vial	5.2
	Inj 1% (HCL) in Vial	0.96
Paracetamol	Tab 500mg	2.8
	Inj 150mg.ml	0.09
	Syrup 125mg/5ml	3.3
Chlorpheniramine	Tab 4mg (Maleate)	5.2
Pheniramine	Inj. 22.75 mg (maleate)/ml	2.8
Albendazole	Chewable Tab 400mg	0.09
Metronidazole	Tab 200 mg	3.3
	Tab 400 mg	5.7
	Oral Sus 100mg/5ml (as Benzoate)	3.8
	Oral Sus 200mg/5ml (as Benzoate)	2.4
Amoxycilline	Cap 250mg	5.7
	Cap 500mg	6.2
	Dispersible Tab 125mg	1.9
	Dispersible Tab 250mg	6.2
Sulfamethoxazole + Trimethoprim (Cotrim)	Tab 100mg +20mg (P)	5.2
	Tab 400mg +80mg (SS)	3.8
	Tab 800mg +160mg (DS)	5.2
	Oral Sus 200mg+40mg/5ml	6.2
Ferrous salt + Folic acid	Tab 60mg +250mg	1.4
	Tab 60mg +0.4mg	3.8
Calamine lotion	Lotion 1% (30ml bottle)	4.3
	Lotion 1% (540ml bottle)	4.3
Gamma benzene hexachloride/Benzyal Benzoate	Cream/lotion 1%	5.2
Povidine lodine	Solution 5% 450 ml	5
Aluminium hydroxide + Magnesium Trisilicate	Tab 250mg+250mg	4.3
Hyoscine butylbromide (Buscopan)	Tab 10mg	3.8
	Tab 20mg	0.96
Oral Rehydration Solutions	Powder 27.5gm/litre	1.4
Ciprofloxacin/Sulfacetamide	Eye & Ear drops 0.3% w/v	5.7
	Eye & Ear drops 10% w/v	1.4
Ciprofloxacin	Eye ointment 0.3% w/v	4.3
Chloramphenicol	Eye Applica. 1%	3.8
Clove oil	Clove oil	1.9
Vitamin B complex	Vit B complex	5.2
Metoclorpropamide	Inj 5mg/ml in 2ml ampoule	3.8
Compound solution of Sodium lactate (Ringers' Lactate)	Compound solution of Inj	1.9
	Sodium lactate (Inj Sol)	1.9
	Sodium lactate compound	0.96
Sodium chloride	Inj Sol 0.9% Isotonic (154 mmol/l of Na+ and Cl- each)	2.4
Charcoal activated	Powder 10gm in Sachet	2.4
Atropine	Inj 1mg (sulphate) of60.5mg in 1ml ampoule	1.4
Ciprofloxacine	Tab 250mg	1.9
Benzoic acid + Salicylic acid (Whitefield ointment)	Ointment of cream 6%+3%	2.4
Atenolol	Tab 50mg	3.8
Frusemide	Tab 40mg	1.9

Promethazine (Avomine)	Tab 25mg	4.3
Dexamethasone	Inj 4mg/1ml ampoule	2.4
Salbutamol	Tab 4mg	2.4
Oxytocin	Inj 10 IU in 1ml ampoule	3.7
Magnesium Sulphate	Inj 1gm/2ml (50% w/v)	5.2
Gentamycin	Inj 80mg/2ml vial	15
Aspirin	Tab 300 mg	15
Phenobarbitone	Tab 30 mg	45
Chloramphenicol	Cap 250mg	10
	Cap 500mg	5
	Anhydrous power for oral sus 125 mg (anhydrous) 5ml	5
Alprazolam	Tab 0.25mg	25
Dextrose Solution	Inj 5% Dextrose Solution	0