CHAPTER III

PROPOSAL

Community Drug Program (CDP): A Strategy for Increasing Health Post Utilization through the User Fee and Mobilization of Health Post Management Committees in Rural Nepal

3.1 Introduction

The proposed Community Drug Program (CDP) is a cost sharing community drug scheme for essential drugs through the active participation of the community. This program aims at the reactivation and improvement of rural health system in a sustainable manner through strengthening the community health system management capacity. The proposed program will be implemented in three rural health posts of Myagdi district for the study purpose.

The principle and concept of this proposed community drug program is based on public private- mix model -of health care financing. The program aims to implement user fee for the drugs dispensed from the health facility in order to generate additional resources for the continues supply of essential drugs through the active participation of health post management committees. The strategy for implementation of the proposes community drug program will be described as follows.

i) Health post committees will be formed in each health posts and trained on management of proposed community drug program.

ii) Health post staffs will be trained prior to the implementation of the program.

iii) A program protocol will be prepared with participation of health post committees, health facility in-charges and District level CDP team.

iv) Program protocol, standard drug treatment schedule and essential drug list will be provided to each health facility.

v) Regular supervision, monitoring and review meeting will be organized from district health office in order to facilitate the committees and health staffs.

The outline of the proposed community drug program will be as follows.

i) On the onset of the program, A total of 500 US$ will be provided by West Myagdi community Health and Development program to each health posts for the purchase of additional drugs which are not supplied by the Ministry of Health or not enough for the treatment of illnesses. The required quantity of drugs will be estimated on the basis of catchment population and morbidity patterns.

ii) The health post management committee will make the decision and arrange for setting the charges for these drugs. For the simplicity in administration and collection of fees, a multi-band fee mechanism will be used. All the essential drugs will be put in three categories, and the health committee will decide the fee for each category. The category of drugs will be as follow.

Group I: analgesics, antipyretics, antihelmenthics, iron/folic acid, oral re-hydration solution, eye/ear drops and dressings. These are the most commonly used drugs and will be placed in the lowest fee level.

Group II: Oral antibiotics, including tablets, syrups and capsules. These are most expensive drugs and will be placed in the modest fee level.

Group III: Intravenous fluids, and injections. These are expensive as well as require precautions for using and will be placed in the highest fee level.

This multi-band system of user fee mechanism for drugs will reduce administrative complexity and also promote rational use of drugs from both prescriber and patients (Fryatt et. al., 1996). For the purpose of collecting fee, set charges for each group will be put in OM ticket and health worker will make a tick on the fee group. This provision will avoid the calculation of drug prices, which is not only time consuming but also not possible in most of the rural health posts where beans are responsible for dispensing the drugs.

iii) The money collected from the user fees will be deposited in the nearby bank by opening an account in the name of community drug fund. The community will retain the total ownership of the funds raised through user fee collection. On behalf of the community, the health post management committee will manage this fund. When the drugs stock gets low, the health post management committee through a decision and with the recommendation of health facility In-Charge, will draw money from the drug fund and purchase drugs from the wholesaler at the district headquarters or any convenient places.

iv) The proposed user charges will be levied only for drugs used for any general out patients drugs dispensed for priority programs such as Acute Respiratory Infections. Diarrhoea Disease control, Tuberculosis and leprosy control, Malaria control and Maternal and child health program will be free of g to all patients.

3.2 Rationale of the study

Government of Nepal has made considerable efforts for providing basic health services to entirely, large rural based population. As a result of this, plans have made to establish health posts and sub health posts in each village development committees in order to provide basic curative, preventive, and promotive health services to the population. So far, there are 611 health posts and 3199 sub health posts in operation through out the country (MOH, 1997) to addressing the increasing health care demand of the population. Moreover, there has been no evaluation conducted on how far these public health facilities have been achieving their objectives. Effectiveness of public health posts both in terms of cost and utilization is yet to be evaluated.

Provision and delivery of equitable and accessible basic health services to entire population has remained a top priority of Nepal's health policy (MOH, 1997,1991). In response to this, the Ministry of Health adopted the primary health care approach for providing essential clinical services through Basic Health Care Package (BHCP) to all population. Nepal's BHCP is the part of PHC approach and supports four basic PHC principles (MOH, 1997).

a) Universal accessibility to available resources and services in order to provide adequate coverage of the most essential health needs of the rural population.
b) Community participation and self-reliance.
c) Intersectional collaboration and collective action for health development.
d) Use of appropriate technology and financing mechanisms by which health need of the population can be met.

Government of Nepal has been experiencing financial problems due to expansion of primary health care network through out the country and as a result, appropriate alternatives to public financing of health services have been in top priority. The second long-term health policy of Nepal (1997-2017) has emphasized on public private mix model of health care financing for meeting the financial requirement of these rural public health posts. In this regard, study on community Financing mechanisms like community drug program will be proved valuable.

There are ample studies conducted on community financing mechanisms and community involvement in many developing countries including Nepal. Different types of community financing mechanisms have been in operation in some parts of Nepal. These are mostly initiated and implemented by donor agencies or Non Governmental Organizations (NGOs) and role of community people in such drug schemes are found to be limited only on papers (Sepheri and pettigrew, 1996). The proposed community drug program has aimed to involve community leaders in every stage' of the program.

Much has been said about the involvement of community people in primary health care management and considered as a powerful means for mobilizing local resources. But planner and implementer of health sector hardly show their commitment for involving local people in their health care management. In this regard, training/workshops and study tours for local leaders will be necessary to increase their managerial capacity.

Planning and estaldishing of health care facilities alone does not necessarily bring improvement in health of the population. Health care system must be able to address the health needs of the population in a changing environment for which information and knowledge is required. Therefore, training and evaluations are essential not only for planning new activities but equally or more important for the improvement of ongoing health programs and activities. Evaluation studies provide basis for improvement of program design, management and implementation and make health programs more relevant to its population.

The proposed intervention study deals with design, planning, implementation and evaluation of community drug program for the continues supply of essential drugs at public health facilities in rural Nepal. The approach of the proposed intervention program will be participatory which ensures active involvement of community leaders and stakeholders in every stage of the program. The study program has aimed to enable community leaders for taking their role and responsibility through appropriate training and supervisory activity. At this stage, the proposed activity will be seen more

appropriate and relevant for strengthening primary health care activities in rural Nepal. The study, proposed here not only evaluates the performance of health post management committee but also helps to identify appropriate health care financing mechanism for the sustainable supply of essential drugs required for health posts, by which health care needs of rural Nepalese can be met. The proposed study will help to understand patterns of health service utilization, including drug supply and this will help planners and policy makers to identify those who may be at disadvantaged or in greatest health needs.

The proposed study will be important for several reasons. Firstly, there are very few published studies, which have focused on health care utilization in rural Nepal. Obtaining results regarding the patterns of utilization will provide the information needed in reallocating resources more effectively. Secondly, utilization model, formulated in developed countries may not be applicable to the Nepalese context because of the socio-economic, cultural and geographical differences, for example, a number of predictors of health service utilization such as drug supply, complex geographical structures may be more important in Nepal. Thirdly, baseline data on rural Nepalese health status and utilization is not presently available. Finally, results will be expected to generate information on health service utilization, which will provide a foundation for formulating further research questions about activities and factors, which may contribute to better utilization of health services in rural Nepal.

3.2.1 Rationale of user fees for supplying drugs

Rapid expansion of primary health care networks in all village development committees of Nepal has resulted in an increased financial burden to health sector and most of these public primary health posts have been facing the problem of drug shortages. This acute shortage of essential drugs in public health posts has hindered full utilization of basic health services, by the rural population. Although government has increased the budget for drugs and supplies, the problem of drug inadequacy is still persisted mainly due to devaluation of Nepali Rupee and establishment of 3199 sub health posts. In real term these health posts have been receiving less drugs than before.

In such situation government alone can not meet the health requirements of the entire population and the concept of community drug program evolved. The proposed community drug program is a cost sharing drug scheme where be- user of health services will be charged for drugs in order to generate revenue for re-supplying the drugs. Such user fees are direct financing methods, which provide additional resources for health. User fees for drugs as proposed in this study, require payment at the time of health care are received. User fees have many attractions, such as, simplicity in administration and regulation and can demonstrate effectiveness in a short period of time (Lewis, 1993). Therefore, user fees are better alternatives to government that want to susidize care but unable to afford free health services for everybody.

3.3 Statement of problem

Assured supply of essential drugs has always remained a problem of rural health posts in Nepal, which has hindered utilization of basic health services. Many studies have shown that, the drugs supplied from the government meet the requirement of a health post for 3-5 months per year only (MOH, 1997; BNMT, 1995). The short supply of drug situation has manifested several problems, the major ones being as follows (Holloway and Gautam, 1997).

I) Full course of drugs is not dispensed

As long as there is stock, drugs are distributed free to the patients. The quantity of drugs dispensed, however, is often not enough as needed, but in small quantity to meet the demand of many patients.

II) Prescription for local purchase

If the drugs are not in stock, prescription slips are given for the patients to buy drugs from the local market. This is a common practice prevalent in most health posts in Nepal. This practice on the one hand has resulted in the decline of people's faith in health facilities, and on other hand; the user is compelled to pay high price for drugs from the local market. Moreover, patients of several health posts of remote areas do not have access to drug pharmacy.

III) Irrational prescribing practices.

Due to shortage of drugs, health workers do not follow standard drug treatment schedule. Thus the prescribing habit is often affected by the availability of drugs in the health facility.

IV) Irregular patient load

Few months, with the availability of drugs, the patient load is high in most of the rural health posts, but once the drug supply run out, the daily patient attendance decreases, thereby reducing the utilization of other preventive and promotive health services.

Table 3.1 Trends in patients' attendance in a rural health post in Nepal for Curative and preventive services in 1997

Months / Services	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
No .of OPD visits	675	1205	1058	339
BCG Immunization	33	37	29	13
DPT 3immunization	32	35	49	13
Polio 3 immunization	32	35	49	13
Measles immunization	24	30	30	16
Depo provera users	43	40	26	15

Source: Takum health post report, 1997.

From the above data it indicates patient attendance when drugs were available. The effect of drug shortage can be observed on utilization of both curative and preventive services (Takum health post record showed that there were two lots of drug supply in January and in May during 1997). During September to January there was no drugs in the health post and patient attendance dropped sharply in comparison to previous months. This problem of drug shortage has caused high drug and service cost to the rural population. The cost is also associated with other indirect costs such as travel and time costs for buying medicines from the market.

Nepal does not have enough of the right drugs in the right places to meet the health needs of its population. A WHO report estimated that some two billion people, clearly half of the world's population have no access to even essential drugs (WHO, 1988a). Government of Nepal already spending significant amount of its budget for primary health care (70 % of total health budget is allocated to PHC activities. MOH, 1997), but the budget for essential clinical services is always less than the preventive care. The Ministry of Health has reported that the ratio of budget allocated for preventive and curative services at primary level in 1994/95 was 1:3, whereas burden of communicable diseases is estimated very high in Nepal in comparison to other South Asian countries

A study conducted in Nepal during 1996 estimated that about 7.68 million Disability Adjusted Life Years (DALYs) have been lost (MOH 1997). For the purpose of this study, diseases were classified in to three categories.

Group I: Pre transitional disorders such as infectious diseases, including maternal and peri-natal disorders and nutritional deficiencies

Group II: Non communicable disorders.

Group III: Injuries and accidents.

Table 3.2 DALYs lost per 1000 population in Nepal with reference to India and China.

Disease Group	Nepal	China	India
Group I	239	45	175
Group II	80	103	138
Group III	30	30	31
Total	349	178	344

Source: Ministry of Health, Second long term health policy of Nepal, 1997

The study has estimated that the Group I disorders are responsible for more than two thirds of the disease burden (68 %), Group II disorders contributed 23 % and Group II disorders contributed the 9 % of disease burden. The present estimates of DALYs lost for Nepal indicated that its current burden of diseases is quite high especially for pre-transition disorders.

Morbidity reports of Nepal also indicate the burden of disease due to ore transition disorders is high. An analysis of 1996 morbidity reports showed that the top ten leading causes of morbidity and mortality are communicable diseases and can be treated with provision of essential drugs at health post level (DoHS, 1996).

Table 3.3 Ten leading diseases in Nepal as reported by the public health facilities as percentage of total visits

S. NO.	Diseases	Percentages
1	Skin infections	20.0
2	Worm infestation	11. 5
3	Diarrhoea	9.3
4	Upper respiratory tract infections	7.0
5	Dysentery	5.5
6	Gastritis	5.0
7	Headache	4.8
8	Fever unspecified	4.0
9	Cough and chest pain	3.8
10	Otitis media	3.5
11	Others	25.6

Source: DoHS Annual Reports, 1995/96

Table 3. 3 indicates high prevalence of communicable diseases in Nepal and management of these health problems require drugs available in public health Facilities in adequate quantity.

3.4 Description of study area

The proposed study includes intervention and control groups. There will be three randomly selected health posts in each group. The intervention and control groups will be in Myagdi district. A total of six health posts will be selected from three

ecological regions of Myagdi district. Two health posts having similar utilization rates from each region will be chosen and these health posts will be assigned randomly into control and intervention groups. There will be one health post from each region in both control and intervention group.

3.4.1. Myagdi district (study area)

A. Geography and location

Myagdi District is one of the districts of Dhaulagiri Zone and situated in the Western Development Region of Nepal. There are 40 villages development committees in Myagdi District.The entire district is divided into three ecological zones which are west, central and north. The western and northern parts are more remote and difficult to reach.

B. Population

The estimated population of Myagdi District is 112,094. The population of under one year, under five year and 15-44 years are estimated 3512, 16229, and 20343 respectively (DOHS, 1996/97).

C. Infrastructures

There is no all weather road connecting to Myagdi District. The nearest all weather road is in 3 hours distance from district head quarter. Transportation within the district is only on foot and many villages are very difficult to reach during monsoon due to rivers and landslides.

D. Economy

Although, main occupation of Myagdi people is agriculture and livestock, people have some business opportunity due to the town is the main tourist route to Dhorpatan mountain and Dhorpatan hunting reserve. The land available for agriculture is less fertile and most of areas are suitable for only one crop within 12 months due to high altitude.

E. Health services

There are 9 health posts, 29 sub health posts, one Ayurbedic health post, and one district hospital in Myagdi District. District Hospital is situated in district headquarters and out of reach for most of the villages of western and northern parts. Village people are heavily relying on this health posts and sub health posts for basic health call. The average utilization rate for curative services is estimated at 0.25 per population per year in Myagdi District. (DOHS, 1996/97).

Table 3. 4 Health facilities in Myagdi District

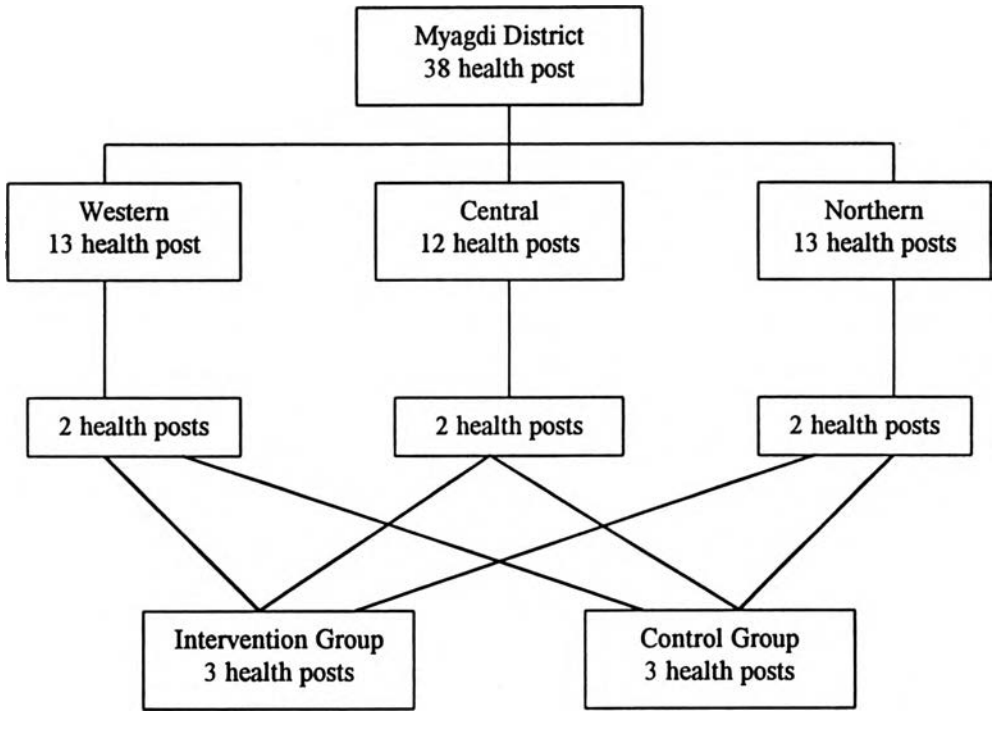
Region / Health Facilities	Western	Central	Northern
1. District Hospital		1	
2. Health posts	3	3	3
3. Sub Health Posts	10	9	10

source: DoHS, 1995/96

3.5 Methodology

The research method proposed for this study is that of an experiment since approach produces the strongest cause and effect relationship. The experiment will test the effects on a policy introduction of user fees and drug supply on health facility utilization by i) the overall population; and H different economic groups within the study population. The design of the proposed study will be as follow.

Figure 3. 1 Random assignment of study areas into intervention and control groups



3.5.1 Study Design

The design of the proposed study is that of a pre-test}", post-test control group. The study will use three intervention health post areas (where fee/drug supply policy will be introduced) and three control health post areas (where the fees/drug supply policy will not be introduced) for a total of six study health post areas located in

Myagdi District, with similar socio-economic and geographical characteristics. The first measurement of the health post attendance among the population will be collected by a baseline household survey in both intervention and control areas, in August 1998. The introduction of user fees/ drug supply policy will begin in September 1998 at three health posts. The second round of the measurement of attendance will be recorded in July 1999 by another household survey; in the six study health post areas. Regular monitoring and supervision will be carried out and observation will be made at the time of surveys and during supervisory visits. Health post drug stocks will be checked to ensure the quality component of the study. Health facility staff will be interviewed in order to find out any unusual events such as epidemics, change of health staff and major holidays etc. Which can affect people's decision to seek health care. All the comments regarding these events will be recorded.

The experimental design of the proposed study is possible since the random assignment of intervention and control is an important component of experimental design and control for differences between intervention and control health posts by selecting control areas as similar as possible to the intervention areas in terms of population size, socio-economic status, utilization rates and geographical accessibility.

3.5.2 Validity of the results

In any experimental design, it is important to ensure the highest degree of external and internal validity in order to increase confidence in the results. External validity refers to the extent to which results from the experiment can be generalized. In

this study, external validity will be enhanced by using six health posts rather than the minimum of two (one control and one intervention).

Internal validity is the extent to which the experimental certain a true experiment the independent variables is responsible for the reaction of the dependent variables. The internal validity of the study will mainly be effected by two factors and measures will be taken in the experimental design to limit the possible influence.

i) Specific events, such as epidemics, change of trained staff that occurs between the first and second measurement or conditions that change throughout the experiment confound the result of the study. Specific attention will be placed on monitoring health post/community relations, consistency of health post staff, consistency of drug supply and other local events in order to minimize the effects on utilization.

ii) Another factor, which can influence the internal validity of the result, is the selection of the subjects. Therefore households will be selected randomly in order to limit the testing effects and attention will be given in choosing the time of survey.

3.5.3 Description of the variables

A. Independent variables

These are the variables, which the researcher cannot manipulate during the course of the study and includes: I) User fees and drug supply policy and ii) economic group.

i) User fees and drug supply policy

Users' of health facility for general curative care will be charged for the drugs and the revenue collected from the user fees will be used at local level for resupplying the drugs. The expected ratio of user fees and drug cost recovery will be 1: 1.This new policy will be introduced in three intervention health posts and other three health posts will provide services free of cost and there will be no additional drug supply.

ii) Economic group

Because of the difference in wealth, this be critical component of the study, since the principle research goal is to detect whether the higher fees will be discouraging poorer people from obtaining health services from the public health facilities. Therefore the study will identify different economic groups based on their annual income and will measure how their share among all patients will be changed with the introduction of user fees.

B. The dependent variable

i) Patients attending the public health posts

The implementation of the user fees policy will be assessed on the effect it will have on the number of patients attending the public health posts. Since health facility coverage is more important from a public health perspective than health post utilization rate based on health facility records; the proposed study will look at the percentage of sick people in the population who will attend the public health posts during the study period.

ii) The Household Survey

Health post coverage will be monitored in all six-study health post areas prior to the commencement of the user fees and drug supply policy by conducting a base line survey. Coverage will be monitored again with follow up survey 10 months later, after the user fees plus drug supply policy initiated at three health post. These two round of surveys will represent the protest and post-test measurements neededto evaluate the effects of user fees on health care utilization.

3.6 Data Analysis

To view the effects of the user fee plus drug supply policy on utilization by income groups; study will compare the baseline and follow up results for both the intervention and control areas. For this reason, only those households will be included in analysing the utilization of health services in which a member of the family had been ill within the last four weeks, and it is important to find out whether this population sub-set will be representative of the income groups in the total sample population.

Analysis of the variance will be used on the combined baseline and follow -up data sets to test the association between report incidence of illness and income level of the population. Along with this survey data, health post service statistics will be collected and analysed regularly in order to monitor the effects of the user fees and drug supply policy on utilization of public health facilities. To further explore the

statistical significance of the results, statistical test will be done using 't' test and help from statistical expert will be taken in order to perform this part of the study.

3.7 Purpose of the study

The purpose of the study is to increase health post utilization for curative and preventive health services of rural public health facilities, through the introduction of user charges for regular supply of essential drugs at health post level. The focus of the study is to design, plan and implement community drug program for supplying essential drugs in adequate quantity, orientation training of health post management committees and health post staffs in drug program management, and improvement of quality of services. The impact of these activities on health service utilization will be evaluated after one year of the program by using 1) service statistics, 2) Focus Group Discussions (FGD), 2) household survey and 4) in-depth interviews.

3.8 Goal

The overall goal of the study is to improve health status of the rural population through the regular provision of curative and preventive health services at health post level.

3. 8.1 Objectives of the study

A. General objective

To increase health post utilization through the introduction of user fees and reinvestment of the revenue for supplying the essential drugs and improvement of health services by active involvement of the health post management committees.

B. Specific objectives

The proposed program has aimed to attend following objectives.

1. To develop Community Drug Program protocols and appropriate user fee mechanism.
2. To develop training curriculum for the orientation training's to health post management committees and health staffs on Community Drug Program. ,
3. To provide orientation training to health post management committee officials and staffs.
4. To evaluate the training programs.
5. To implement Community Drug Program in three health posts of Myagdi District in order to increase the attendance by 25 %.
6. To evaluate the effects of user fee, drug availability, and quality improvement on health care utilization by rural population.

3.9 Research question

"Will introduction of user fees and reinvestment of the revenue for replenish the essential drug, increase patient attendance by 25 % in rural health posts compared to control group, in Myagdi District."

3.10 Project framework

Table 3.5 Desired results and indicators of proposed CDP.

Desired results	Inputs	Out comes	Indicators
1. Health facilities will have sufficient fund for continued supply of essential drugs.	1) Develop and introduce user fee. 2) Purchase of drugs	1) Availability of fund 2) Availability of drugs	1) Bank balance of revenue collected from user fees. 2) Availability of 10 Full courses of essential drug at health post.
2. Increased uptake of health post services (both curative and preventive).	1) Training to health post staffs. 2) Supervision and monitoring. 3) Supply of drugs	1) People regularly use health post services.	1) 25 % increase in health post attendance for both curative and preventive services.
3. Health committee understanding, committed to and working towards better management of health facility.	1) Orientation to health post committee. 2) Regular meetings.	1) Better participation of People. 2) Timely purchase of drugs.	1) No. Of committee meeting. 2) No. Of decisions plus activities a g, Drug purchase, collection of fees, regular reporting.

3.10.1 Major assumptions

a). Government policies an priorities regarding community financing will remain unchanged during the period of this program

b). With the year round supply of essential drugs and involvement of community in health facility management, the standard of health services shall improve and consequently, the utilization of health services will be increased.

c). Government will continue to provide the drugs and health staffs for these health posts and the revenue generated from user fee will be spent only to replenish essential drugs.

3.11 Proposed programs

This intervention program has proposed three main activities in order to achieve the objectives, namely design and introducing community financing mechanism, supply of essential drugs regularly in adequate amount, and training workshops for health staffs and health post committee officials. It is hoped that implementation of above said activities will be resulted in better quality of health services and utilization of public health services will be increased.

The proposed program will be implemented in three randomly selected health posts of Myagdi District, West Nepal. Three health posts from each ecological regions of Myagdi district, with similar geographical, socio-cultural and demographic

characteristics, will be the control group for comparing the results of this study. The components of the proposed program will be as follows.

Table 3.6 Components of proposed program

S. No.	Proposed programs	Expected outcomes	Date of commence
1.	Workshop for designing user fee mechanism and preparing program protocol.	Program protocol in use at three-intervention health posts in Myagdi district.	July 1998 Ongoing.....
2.	Develop a system for purchasing essential drugs.	Increased availability of essential drugs at three intervention health posts.	August 1998 Ongoing as per health Committees' decision.
3.1 3.2	Orientation training to health post management committee officials. Orientation training to health post staffs.	Health post committees will be capable in managing the program. Improvement in drug use and recording /reporting.	August 1998. August 1998 Ongoing.....
4.	Collection of baseline information from six study health post area	Baseline information on health post utilization by rural population will be available.	August 1998
5.	Implementation of the program	Improved quality of services and better use.	September 1998 to July1999.
6. 1 6.2	Monitoring, and supervision Impact evaluation.	Improved health facility management. Better utilization of health facilities.	On going on monthly basis. May-July 1999.

3. 11. 1 Designing user fee and Developing CDP protocol

A program protocol will be developed prior to the implementation of the program. Two days workshop will be organized at District Headquarter in order to prepare CDP protocol. District level CDP team, health post In-charges and health committee chairpersons will be the participants of this proposed workshop. The outline of the proposed CDP will be presented to the participants and the proposed protocol will be prepared during the workshops. A simple heuristic approach will be adopted to reach conclusion regarding user charges. Outline of the proposed CDP protocol and workshop schedules are given in the appendix.

1. Rate setting

The workshop will be focused on designing the user fee for different group of drugs. The decision problem can be defined as select or construct user fee for the essential drug that will yield the highest income for the health facility and at the same time increase the economic accessibility to health post care for all participants

During the workshop, participants will discuss the different alternative fee scales and these alternatives will be evaluated with possible impact on equity, feasibility and financial sustainability. One of the best alternatives among the three as given in table 3.7 will be chosen through the group consensus.

Table 3. 7 Impact of three possible fee systems on equity, accessibility and feasibility

S. NO.	Possible fee system	Equity	Accessibility	feasibility
1	Flat fee per visit			
2.	Fee per item			
3.	Sale of drugs at cost price			

The workshop participants will reach on conclusion through the ranking of different fee system and the best alternative will be used for setting the user fee. The average drug cost per episode of treatment will be calculated and user fee will be set accordingly.

II. Model formulation

The objective of this scheme is to generate adequate fund through the user fee, required for the supply of essential drugs. It is assumed that other costs such as salary of the health workers and capital costs will be the responsibility of the government. Therefore, only cost of the drugs will be considered for cost recovery. If we assume that inflation is offset by the interest on the revenue, the following mathematical model can be formulated:

Objective: TPR=MC

Where TPR is total patient revenue and TDC is total drug cost.

3.11.2 Orientation training for health post management committee

A. Introduction

Health post management committees are an integral part of the primary health care system in Nepal. These committees are supposed to play an important role in

health facility management in order to bridge the gap between communities and health facilities. The functions of these committees as stated in second long term health planning includes planning, implementation and monitoring of local health development activities (MOH, 1997) and the health policy has emphasized the need for developing required capacity of these health post management committees to effectively carry-out their responsibilities. Without appropriate training, health post committees will not be able to perform their responsibility effectively. Therefore, there is a need for providing orientation training for health post management committees prior to the implementation of community drug program. The need for this training are mainly due to application of new knowledge, resources or approaches of proposed new intervention and due to the changing role of health post management committee officials.

The proposed orientation training on community drug program will increase knowledge, skills of committee officials in managing and monitoring the activities. Involvement of such potential implementations in planning of activities will increase their confidence and widen the level of understanding of the participants. Regular supervision and support from district level will provide better opportunity in solving the practical problems arising during the course of action.

B. Training objectives

The main objective of this proposed orientation training is to develop better understanding of the community drug program's overall goal, purpose, roles and

responsibilities of different agents involved in the program. At the end of the training, health post management committee officials will be able,

i) To understand concept, principles and procedures of community drug program.

ii) To discuss need and benefits of community drug program with community people.

iii) To identify and carryout responsibility of the committee.

iv) To demonstrate the community partnership for proposed community drug program.

v) To monitor the CDP activities regularly.

vi) To prepare an action plan for the implementation CDP for their health facility.

C. Training strategies

The training package will be prepared under consideration of "co-management" of proposed community drug program by the health workers and the community representatives. The proposed training will focus on three major areas as stated below.

i) Management: Community drug program is an approach to maximize the function of health facilities and its impact on households through improved management of drug supply. Management improvement will therefore be the major focus of proposed CDP training.

ii) Quality control: Utilization of the health services will largely depend on quality of care that is case managements Therefore, quality control, including improve consultation, sterilization of equipment will be covered in the training.

iii) Monitoring: The most crucial factor for the success of CDP will be systematic but simple and practical monitoring system of the function of the health facility by the

health committee members. The proposed training will give high priority to community monitoring.

D. Curriculum of the orientation training

The training curriculum for health post management committee will cover concepts, principles, purpose/objectives, fee mechanism, collection and banking of fees, drug supply, recording/reporting, role/responsibilities of different people monitoring and supervision of community drug program. This outline of the curriculum will be the guideline for achieving the objectives of the training program. The overall training activities includes six modules, and cover different aspects of the proposed community drug program.

Module 1: Situation analysis

This module describes the overall situation of health problems and services of the community and will be focused on the problem of drug supply and use of health facility.

Module 2: Introduction to community drug program

This module deals with the possible alternatives for solving the problem identified in module one and discusses the concept, principles, purpose and objectives of the proposed community drug program.

Module 3: Fee mechanism, collection and reinvestment of user fees

This module describes the process of setting user fee, collection, banking procedure, reinvestment and exemption policy.

Module 4: Drug supply

This module deals with estimation, selection, purchasing, storing and distribution of drugs required for the health facility.

Module 5: Management of community drug program

This module provides guidelines and information on formation and role of different committees and people involved. It also discusses about supervision, monitoring recording/reporting of CDP activities.

Module 6: Action plan

This module describes how local health post management committee can make an action plan for implementing community drug program at health post level.

E. Training approach

The success of a training program largely depends on the approaches of training applied. Participants' background, age, knowledge and previous exposure in training activities affects in determining the appropriate training approach (Srinivasan, 1992). The orientation training for health post management committee officials will be different from other formal training because of their background, age, and experiences.

Participatory training approach will be applied and participants will be facilitated by means of appropriate training methods and materials. For insuring active participation from all participants, facilitators/trainer will encourage them to contribute what they know about the subject being discussed and a favorable learning environment will be created in order to share the expertise and experiences of the participants including facilitators. The participatory approach of training proposed in this program is simply based on the following principles (UNICEF/Bangladesh, 1993).

I. Experiential or participatory learning

This means simply learning by doing. Instead of teaching people how to do something, participants will be involved in process of actually doing something and they actually do that which is to be learned.

II. Valuing one's own experience

This means recognizing that all participants have valuable experiences, which they can help, themselves and others. Too often adults are treated as empty vessels instead of rich storehouse of experiences and information (Svendsen and wijetilleke, 1988). People can greatly enrich themselves if they can learn to recognize, value and respect each other's experiences.

III. Expanding from the person outward

It means looking at a problem or situation in participants' own context first. For example if participants have first examined their own needs, they will probably be able to work with others to identify communities' needs.

Thus, the proposed orientation-training program will begin with training activities in getting together and working together. This will help participants to get to know each other and to begin to form a positive, supportive, and understanding group, and promotes group skills on communication and problem solving.

F. Training methods and materials

Most of the participants of the proposed training will be the village elderly with limited educational background and training experiences. Therefore, lecture methods will be avoided. The training activities will be incorporated with group discussions, role-plays, demonstration, observations, brainstorming, question answers, and group exercises. Mini lecture, if used, will be incorporated with appropriate visual aids.

Protocol of community drug program will be provided to all participants, which contains background information regarding different modules of training program. News print sheets and marker pens will be used for group work and presentation of teaching/learning activities.

G. Duration of the training

The duration of the proposed training program will be five days for each health post management committees. Date of the training program will be decided after discussion with District Health Officer, Myagdi, health post management committee chairperson, and health post in-charges of the concerned health posts.

H. Venue of the training

The proposed training will be conducted in health posts or in village development office building and the setting of the training will be informal, relevant to village situation. The reason for conducting the training at local village is to use health post records during training and to minimize possible nonattendance of the proposed participants. It also saves the time of health workers and can provide services in emergency.

I. Participants of the orientation training

There will be 11 participants in the training, proposed in three intervention health posts of Myagdi district. The participants include all officials of the health post management committees and health post in-charge.

J. Facilitators for the proposed training

The necessary facilitators/trainers will be available from District Health Office, and West Myagdi Community Health and Development project, Myagdi. If necessity

arose, Regional Health Training Carter, Pokhara and Britain Nepal Medical Trust, Biratnagar will be requested to provide some trainers.

K. Evaluation of the training program

Evaluation of a training program simple helps to look at where we are and where we have been so that we can better know where to go. Therefore, evaluation of a training program is a continues process of collecting information from both the participants and trainers involved. The evaluation process includes contents, methods, materials, activities and outcome of the training. Therefore, an effective evaluation of a training program should cover the plan, process, and the product of training. There must be some evaluative activities each day, which will enable trainers to modify and adopted more effective teaching/learning activities during the training program. An evaluation planned at the end of a training program only helps to improve for the Future training (Abbatt and Mejia , 1986)

The proposed orientation training program will be evaluated regularly by means of different tools. The process of the training will be evaluated daily. For the purpose of daily evaluation, participants will be divided into three groups and each day, one group will present the result of daily evaluation to the participants. At the end of the day participants will be asked to answer the questions individually and submit their answers to evaluating group. The evaluation group will summarize the individual responses and present on the following day.

A rapid participatory evaluation technique will be used for ongoing feedback on the process. This form of daily evaluation will involve participants in the preparation of all of the factors to be evaluated at the end of the day (UNICEF/Bangladesh, 1993). The facilitator will ask participants to place an individual dot in line with the emotion they are feeling at the end of the day of everyday. This is a subjective method of visualizing the groups' feeling regarding training process. (Evaluation tools proposed in this training are presented in appendix).

The product is the result or outcome of the process. This includes what has been achieved in general terms, such as improved health facility management, as well as, specific improvements in knowledge and skills of the participants. The product in specific terms such as improvement in knowledge and skills can be evaluated at the end of training program. The participants of the proposed training will be the village elders, therefore, a written ore and post-test examination will not be appropriated to them. The knowledge and skills gained through the training will be evaluated from the application and participation in preparing action plan. This activity by performance testing can help to know the participants' improvement in knowledge and skills. The product of a training program in general terms refers to the impact on overall health care system and requires ongoing monitoring and evaluation.

3.11.3 Orientation training for health post staffs

A. Introduction

Implementation of proposed community drug program require complete understanding of principle, concepts, objectives and procedures by all people involved. Therefore, it is planned to provide two-day orientation training to all health post staffs on proposed community drug program. This will help health post staffs to carry out activities and prepare themselves for changing roles.

B. Training objectives

At the end of this orientation, training health post staff will be able,

I) To understand concept, principle objectives and procedures of proposed community drug program.

II) To use CDP protocol in they're daily work.

III) To discuss about CDP with community people.

IV) To use standard drug treatment schedule in their daily work.

C. Training curriculum

The proposed training of health post staff will include introduction to CDP, role of health post staffs in implementing CDP, reporting and recording, exemption policies and use of standard drug treatment schedule.

D. Training approach and methods

A participatory training approach with group discussion, brainstorming, demonstration, exercise and practical will be the methods of training. Emphasis will be given in recording and reporting and use of forms.

E. Duration and venue of the training

The proposed orientation training for health post staffs will be conducted in three health posts of Myagdi district for two days. The date of the training will be confirmed after discussing with health post in-charges.

F. Participants

All the health post staffs including Auxiliary Health Worker (AHW), Assistant Nurse Midwife (ANM), Cold chain Assistant, Administrative clerk, Village Health Worker (VHW), and Peers. There will be 8 participants in each health posts.

G. Trainers

The required number of the trainers will be arranged from District Health Offices Myagdi and health post in-charges of the concern health post will also involve as trainers.

H. Evaluation of the orientation training

The training will be evaluated by using Objective Structured Practical Examination (OSPE). All the participants will sit in 8 different stations where different

activities including some written questions will be asked to complete. Participants will complete the task within given time and move to other station after the warning bell. Thistype of evaluation will help to assess the knowledge and skills of the participants.

3.12 Implementation of community drug program

Implementation is the process of putting policies, programs and plans into effect. The aim of implementation is to achieve specified program targets, according to proposed methods and a proposed timetable, within the limitations of the available resources (Moens, 1990). Identification and involvement of several people plays an important role in the successful implementation of a program. It includes coordinating, supervising, training, monitoring and operating of specific activities. The involvement of different people including community is equally important since its health needs form the basis of the health care system.

Because of the involvement of many organizations and individuals in implementing community drug program, it is useful to establish a core group of individuals with managerial, teaching/training and technical skills to undertake the responsibility for implementing the proposed program. In order to form such group; the researcher will first organize a meeting with District Health Officer, West Myagdi Community Health and Development Project Manager and District Development Committee Chairperson. Then after this district level, CDP implementation team will implement the program in three health posts of Myagdi district.

The district level CDP team will take the responsibility of preparing CDP protocol, training to health post management committee officials and staffs, supervising, monitoring and evaluation of the proposed program. Similar, at local level health post, management committee will be responsible for implementing proposed community drug program at their health facility. Each health post management committee will prepare their own plan of action to propose CDP and implement it according to their local situation.

After the completion of the orientation training for health post management committees and health post staffs, community drug program will be implemented in three health posts of Myagdi district. Necessary resources including initial seed money and materials such as, registers, forms cash box will be made available to each health post before implementing the program. Users of health facility will be well informed about new system and services available at these health posts. Information will be disseminated through schools and village meetings. A notice board containing information on fees and available services will be displayed in the health post. The proposed program will be implemented from September 1998 for study purpose.

3.13 Supervision of community drug program.

Supervision plays an important role in improving the performance of a health system and ensures the success of the program. Supervision is an important mechanism for obtaining information on problems encountered in the implementation of

for obtaining information on problems encountered in the implementation of community drug program. Ineffective supervision not only improves management but also provides subsequent learning opportunities to the staffs of a health system (Karen et al., 1987). Therefore, a supervisor not only controls the activities of others but also equally helps health workers to identify weakness and strengths and provides opportunities for better performance.

A problem based supervisory approach will be adopted for the proposed community drug program in order to motivate, encourage, and educate health post management committee and staffs. The proposed supervisory approach will consist of four activities, such as, 1) Finding out what work has been done and what method has been used. This will involve observation and inspection of work, records and reports. 2) Comparison of works with specified targets norms or standards and feedback to the people on the quality of work. 3) Taking action in order to reduce the problem of unsatisfactory work, which includes advice, or on station training to the concerto people. 4) Preparing a supervisory report with comments for improvement.

Supervision of the proposed community drug program will be done from District Health Office, Myagdi and a multi-disciplinary team of two people trained on problem based supervision will take the responsibility of the supervisory work. At the beginning of the program, supervision will be done monthly and later on these will be done at three monthly intervals. These supervisory visits will be incorporated with short training session for health committees and staffs.

3.14 Monitoring and evaluation of community drug program

Monitoring and evaluation is the periodic collection of data relating to selected indicators of the program. Periodic monitoring of activities enables managers of health system to determine whether activities are being carried out as planned and are having the expected effects on the target population. Careful monitoring of activities provides feedback to the program management to improve operational plans through corrective actions.

3.14.1 Monitoring of community drug program

Monitoring of the proposed community drug program will be done on periodic basis by using health post service statistics and these will be compared with set targets. Action plans prepared by each health post management committees will also be used for monitoring purpose. Information required for the monitoring of the activities will be collected monthly from each intervention health posts. Health posts monthly reports and supervisors'reports will be the meadow for monitoring the progress. Each health post committees will be encouraged to monitor their health activities at the time of monthly meeting and requested to send their comments regarding the achievements. Regular feedback mechanism will be developed through supervisory visitor. A master health information chart will be developed and used in order to monitoring activities.

3.14.2 Impact evaluation of community drug program

The aim of the proposed intervention is to increase health post utilization through the regular supply of essential drugs and mobilization of health post management committees in health facility management. After the completion of one year of community drug program in Myagdi district, the impact of the proposed community drug program will be evaluated.

The rural population in Myagdi District will focus the evaluation plan on utilization of health post services. Impact evaluation of the proposed program, will mainly answer the following questions. 1) Are health services utilization by villagers increased after the implementation of community drug program? 2) Are the availability of essential drugs improved and the patients receive all necessary drugs Cruel the health facility? 3) Are villagers satisfied and willing to pay the charges for the drugs dispensed from the health facility? 4) Are there any negative effects on health services utilization especially to poor and preventive cares? Details of the proposed evaluation will be as follows.

Table 3.8 Components of monitoring and evaluation of community drug program.

Source of data	Records/Reports	Clients	Health care provider
Indicators			
1.Service utilization a) clinical/curative			
No. of visits	Service data		

Health post use		Survey Focus Group Discussion	
Satisfaction		Focus Group Discussion Survey	
Demographic		Survey	
Economic status		Survey	
Drug availability		Survey	Observation Interview
b) preventive FPI coverage	Service data		
FP use	Service data		
2.Mismanagement			
a) Training impact	Supervision		Observation Interview
b) Planning	Supervision		
c) Drug supply	Records		Observation
d)Financial cost analysis	Records		

A. Methods of the evaluation

Household survey, focus group discussions, in-depth interviews and review of service statistics will be the methods for collecting data. The necessary people required for interview, group discussions, and review of services data will be recruited and trained on data collection procedures prior to fieldwork. The purpose and procedures of different data collection techniques will be as follows.

I. Focus group discussion

Focus group discussions are proposed to obtain in-depth information on health services utilization by the villager. Two focus group discussions (one for male and one for female) will be conducted in each health facility area prior to house hold interview. There will be 9 participants in each group from each ward of the village development committee. Health problems, health service utilization, user fee and ability to pay and consumers' satisfaction will be the main contents of the discussion. The participants will be selected purposively from each ward. She venue and place will be decided after discussion with village chairman and health facility in-charge. The discussion will be conducted in Nepali language with the help of the moderator who will be the staff of West Myagdi Community Health and Development Project with experience in facilitation and group skills. A note taker will make transaction of the discussion and if the group allowed, tape recorder will be used for recording the discussion. Details about the procedures and FGD guidelines are given in appendix.

II. Household survey

Household survey will be conducted in both intervention and control areas in order to get more information on health service utilization of the population. A total of 600 households will be included in household survey. A trained interviewer will interview household head or an adult who present at the time of visit. An interview schedule prepared in Nepali language will be used for recording responses. This technique of collecting data will mainly help to determine the utilization of different

health facilities available in the area such as the reason for use and non use, The cost of the services, socio-economic status of the population, and consumers' satisfaction towards different types of health care providers (Interview guidelines are Given in appendix).

III. In-depth interview

Health workers and other health care providers working in both control and intervention areas will be interviewed in order to get information on changes of health care utilization. At least one people from each health area will be selected purposively and interviewed.

IV. Review of health post statistics

Health post statistics relating to outpatient visits, immunization, family planning services and availability of drugs will be collected and analysed to see the changes occurred from the implementation of proposed community drug program. From the review of service statistics, following indicators will be used increase or decrease in monthly attendance for outpatient services, immunization and family planning services, average number of drugs per prescription, drug cost recovery ratio, regularity in drug availability (Details are given in appendix)

B. Study population

All people living in the intervention and control groups will be the study population for the utilization of clinical services whereas for EPI and family planning

under one year and women between 15-44 years of age will be the study population respectively.

C. Inclusion criteria

All people as stated in study population living in both the intervention and control group will be included in the study.

D. Exclusion criteria

People living outside the intervention and control VDCs but receiving treatment or services will be excluded from the study.

E. Sampling

The sampling techniques for selecting the subjects of proposed impact evaluation is described bellow.

I) Household survey

The subject required for household survey will be selected by using stratified random sampling method. A sample size of 100 households will be used for each of the six health post catchment areas, for a total of 600 households. Although the health areas varied between 3000-4000 inhabitants, the same sample size will be taken from each area. The stratification within each village development committee will be based on wards. Each health post catchment area is divided into 9 wards and equal number of subjects with then be chosen using simple random sampling technique.

III) Review of service statistics

All the data relating to health post services will be collected monthly. For the study purpose, some prescriptions made by health workers will be selected and analyzed. 100 prescriptions from each health facility a systematic random sampling technique. The selection interval will depend on the total number of outpatients visits of the health posts (for example if a health post of 400 OPD visits requires 100 samples, the sampling interval will be 40).

3.15 Activities, plans with time tables

No	Activities	1998						1999						
		July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July
1.	Formation of research team and meeting	↔												
2.	Preparation of CDP protocol.	↔												
3.	Training to health post committees and staff.		↔											
4.	Collection of baseline information from six study health post areas.		↔											
5.	Implementation of the community drug program.			←	—	—	—	—	—	—	—	—	—	→

Activities, plan and time table Contd. From page 90

No.	Activities	1998						1999						
		July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July
6.	Monitoring and supervision of community drug program		◄►	◄►	◄►			◄►		◄►				
7.	Impact evaluation											◄		►
7.1	Selection of interviewer											◄►		
7.2	Orientation to interviewers											◄►		
7.3	Data collection, analysis and report writing												◄►	

3.16 Budget for the study

Table 3. 10 Estimated budget for the study.

A. Human resource required				
Personnels	Number	Total Days	Rate-days US$	Total US$
Coordinator	1	45	10	450
Trainer	3	73	10	730
Supervisors	4	80	10	800
Trainees	57	225	5	1125
Interviewer	6	180	10	1800
Consultant	1	7	20	140
Sub total		610		5045
B. Other resources and materials				
Description				Total US$
Printing of prescription pads, forms etc.				300
Training materials				100
Stationary				400
Printing of questionnaires and report				500
Utility				100
Seed money for buying of drugs 3 x 500 US$				1500
Contingency 10% of estimated budget				795
Sub total				3695
Grand total (A+B)				8740

(Note: 1 US$ = 63 Nepal Rupees.)

3.17 Problems and constraints

The success of proposed community drug program depend involvement and commitment of health post management committees and staffs working at these health posts. Although, the proposed orientation training, regular supervision and monitoring activities will encourage and motivate these key actors/there will be some problems

which may impact negatively on the effectiveness of community drug program. Most of these problems or factors are out of control of the proposed implementing teams at both district and local level.

Health post staffs who will be trained on community drug program can be transferred to other places and the new corner may not understand the principle and policy of proposed intervention. Frequent transfer of health workers is very common in Nepal and District level health officer has no authority to control such problems. Therefore, strong commitment from higher authority and health post staffs is necessary in order to avoid such problems.

Since the implementation of community drug program, health post staffs and committee members will be more responsible for collecting, banking, and reinvesting the revenue. There will be chances of being misuse of fund and medicines. Therefore, health staffs and committee members should be honest in all financial matters and should adopt transparency in financial issues.

The proposed community drug program has aimed to meet the drug requirement of health facility under a normal condition. Therefore, this may not fulfill the demand of drugs arising from epidemic outer such as diarrhoea and measles, which are still very common in Nepal. Insufficiency of drugs during such epidemics may resulted in dissatisfaction of the population.

3.18 Ethical issues

The proposed community drug program will be implemented in three health posts of Myagdi District according to set policies and methods. Health workers will not be imposed to carry out additional activities other than their job description. Similarly participation of health post management committee official in training and other activities will be optional. Health committee officials will not be imposed to take part in the program.

Activities other than proposed in this intervention program would not be carried out in order to influence health care providers and consumers. Participation in group discussions and interviews will be volunteer and optional. All participants will be requested to take part in the proposed study and be informed about the objectives and purpose of the study. Any information received from the participants will not be published without their permission. Confidentiality regarding subjects and responses will be assured. Information received from the respondents will be used only for the improvement of health services and anything that will cause harm to the respondent will be the responsibility of the researcher.

3.19 Limitation of the study

Scientific nature of the research design permit more clarity in conclusion than other research methods, its limitations should be considered when generalizing the

results. The two most relevant limitations to this study will be the external validity and relatively short timeframe of the study.

The elimination of most confounding factors in the research design makes the result of this study internally strong. However, a great deal of caution must be taken about generalizing the results of this study to other areas unless they are very similar to this study site. The fact that Myagdi District is very remote and other forms of health services are limited than most of the other districts of Nepal. Myagdi district may have greater cash liquidity due to being in the main trekking route to Dhaulagiri Himalaya and Dhorpatan hunting reserve. This should not be forgotten when interpreting the results and assessing its applicability to other health post of the country.

In addition to external validity, another limitation to the study is the timeframe used for measuring the effects of user fee and drug supply on the population. Ten months measurement period merely permits the short term effect of the policy to be evaluated. It may be possible that, many families will be willing to try the new system when one of their member has become ill, but they may not be interested about using health facility on the second time a family member become ill. The ten-month period can represent only the first round of illness in many families.

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