CHAPTER III

DATA EXERCISE

Rapid Assessment on the Feasibility of Alternative Strategies for Delivering DOTS in the Hilly Area of Lalitpur District, Nepal

3.1. INTRODUCTION

Despite the success of DOTS in Nepal, access to DOTS for TB patients is a serious problem in the hilly region of the country (DHS, 1998/99). Because of the difficult geographical structure, TB patients do not have easy access to health services. The health institutions are not organized to deliver services in an accessible way due to their limited resources and manpower. Therefore, it has been a major challenge for National Tuberculosis Program (NTP) to expand DOTS to the hilly region of the country (DHS, 1998/99).

The rapid assessment described in this chapter aims to explore the feasibility of an alternative strategy to deliver DOTS to TB patients close to their houses or working places. The rapid assessment was conducted in Lalitpur district. The findings of the assessment will be an input for developing an intervention to solve the problem of inaccessibility of DOTS for TB patients in the hilly area of the district.

3.2. RESEARCH QUESTION

1. Does the NTP allow exploring alternative strategies for delivering DOTS in the hilly region?
2. Would TB patients and health workers accept Female Community Health Volunteers (FCHV) as DOT observers?
3. Are FCHVs willing to provide DOT for TB patients in their wards?

3.3. OBJECTIVES

3.3.1. General objective

To explore the feasibility of an alternative strategy for delivering DOTS in the hilly area of Lalitpur District, Nepal.

3.3.2. Specific objectives:

1. Identify the scope within the NTP on the alternative strategies for delivering DOTS
2. Describe the profile of FCHVs in Nepal.
3. Explore the readiness of FCHVs to be DOT observers
4. Assess the acceptance of FCHVs as DOT observers among TB DOTS patients.
5. Describe the perspective of HP and SHP staff regarding decentralization of DOTS and mobilization FCHVs as DOT observers.

Operational definition of terms:

Feasibility in this study is defined as, "the scope for the alternative strategy within the NTP, perception of health workers on mobilizing FCHVs and decentralizing DOTS, the readiness of FCHVs to function as DOT observers and the acceptance of FCHVs by TB patients".

Scope: options for the alternatives in terms of level of diagnosis, treatment decision, and level of DOT within the policy frame of the NTP.

Profile: the characteristics of FCHVs in Nepal in terms of age, level of education, social characteristics and their involvement in the PHC program.

Readiness: work experience as FCHV, satisfaction with their work, willingness to take additional work, awareness on TB, and willingness to provide DOT in their respective wards.

Perspective of HP and SHP staff: their opinion on decentralizing DOTS center and sub-center and mobilizing FCHVs as DOT observers.

Acceptance: familiarity and relationship with FCHVs, previous contact, and willingness to have DOT from FCHVs.

3.4. METHODOLOGY:

3.4.1. Study design:

A rapid assessment procedure was employed applying the qualitative and quantitative methods. For the qualitative data collection, in-depth interviews and

focus group discussions were conducted. A structured interview was employed for the quantitative data collection.

3.4.2. Study Location:

The rapid assessment was done in six HPs in Lalipur district of Nepal. Different instruments were used to collect information in the following places in the district.

a. Focus group discussions were held among HP/SHP staffs and FCHVs in Ashrang HP located in Ashrang Village Development Committee (VDC). This is one of the HPs located in the most remote hilly area of Lalitpur district where I intend to implement the intervention.

b. Structured interviews with FCHVs were conducted in the three target VDCs of Ashrang HP area i.e. Ashrang, Gimdi and Pyutar VDCs.

c. Structured interviews with DOTS patients were conducted in five semi-urban HPs in Lalitpur district namely- Chapagon, Thecho, Dhapakhel, Bungmati and Sainbu.

d. The in-depth interviews were conducted with the District Tuberculosis Leprosy Assistant (DTLA) of Lalitpur District, and the national director of National Tuberculosis Center (NTC), Thimi, Bhaktapur.

3.4.3. Study duration

Rapid assessment activities took place from 5th to 23rd Feb. 2001. The study period includes the time for development of data collection instruments, logistic arrangements, communication to the study sites, and travel time to the field.

3.4.4. Sampling and sample size

1. The NTC director and Lalitpur DTLA were purposively selected for in-depth interviews. The NTC director is the top-level person who formulates and guides the NTP policy and the DTLA is the person who is responsible for TB control program in the district. They were selected to get information on national and district level TB control policy and programs respectively.

2. Six Ashrang HP staffs and two SHP in-charges in the area were purposively selected to assess their perspective on implementing DOTS in the area and the alternative strategy for delivering DOTS. The HP and SHP staffs are the health workers who have to conduct DOTS program in the rural the health institutions and work closely with FCHVs.

3. Thirteen FCHVs from the outreach wards of the three VDCs in Ashrang HP area were purposively selected for focus group discussion and structured interview.

4. Twenty-one TB DOTS patients were purposively selected for structured interview from five HPs in the district. Based on the treatment records, the patients who were from relatively distant places were selected for the interview. The five HPs were also purposively selected since they are located in the peripheral part of the valley and serve the semi-urban and relatively rural community in the area.

Table no. 3.1. Summary of study methods, tools/techniques and sample size

Method	**Tools/techniques**	**Study group**	**Sample size**
Qualitative	In-depth interview with open ended questions	NTC Director and DTLA	2
	Focus group discussion with guiding questions	HP/SHP staff	8
	Focus group discussion with guiding questions	FCHVs	13
Quantitative	Structured interview with questionnaires	FCHVs	13
	Structured interview with questionnaires	TB DOTS patients	21

3.4.5. Language

The structured questionnaires were translated from English into Nepalese language. All the interviews and focus discussions were conducted in Nepalese language since it is the only common language among all the respondents and participants.

3.4.6. Recorder

A recorder was appointed for taking notes during focus group discussions. The recorder was a lady working in my organization (CDHP) as an administrative assistant who also looks after the health information system in the project. Her skills in taking notes were useful for organizing and analysis of the information.

3.4.6. Data collection activities

Table no. 3.2. Rapid assessment activity summary table

Activity	5 - 9 Feb	12-16 Feb	19-23 Feb	Remarks
1.Development of tools				FGD outcomes from TB patients and FCHV group were used for developing the interview questionnaires.
2.Logistic arrangement				Includes vehicle, stationery, food and incentives for participants
3. Communication				An official letter was prepared from DHO for the study and letters were sent to the HPs and FCHVs two weeks before the program.
4. Literature search				Literature was searched on the FCHV program.
5. Conducting FGD				FGD of HP/SHP staffs was held on 16th Feb and the FCHV group on 17th Feb.
6.Conducting structured interview with FCHVs				Structured interviews with FCHVs were conducted on 17th Feb.
7.Conducting structured interview with TB patient				Structured interview with TB DOTS patients took place in five HPs.
8.In-depth interview with TB authorities				In-depth interview with DTLA on 22nd Feb and with NTC director took place on 23rd Feb.
9. Data management				The field notes of qualitative data were transcribed during the time of the study.

3.4.7. Data analysis

The qualitative data were analyzed by using content analysis. For quantitative data, simple descriptive analysis was done using frequency and distribution in SPSS software program.

3.5. FINDINGS

3.5.1. Findings of focus group discussion with HP and SHP staff

Characteristics of the participants

There were eight participants in the discussion, five females and three males. Out of eight, six were from Ashrang HP, one from Pyutar SHP, and one from Gimdi SHP. Regarding the level and type of staff, there was one Health Post In-charge (HPI) who is a nurse, three Community Medical Auxiliaries (CMA), one Auxiliary Nurse Mid-wife (ANM), two Village Health Workers (VHW), one nutrition worker, and one HP clerk in the discussion. Two of the participants from SHPs were the in-charges from the respective SHPs. Although the group consisted of people from different functional levels, this was not an obstacle for the discussion. The participants felt open to express their ideas freely, and were supportive to each other. They had common opinions on most of the points in the discussion. All of the participants in the discussion are working in the area for more than two years.

Situation and problems on the TB treatment in the area:

Although there seem to be less TB cases with chronic and severe conditions in the area than before, they said there are still problems in awareness on TB especially, among one of the tribes (Tamang) in the community. They still believe in traditional practices and are late for diagnosis or default in treatment. One of the CMAs said that it is very difficult to get all three sputum samples from patients because of the distance to the HP. He also said that they had to send the sputum slides to the district center for confirmation after they test it. They get the report very late which causes delay in making treatment decision.

Opinion to start DOTS in the HP

The HPI said: (verbatim) "We should start DOTS in this HP. The DHO asked us to start DOTS. Two of the HP staffs have received DOTS training. But it's not possible to start DOTS with the approach as it is now. Patients cannot come to the HP everyday and there is no place in the HP for the patients to stay overnight". The Gimdi SHP in-charge said: (verbatim) " The SHPs must be DOTS sub center to conduct DOTS in this area. Otherwise it's not possible to start DOTS in this area. However we don't have received training on TB until now. At present, we are given no role for TB treatment". This statement was agreed by the Pyutar SHP in-charge. They confirmed that, they were ready to take the responsibility for DOTS program.

Alternatives for delivering DOTS

The participants stated that it is not possible to conduct DOTS only at the HP. If DOTS were extended to SHPs, it would be much easier for the TB patients for daily medicines. Even at the SHP, not all the TB patients can come every day for DOT. The treatment should be available in each ward for easy access to TB patients. The VHW from Pyutar VDC said: (verbatim) "different community health volunteers could be mobilized for DOT observer such as FCHVs, Traditional Birth Attendants (TBA), trained teenager girls, trained teachers". But one of the ANMs said: (verbatim) "TBAs are mainly for care of pregnant mothers and delivery, trained teenager girls and teachers are not very permanent for long term mobilization".

Delivering DOT by FCHVs

As I focused my questions regarding mobilization of FCHVs as DOT observers, they all agreed that FCHVs are the most permanent trained volunteers in the village and they are more reliable than other volunteers. They also agreed to mobilize only one group of volunteer rather than different types. But they were quite concerned with the abilities of some of the FCHVs. Therefore all of them expressed that some of the FCHVs may not be able to conduct DOT since some are illiterate and may not be able to recognize the drugs and to keep records. They said that only the capable ones should be selected for DOT observer, and one FCHV can provide DOT to more than one ward, which are close by. But at the same time some of the staffs said that all of them should be included for the DOTS training. After the training, one

who is capable and needed should be mobilized for DOT as they said. The local staffs could be an alternative in some cases to provide DOT at their homes.

Things to do to mobilize FCHVs

Along with the idea to mobilize FCHVs for delivering DOT, all of the participants stressed on training to FCHVs for proper delivery of DOT. They expressed the confidence that if they get practical training, they can provide DOT effectively. Some of the participants said that even by the color and type of the medicines, they could recognize and give correctly even though they are illiterate. In some cases, the patients themselves can the help for FCHVs for recognizing the medicines. Sometimes, the educated people in the FCHVs' family or some other educated people in the community can help them for keeping record if they are illiterate.

Another point they stressed for mobilizing FCHVs was close supervision and follow-up. The HPI said: (verbatim) "FCHVs needed to be supervised at their work and a monthly meeting should be conducted with the FCHVs at the HP/SHP so that proper communication could be done between the FCHVs, HP and SHP. At the time of a monthly meeting, TB drugs and other things can be supplied to the FCHVs". The participants expressed the need for a box or a cupboard for safe storage of drugs. All of them agreed with the idea expressed by the Pyutar SHPI to integrate the community based DOTS with the Decentralized Community Health Program (DCHP)

in each ward, which has been recently started by the District Development Committee (DCC). The ward committee for DCHP can support FCHVs for providing DOT.

3.5.2. Findings of focus group discussion with FCHVs

Characteristics of the participants

Fifteen FCHVs were invited for the focus group discussion. Considering 6-12 persons as an ideal size for a focus group discussion, few more participants were invited for discussion because usually, not all the invitees attend the program in the rural situation. Thirteen participants attended the discussion. They were from three VDCs of Ashrang HP target area namely Ashrang, Gimdi, and Pyutar. Among the participants, five were from Ashrang, five from Gimdi and three from Pyutar. Most of the participants in the discussion seemed to be familiar to each other since they joined together in different training at the HP. The age of the participants ranged from 24 years to 60 years but the majority of them were in theirs 30s. Despite different ages of some of the participants, the age didn't affect the discussion. There was a common understanding among them that they all were FCHVs. The older spoke more from their experience and the young ones seemed to be more knowledgeable. All of them were married women. By education level, some of them were illiterate, most were simply literate and few had primary and lower secondary education.

Awareness on the TB problem in the community

Some of the FCHVs said that there appear less cases of TB with chronic symptoms and severity than about five years ago in the community. But one of the FCHVs remarked that they were not much familiar with TB in the community since they were not involved in the TB control program.

Problem on TB treatment in the community

They stated that many of the TB patients leave medicine as they get better after few months. One FCHV who is from the Tamang ethnic group said that the TB patients in the their community drink alcohol during the treatment. The FCHVs had the common belief that alcohol during the TB treatment reduces the effect of the medicine. They also said that TB patients feel sicker when they have some side effects of medicine and quit taking their medicine. The FCHV from ward no 2 of Ashrang VDC shared an interesting experience of how she provided DOT to one of her relatives near her house few years ago. As she said, the patient was not taking medicine and he was not cooperative for swallowing medicine every day whereas his condition was weak. Everyday, the FCHV prepared some food for him and fed the TB medicines with the food and completed the treatment.

Opinion on access to DOTS in the HP

As I mentioned about the DOTS strategy as per NTP guideline, all of them disagreed that it could not be implemented in the area. Their remarks were that it

would not be possible for many of the TB patients from the outreach VDCs to come to the HP for daily DOT and even for the periphery wards of the same VDC where the HP is located. One of the FCHVs from Gimdi VDC said: (verbatim) "It took four hours for me to come to the HP today. If it takes four hours for a normal person then, how can TB patients from my ward come to the HP everyday for medicine?" Another FCHV from Ashrang, said that it took two hours for her to come to the HP although it is the same VDC where the HP is located. Therefore, they concluded that no TB patients could come to the HP for daily DOT besides the ones who live in the wards close to the HP. If DOTS were available in every SHP, then it would be easier but still difficult for some patients, one of the FCHVs from Pyutar said.

Willingness to DOT observer

All of them agreed that in their respective wards, they were ready to provide DOT. However some expressed that it might not be possible to go to the patients house everyday but if the patient comes to the FCHVs' home, it would be no problem to provide DOT for them. One FCHV from Pyutar VDC said that within the ward, usually, patients could reach the ward FCHV within half an hour from their houses. The FCHV from Pyutar ward no. 2 expressed her commitment saying that if the patients are weak and cannot walk, she can visit their houses until the patients get better. She also added: (verbatim) "We are volunteer, we have to serve the people who need our help. If it is needed, we have to be ready to serve anyway". One FCHV from Gimdi ward no. 5 said: (verbatim) "We have already promised to work as volunteer, we will not step back if we have to work for our village".

Problems in providing DOT

As they expressed their willingness to provide DOT, they did mention some problems that might come if they work as DOT observers. They said that themselves and their family members had risk of getting TB. They were concerned to handle the sputum of the TB patients, arrange toilet for the patients at their home. They even mentioned that some of the community people might talk "something bad" as they get involved. However, they expected that those problems would be solved over the time with the cooperation from family members, community people and the TB patients themselves.

Things to do for mobilizing FCHVs as DOT observer

Their main concern seemed to be the training and supervision. The FCHV from Gimdi ward no 5 remarked: (verbatim) "We will work but you have to teach us very well how to do it. We are not well educated. So we cannot read the name of the medicine". But another FCHV from Ashrang ward no 5 said: (verbatim) "when we are used to doing it, we can recognize the medicines just by the color and size". The FCHV from Gimdi ward no. 1 expressedd the need for frequent supervision from the HP especially in the initial stage of their work. They did point out the need of safe storage of the TB drugs and an arrangement for that. They also expressed the need for support from the leaders from their wards such as ward members, TBAs, and teachers along with cooperation from their family members.

By the end, as I tried to wrap up the discussion, I asked them a confirmation question: (verbatim) " Would you do if you really have to do it then?" One of the oldest FCHVs spoke her heart, " we will do it, but work keeps on adding, it would be encouraging if there is something for us". What she meant by "something" is some kind of incentives. All the participants agreed her heartily. After that some of them stressed on the need of incentives and mentioned the problems as they serve as FCHV. Along with their readiness to be DOT observers, they expressed the need of training, supervision, support from the community, and they anticipated incentives for their work.

3.5.3. Interview with NTC Director

Characteristics of the respondent

The NTC director is the head of the national tuberculosis program and director of the central TB center. The director is a man and senior chest physician.

Problems for implementing DOTS in the hilly region of the country

The director said that the geographical situation of the region affect both the TB patients and the program. TB patients cannot come to the DOTS center everyday and it is very difficult for the health services to provide accessible DOTS. But the problems of NTP vary in each districts and locality, he said. He added that a particular problem couldn't be generalized in the whole hilly region. He gave some examples of

the problems such as poor functioning of health infrastructures, less committed staff, less trained staffs.

Present NTP approaches for implementing DOTS in the hilly region

The director said that the NTP emphasizes on health institution based DOTS since it shows the best success rate. There are a few other approaches the NTP is trying at present. The late tracers in the villages are mobilized for follow up and counseling to the TB patients who default or are late for treatment. The FCHVs and other community volunteers are involved for tracing late for treatment patients. In some DOTS centers, community volunteers such as FCHVs and schoolteachers supervise the TB patients for their DOT. But he said that there are no any findings published on such approaches so far. In inaccessible situations, family members observe the TB patients in taking their medicines. He also said that the NTP need research for studying suitable approaches for delivering DOTS in the hilly region.

Flexibility in NTP policy for different approaches

On my question whether there is any policy limitation for decentralizing DOTS center and sub-center and studying an alternative approach of DOTS, the director said: (verbatim) "There is no any policy limitation to study different approaches. You don't have to worry about the policy limitation. NTP invites for study on different approaches in implementing DOTS in the hills. On the basis of

different study findings, the NTP can adopt the most appropriate approach to implement DOTS in the hills".

Opinion on mobilizing FCHVs for DOT

The director remarked in short that the FCHVs are the best group of volunteers to mobilize for DOT in the hills. He said: (verbatim) "If you have motivated FCHVs, they work better than the paid staff. They are volunteer but they fulfill the responsibility they are given better than the staff".

Resources for the study project

He said NTP couldn't provide the financial support, but could provide training, available learning materials and logistic support for the project.

3.5.4. Interview with District TB Leprosy Assistant (DTLA)

An in-depth interview was conducted with DTLA of Lalitpur District at his office on 22 Feb 2001.

Characteristics of the respondent

The DTLA is the in-charge of TB control program in the district. He is a man with training and experience in TB and leprosy control program. He has to organize

and coordinate the entire TB control program in the district and supervise all DOTS centers and sub-centers periodically.

DOTS situation in Lalitpur District

The DTLA said that right now, there are eleven DOTS centers. Among them, five are in the urban area and six in the semi-urban area but there are microscopy services only in five centers located mainly in the city. The rest of the centers refer the patients to the center where there is a microscope for sputum test. He stated that the DOTS program is going to be expanded to the hilly area of the district. He also said: (verbatim) "we are looking for an appropriate strategy for implementing DOTS in the hills".

Problems to implement DOTS in the hilly region of the district

As he said the main problem to implement DOTS is that all TB patients cannot come to the HP for their daily DOT because of the geographical problem. He stated that (verbatim) "we don't have a problem of drug supply and logistics". Another problem as he explained was that it is difficult for TB patients from the rural part to go to microscopy centers in the city. Shortage of trained staff and microscopes are the problems to organize microscopy services.

He said (verbatim) "FCHVs could be appropriate to mobilize for delivering DOT. In our program, they have been the late tracers. They are the most accessible

volunteer in each ward," he said. But he also said that they need good supervision and training for the work.

Incentives for FCHVs

The DTLA said that the government policy doesn't provide any regular incentive for FCHVs except for the training. But according to him, NGOs or INGOs, which have resources, can provide some incentives for them. He wanted to request the Community Development and Health Project (CDHP), an INGO working in Lalitpur District to provide incentives so that FCHVs can be mobilized effectively for delivering DOT in the hills. The training and logistic support can be provided by the NTP, as he said.

3.5.5. Findings of structured interview with TB DOTS patients

General characteristics of TB patients:

Mean age of TB patients: 42.19 years (std. 19.91)

Gender: 52.4% male and 47.6% female

Occupation: 47.6% agriculture, 27.8% household work, 19% regular job, and 4.8% students.

Education: 38.1% illiterate and 61.9% literate.

Table no.3.3. Travel time to the DOTS clinic

Travel time	Frequency	Percent
Less than 30 minutes	12	57.1
30 minutes to one hour	7	33.3
1 hour to 2 hours	1	4.8
More than two hours	1	4.8
Total	21	100.0

Ninety percent of the TB respondents were within one-hour travel-distance.

Table No.3.4. Mode of transport to DOTS clinic

Mode of transport	Frequency	Percent
By foot	13	61.9
By public transport	5	23.8
By private car/ motorbike	2	9.5
By other means	1	4.8
Total	21	100.0

The most common mode of transport among the TB patients is walking

Table no. 3.5. Perception of convenience for TB patients

Convenient	Frequency	Percent
yes	6	28.6
no	15	71.4
Total	21	100.0

Although 90% of the respondent were within one-hour travel distance, the majority of them (71.4%) felt inconvenient to come to the DOTS clinic every day.

Table no.3.6. Reason for inconvenience

Reasons	Frequency	Percent
Distance	3	20
Loss of work	4	23.66
Difficulty for travelling	7	46.66
Travel cost	1	6.66
Total	15	100.0

The main reason for inconvenience is difficulty for travelling due to weak physical condition of the patients and the second reason is loss of work.

Table no.3.7. Familiarity with ward FCHV

Familiarity	Frequency	Percent
Yes	14	66.7
No	7	33.3
Total	21	100.0

The majority of the TB patients (66.7%) were familiar with their ward FCHVs.

Table no.3.8. Relationship with ward FCHV

Relationship	Frequency	Percent
Not known	7	33.3
Very good	4	19.0
Good	7	33.3
Satisfactory	3	14.3
Total	21	100.0

The percentages in table no. 3.9 show that all the TB patients who are familiar with FCHVs have fairly good relationship with them.

Table no.3.9. Previous contact with ward FCHV

Contact	Frequency	Percent
Yes	6	28.6
No	15	71.4
Total	21	100.0

Although the figures in table no. 3.8 show good relationship with FCHVs, only 28.6% of the TB patients had previous contact with them for their or family health problems.

Table no.3.10. Reason for no contact

Reasons	Frequency	Percent
No need of help	6	28.6
Distance	1	4.8
No skill	1	4.8
I don't know her	7	33.3
Total	21	100.0

A common reason for no contact with FCHVs among the familiar ones is that they did not need help from FCHVs. It could be that the study area is mostly semi-urban area where there are good level health services accessible for them.

Table no.3.11. Willingness to have FCHV as DOT observer

Willingness	Frequency	Percent
Yes	14	66.7
No	7	33.3
Total	21	100.0

The majority of the TB patients were willing to have DOT from FCHVs.

Table no.3.12. Reason for not accepting FCHV

Reason	Frequency	Percent
Distance	1	14.22
Don't know	2	28.54
Not qualified	4	57.12
Total	7	100.0

The TB patients who were unwilling to have DOT from FCHVs indicated their low qualification as the main reason.

Table no.3.13. Perception among TB patients on needs for mobilizing FCHVs for DOT

Need	Frequency	Percent
Training	13	61.9
Materials	2	9.5
Incentives	2	9.5
Don't know	4	19.0
Total	21	100.0

The most respondents indicated need of training for FCHVs to be effective DOT observers.

3.5.6. Findings of structured interview with FCHVs

General characteristics of FCHVs:

Mean age: 39 years (std.12.73)

Education levels:

38.5% illiterate, 38.5% just literate (non-formal education),

15.4% primary education and 7.7% lower secondary education.

Table no.3.14. Work experience

Duration of work	Frequency	Percentage
1-4 year	3	23.1
5-8 years	1	7.7
More than 8 years	9	69.2
Total	13	100.0

The majorities of the respondents have experience for more than eight years

Table no.3.15. Satisfaction of FCHVs

Satisfaction	Frequency	Percent
Very satisfied	2	15.4
Satisfied	10	76.9
Fair	1	7.7
Not satisfied	0	0
Total	13	100.0

All of the FCHVs responded that they are satisfied to work as volunteer.

Table no.3.16. Willingness to additional work

Willingness	Frequency	Percentage
Yes	13	100%
No	0	0%
Total	13	100%

100% of the FCHVs are willing to do additional work.

Table no.3.17. Knowledge about TB signs/symptoms

Knowledge	Frequency	Percent
Do not know	1	7.7
Can state 1-3 signs/symptoms)	8	61.5
Can state more than 3 signs/symptoms	4	30.8
Total	13	100.0

The majority of the FCHVs have some awareness on signs/symptoms of TB.

Table no.3.18. Awareness on TB patients in the community

Knowledge about TB Pts.	Frequency	Percent
Yes	7	53.8
No	6	46.2
Total	13	100.0

More than 50% of the FCHVs had awareness about TB patients in their community

Table no.3.19. Willingness to be DOT observer

Willingness	Frequency	Percentage
Yes	13	100%
No	0	0%
Total	13	100%

100% of the FCHVs were willing to be DOT observers for TB patients in their wards.

Table no. 3.20. Needs to work as effective DOT observer

Need for FCHVs	Frequency	Percent
Training	13	100
Material support	2	15.3
Supervision	10	76.9
Community support	2	15.3

Training and supervision are commonly expressed needs by FCHVs to be effective DOT observers.

3.6. PROFILE OF FCHV IN NEPAL

Literature review findings:

- FCHV program was started in Nepal in 1989
- There is one trained FCHV in every ward of all VDCs in the country and on population base, one FCHV in 150, 250 and 400 population in the mountainous, hilly and Terai regions respectively.
- Principally, the mothers group in each ward selects the FCHV but local leaders are also involved in the selection process.
- About 45,000 FCHVs are working at present all over the country.
- Mean age of FCHVs is 34 years.
- Different ethnic and social groups are represented by FCHVs, but the major three ethnic groups are the Brahmins, Chhetris and Tharus.

- By education level, 24% of them are illiterate and 76% literate (19.5% just literate, 20% primary level, 33.3% secondary, and 3.3% higher education). The educational level of FCHVs is much higher than the average educational level of women in Nepal.
- 97% of the FCHVs are married and have at least one child (mean no of children 3.2/women).
- 55% of the total households in the wards are visited by FCHVs.
- 97% of the people served by FCHVs are satisfied with the service they provide.
- 71.5% of the FCHVs are willing to do additional work.

Source: Assessment Report of FCHVs (1997), Valley Research Group.

- FCHV s have been successfully involved in National Vitamin A program in some of the Vitamin A deficient districts of the country, and for Acute Respiratory Infection (ARI) control program in four districts of the country.

Source: National Vitamin A program Report, 1999 and Report of ARI strengthening Program.

3.7. DISCUSSION

The in-depth interview with the NTC director showed that there is no policy limitation for studying an alternative strategy for delivering DOTS. Studying different kinds of alternative strategies is a current need of the NTP in Nepal. Mobilizing FCHVs for DOT was highly recommended by the NTP authorities.

The HP and SHP staffs expressed the need of an alternative strategy to deliver DOTS in the hilly area. They clearly indicated the need of decentralizing DOTS to the HP and SHP level respectively as the first strategy. At the same time, they accepted the idea to mobilize FCHVs as DOT observers. They accepted FCHVs as the most accessible and accountable volunteers to be mobilized as DOT observers in their respective wards. Although there was some concern on low the educational status and ignorance of some of the FCHVs, it was agreed that most of the FCHVs could serve as DOT observers once they are provided proper training, supervision and follow-up.

The majority of the TB patients (66.7%) in the assessment accepted FCHVs as DOT observers. Although 90% of the respondents were within one-hour travel distance, 71% of them felt inconvenient for DOT. This could be the reason that the majority of the TB patients accepted FCHVs as DOT observers. Familiarity and relationship of TB patients with FCHVs and previous contact with them for health problems was not significant to accept FCHVs as DOT observers. Some of the TB patients who were not familiar with FCHVs also were willing to have DOT if they could get it at their ward. From this, it can be said that accessibility to DOT is most important factor for the TB patients to accept FCHVs as DOT observers.

FCHVs seem to be ready to serve as DOT observers for TB patients in their wards. The majority of the FCHVs is experienced and is satisfied with their work. They have general awareness on TB signs/symptoms and the TB problems in their community. They expressed the willingness to do additional work. Although they expressed some possible problems to work as DOT observers and had expectation of

incentives, which are realistic, they all were willing to provide DOT to TB patients in their wards.

The FCHV profile also indicates that FCHVs could be appropriate volunteers to be mobilized for DOT. They are well-established volunteers group in the present health care system and are accepted by the local community. In the educational status, they are much better educated than the average women in the community. Their performance in the basic health care, the National Vitamin A program and Acute Respiratory Infection (ARI) control program in some districts of the country is quite satisfactory. Further, they are willing to serve as DOT observers. This indicates that FCHVs could be appropriate volunteers for the TB control program.

3.8. CONCLUSION

Although the findings of the rapid assessment cannot be generalized, it fulfills the purpose of the study. The findings are indicative that a decentralized and community-based approach of DOTS is feasible in Lalitpur District.

First of all, the operational policy of the NTP is flexible for studying alternative strategies of delivering DOTS. There is need of studying alternative approaches for DOT, which would be useful for NTP. It is also the policy of the NTP to involve the community through for TB control program.

Decentralization of DOTS services is a must to implement DOTS in the hilly area of the district. The HP and SHP staffs also seemed to be ready to conduct DOTS at the HP and SHP. The current operational policy of NTP offers scope to decentralize DOTS to the HP and SHP level. Further, the assessment indicates that FCHVs are accepted for DOT observers by the NTC authorities, the HP and SHP staffs, and the TB patients.

Further, FCHVs are willing to provide DOT to the TB patients in their wards. The majority of them are well-experienced volunteers. With proper training and supervision, they can provide DOT to TB patients. It is important to foresee some kind of incentive to encourage for their work.

In summary, it will be feasible to decentralize DOTS services to the HP and SHP level, and to implement community based DOT by mobilizing FCHVs.

3.9. LESSION LEARNED

1) Planning of the data exercise activities:

I learned from the exercise that sound planning of activities is very important. Many of my activities were changed because of the situation in the study area.

2) Development of data collection tools:

I felt the importance of proper development of data collection tools especially for fulfilling the objectives of the data exercise. It took me relatively long time for developing the tools, and I tended to collect more information than I needed. I realize that many of my questions in my quantitative tools were not much related to my objectives, and some questions were not specific. This made me remove some of the questions while doing the analysis.

3) Triangulation of methods:

From different methods used with FCHVs, I found it useful to cross check and confirm the findings. The qualitative methods were very useful to find out the perceptions of the respondents more clearly and in-depth.

3.10. LIMITATION OF THE STUDY

The study was a rapid assessment aiming at providing an overall analysis of the situation. Therefore, it is limited in depth.

3.10.1. Methodological limitations:

Study location:

The study focused on a limited rural hilly area of the district and the findings might be different in other social and geographical situations. Therefore, it might not be generalized for other parts of the district or the country.

Sample size:

Considering the limitation of time for study, purposive sampling technique was employed. The sample size was fairly small. Because of this, the study population doesn't represent the whole population, which limits the findings of the study for generalization. There could be some biases from the respondents because of the sampling techniques.

3.10.2. Limitation of resources:

Limited time was the most important factor, which influenced the methodological aspects of the study. Since some of the study locations were very remote, it took more time for me to travel. There was problem for communication to the field sites because of the remoteness. My lack of experience in research has some effect on the study as well.

3.10.3. Ethical limitations

Oral permission has been taken for taking notes and using the data, but no formal informed consent has been taken.

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