Chapter IV

Data exercise

4.1   Introduction :

The purpose of the study is to increase early case detection of Leismaniasis among risk group people particularly children and young adults of 5-20 years of age through mobilization of Community health worker for early diagnosis and prompt treatment with a reliable referral system in Harinagar PHC, Sunsari, Nepal. The screening service will be provided through trained health workers from September 1998 to 1999, (the period target of this study) for study purpose. Therefore, case detection training for control of diseases through increased case detection is the main component of the study. An impact evaluation will be done after completion of one year services to population at risk (Kala-azar clients), in Haranagar PHC, through trained health worker.

Impact Evaluation will mainly answer questions such as :

1. Are Kala-azar clients or people at risk satisfied with screening service provided to them by trained Health Workers?

2. Have they received enough information for prevention and control of diseases or for their detection them in time?

3. Are they really interested with screening methods?

4. Do they have their own methods to detect cases?

5. Focus group discussion, semi-structured interview with people at risk (Kala-azar clients), review of official statistics will be used to evaluate the impact of screening services.

For data collection, Panathnicom district in Chonburi Province was choosen because of enough number of beds (120) with an availablility all of conventional services. In Thailand, there are only 6 indigenous cases of Kala-azar which is scattered and difficult to trace. That is why medical personnel of this place are not much acquainted with the management of Leismaniasis, and so I could not find much of data exercise of Kala-azar in Thailand. With the permission from the Director of the hospital, I observed the existing facilities in the hospital for diagnosis and treatment. It has well equipped laboratories, but to my surprise, some important facilities like spleenic aspiration for diagnostic purpose was not there, and cases used to be referred to Chonburi provincial hospital, which is 26 km from district hospital and takes 30 minutes by car. There was a good referral system. Whenever a patients is referred, the communication was found made by telephone, for early acceptance of the patient. I conducted an in-depth interview with a medical personnel and with the director of the hospital in the same way, and with the same format I conducted in Nepal.

4.2   Objectives of Data-Exercise :

i)   To refine Data collection Methods.

ii) To Develop Data collection Instruments.

4.3   Data collection procedure :

District hospital and PHC in Sunsari district are governmental health facilities, and run by district level health officers. The ministry of health makes over all policy decisions in consultation with the Directorate of health services, and the Directorate of health services are responsible for management functions like supply of drugs, chemicals, and staff assignment. The first step was to ensure whether adequate facilities and care for diagnosis and treatment was available. Sensor has a 30-beded district hospital with a good diagnostic and treatment facilities to which complicated cases are referred from different community level health facilities. Besides this 30-beded hospital, it has 5 PACs and 9 health posts with 38 Sub-health posts. The district has a newly developed health institution which is an academic institution and of much help for peripheral institutions.

Cases referred for diagnosis and treatment and for management of complications to district hospital are from PACs and other health posts at community level. Prior to referral, a communication is made by telephone to avoid delay in providing care early (before) when reaching hospital. Before being referred cases are stabilized at PHC by providing conventional treatment.

Health center provides conventional antipyrexial care, IEC services, immunization services and anti-natal care. But the disease control part has not been found functioning properly because of lack of training to CHWs. Both primary and secondary data were collected during data collection phase in Nepal, since the disease is prevalent and a habboc in Nepal. In cases of primary data, an in-depth interview with the medical personnel, laboratory staff, and administrator, was conducted and observations of the case for diagnosis and treatment was carried out.

People found having an access to diagnosis and treatment, and proportions of all Kala-azar clients who need care anted reach facilities is also known. In order to obtain a clearer sense of how hospitals and health centers are functioning, the issues such as diagnostic and treatment patters in cases, availability of drugs, supplies, staffing pattern, and quality of diagnosis report were observed. In order to access the resource available for diagnosis and treatment of Kala-azar, its complications, reagents for diagnosis, etc. were conducted. A detailed observation of laboratory and its staffing pattern were observed. Most of the information were collected from the hospitals records.

Primary data :

In-depth interview of the medical personnel in the Sunsari district hospital and 3-PHCs were conducted. Major tasks of the interview was to establish whether the functioning facilities has only basic or developed diagnostic and treatment facilities.

Questions

1. Type of hospital.

2. Type of facilities.

3. Type of operating agencies.

4. Total diagnosed cases during 12 months period.

5. Total number of cases of Kala-azar in one year period.

6. Number of complicated cases in one year period.

7. Number of cured and mortality.

8. Which way it was confirmed (Serological, or Parasitological.)

9. Which services were performed during the last 12 months period.

    - Only diagnostic or treatment as well.

    - If diagnostic, what type (serological or pathological).

    - If treatment, with first line or Second line Anti-leismanial drugs.

    - Blood transfusion and others.

Similarly, some important questions were asked to the Director of the Sunsari district hospital :

10. Acceptance of the patients.

11. Mode of payments by the patients.

12. Existing man-power.

13. Referral system.

14. Number of deaths from Kala-azar in one year.

Primary data exercise was conducted with non-structured questionnaires (interview with an open dialogue) with doctors in district hospital, Who are in change of the PHC and with people at risk. In this group discussion and interview my main focus was to know the knowledge, attitude and practice of the health workers and of people at risk. So, it is a qualitative type of data exercise.

General outlines of question are as follows :

Q.1   Which group of patient you generally get for diagnosis and treatment?

The age group generally affected is between 5-20 years, in which males are affected more than females.

Q.2   What are the common causes of complications and mortality?

Severe anaemia, Severe wasting, Severe dysentry, Pneumonia, Renal failure, Myocardial degeneration, Severe bleeding, Toxaemia were the causes.

Q.3   What was catchment area of the district hospital?

Harinagar PHC-2 hours.

Madhuban PHC-2-3 hours.

Baklauri PHC-2 hours.

According to relatives, friends, quality of care is low and medical personnel are not available all the time at PHC. They feel scared of seeking help.

Q.4   What type of referral system exists between PHC and district hospital?

Those who can not be managed at PHC because of many reasons are being referred. Referral increases mortality if referred late or get service late.

Q.5   What measures be needed?

There should be a special care team comprising of madical officer, laboratory technician, VHW and others to look after Kala-azar cases for diagnosis and treatment.

Q.6   What do you think of death record from Leismaniasis?

In Nepal most of the death takes place out side of hospital, so it does not come in report of CHWs. Only few deaths occur in hospital, and reports available are under reprint.

4.4　Focus Group Discussion :

4.4.1　Field Preparation :

Target population of the study is children and young adults between 5-20 years of age. Harinagar was choosen for data exercise.

The necessary discussions and questions for focus group discussions were prepared before going to the field for data collection exercise. I visited this place twice. My first visit was on May 22, 1997 and my second visit was on May 30, 1997 for data exercise. I did my data exercise in Nepal. I visited place to take consent of the target populations after providing them with the information of thesis, purpose of data exercise, to find out the required number of the people for data exercise, place for discussion and other facilities to conduct data exercise. I met the chairman of VDC, who helped me to collect data comfortably.

4.4.2　Sampling :

The required number for focal group discussions were selected from risk group people in Harinagar PHC. There are 9 member of FGD.

4.4.3　Duration :

I visited Harinagar on May 30, 1997 for data exercise. Data collection was done in one day in Harinagar PHC for data exercise. The FGD with 9 members of the group were organised on May 30, 1997 at Harinagar.

4.4.4 Data collection at Harinagar, Nepal.

A. General characteristics of FGD Members :

They were 9 FGD members from Harinagar village and they are between the age of 15-20. In cases of minor children, their guardians were involved in the process. They were all strangers. They were all found involved in farming. Most of them were unmarried.

B. Field Activities :

With the help of one local CHWs as a moderator, one local teacher as a note taker and along with 9 people I gathered them all in Harinagar PHC for data collection purpose. There were 9 local people in the group. At the beginning after an introduction with group members, all of them were found taking it very lightly, while the moderator was asking questions for FGD. It was because they were found not accustomed to such things. But when detail information on disease, purpose of data collection and seriousness of disease was given, they then participated actively.

4.5 Limitations of Data Exercise :

The study is aimed at provision of screening services to the risk people at Harinagar PHC, Sunsari, Nepal. After one year of the intervention, evaluation will be done. Since a small group was taken for FGD, representativeness could not be ensured.

4.6   Findings :

A.   Knowledge of Leismaniasis,

The majority of the people attending FGD know about Leismaniasis. They know it as Kala-azar. Knowledge and attitudes regarding to Leismaniasis were assessed by the following questions :

1. Knowledge of Leismaniasis.

2. How do you learn about Leismaniasis?

3. Do you know signs and symptoms?

4. What do you do if ill with disease?

5. What do you do to get protected from disease?

6. Knowledge of use of mosquito nets.

7. Knowledge of medicine for Leismaniasis.

B.   Attitudes :

1. If family member suffers from Leismaniasis, what advice will you seek?

2. What do you do after you get disease?

3. How you advice Leismaniasis patients for treatment?

C.   Practice :

1. You use bed nets.

2. Reasons for not using bed nets.

3. Suggestions for Leismaniasis control.

D. Health Belief :

1. Leismaniasis is a severe disease.

2. Chance of contracting disease, if not using bed nets.

3. Living in a good house prevents Leismaniasis.

4. Going to hospital for treatment.

5. Traditional healers/doctors in hospital can treat Leismaniasis.

E. Health Workers Behavior :

During last 12 months health workers were not found visiting health facilities regularly. During last 12 months they were found dissatisfied with the behavior of health workers for not listening them well and politely.

F. Advantages and Disadvantages of Screening Methods :

They believe that screening methods enables people to have knowledge of identification of the disease and helps to provide early case detection of Leismaniasis. They are afraid of getting contract with the disease. At the same time not all cases are identified by CHWs and not all cases go to PHC/Hospital for treatment.

4.7 Discussion :

All people were seemed very co-operative because of new subject and knowledge on disease. The awareness about case detection were found to be not high,

because of they could not answer much for Leismaniasis. It is found that the main source of information on VL were from other members of the community. The other source of information were Nepali magazines, Newspapers, radio, and televisions. This suggest that though they have information through mass-media, they do not have such information from health workers. At the same time health workers were found spending less time with risk group people.

The follow-up visits play an important role, but most of the people were not found visiting hospital, when become sick with fever and with or without spleenomegaly. This indicates they were not given the knowledge and importance of follow-up visits.

4.8 Conclusion :

The method of choice among members of FGD were nothing but clinical examination of the suspect early. The intention of method depends upon early case detection with reliable referral to district hospital for prompt treatment. The side effects of the methods was an afraid among the members for treatment due to injection nature of drugs and its toxicity. Health workers behavior and time spent with target people seemed essential for early case detection and disease control. In cases of children below 10 years of age parents need to be provided with information.

4.9 Lessons learned from Focus Group Discussion :

From FGD, I learned that community people at risk of Kala-azar should be consulted not only on the nature of problems but sometimes they are quite helpful for solutions as well. FGD is essential for exploring their perceptions about VL. Thus FGD was incorporated in the proposal, which was not planned before data exercise. Although majority of community people were found illeterate, they were generally uncooperative. People generally know well whether a particular facility has competent, concerned staff and available key services. Hence, one should be hesitant to blame the community or culture for poor co-operation.

Other barriers of the early diagnosis and treatment are distance of health facilities, lack of transportation, transportation cost, negative staffs' attitude, loss of income, and patient and provider relationship.

It was found important that a quiet environment for having no disturbances from outside noise, along with homogenous group with minimum or no dominating attitude among group members should be an ideal situation for FGD. The competency of CHWs for providing service, regular interaction with people at risk, and a good co-operation was learnt to be included in semi-structured interview with guidelines questionnaires. The conclusion made from this focus group discussion is not applicable for study. So, lesson learnt from FGD is incorporated in the proposal.

Secondary Data Exercise :

A. Situation Analysis of Sunsari District in Nepal :

I have collected data from Sunsari district of Nepal and have utilized both primary and secondary data from Sunsari district for situation analysis and for the need of diagnostic and treatment services in Harinagar Primary health center. The population of Koshi zone is around 1,750,932 (CBS, 1991), and its area is about 9,669 sq. km. It consists of six district (Morang, Sunsari, Bhojpur, Dhankutta, Terrhathum, and Sankhuasabha). Sunsari district hospital is located in Sunsari district, which has a population of 645,643. Its area is 1,268 sq. km. The district has a male/female ratio of 51:49%, with a literacy rate of 40-45 : 18-25%. The district is composed of village development committees with poor people living in poor condition, and the main source of livelihood is farming.

B. Objectives :

The objectives of data collection was to observe the existing facilities in the district hospital and in PHC, and also to evaluate diagnostic and treatment facilities along with referral facilities for better diagnosis and treatment.

C. Data from Sunsari District Hospital :

Table2 : Situation of Diagnostic and Treatment Service at Present :

Service Facility	Service provider	Expected Service
District Level	Specialist--2 Physicians	DAT Test and
	Medical officer-----3	B. M. Test.
	Laboratory technician --3	
	Medical officer----------3	
	Nursing staff-------------12	
	Radiographer------------1	
	Dark room Asstt.--------2	
	AHW--------------------6	
	Lab. Technician---------1	
	Lab. Asstt. -------------2	
	Peon + Sweeper ------------12 +4	
	Adm. staff--------------6	
	Total---------------- 54	

Table 3 : **At Primary Health Center Staffing Pattern :**

Service facility	Service Provider	Services provided
PHC	Medical officer-----1	
	Staff nurse-----------1	
	Health Asstt--------1	
	AHW----------------2	
	ANM----------------3	
	Lab. Asstt------------1	
	VHW----------------1	
	Peon + sweeper--------------2	
	Total---------------------------12	

Table 4 : **PHC, Of Sunsari District 1996 has 3 Bed Health Facilities :**

Total cases of fever -----200 per month
with spleenomegaly-------40-45
without spleenomegaly----150-160
Suspected cases--------------40-45
Referred cases----------------40-45
Fever with spleenomegaly-------20-25%
Fever without spleenomegaly-------75-80%
Source---PHC record, 1996, Harinagar, Sunsari, Nepal.

Almost 180-200 cases of fever were found attending PHC where 20%-25% were suspected for Kala-azar and referred to district hospital for diagnosis and treatment. With the rest, 75-80% cases were treated at PHC with symptomatic treatment and only 3 cases were referred for suspicion of malignancy. The recorded showed that the causes of death were report due to complications from disease, late access to district hospital, Inadequate treatment, and may be because patient did not turn up for lack of money.

Similarly data collection from district hospital register is as follows :

The district hospital has data recorded from different institutions of the district and of those who come directly to district hospital for treatment.

Table 5 :   District Hospital Sunsari :

Health facilities	1994		1995		1996	
	Cases	Death	Cases	Death	Cases	Death
Inarwa	11	0	9	0	4	0
Baklauri	62	9	58	6	59	9
Madhuban	35	4	28	2	31	3
Dewanganj	47	5	42	7	38	5
Bhutaha	41	7	38	2	27	2
Chatra	3	0	1	0	0	0
Sitaganj	7	2	5	1	2	0
Harinagar	37	6	55	9	57	11
Madheli	14	3	12	4	16	2
Total-------	265	37	249	31	241	33
CFR -----	13.9%				12.4%	13.6%

Age group affected -10, 14 and 19 years of males are mostly affected. Diagnosis confirmed by Bone-Marrow smear examination for, Treatment provided-First line of treatment is provided, but 13 cases were found treated by second line of drugs.

So, after observing the situation of PHC at Harinagar, Nepal, it was found that though there is a laboratory facility at PHC, but laboratory assistant is not trained enough to conduct specilised tests for diagnosing Kala-azar PHC. The Case Fatality Rate has been found very high because these are no diagnostic facilities, CHWs are not motivated for early case detection and on the top of that the poverty prevents people from early access to health facilities, leading to complications and death. So, cases are referred to district hospital to reduce mortality. At the same time it was found that though district hospital has good set-up for diagnosing cases of Kala-azar, even in certain cases like spleenic aspiration, which needs specialised technique and so, cases are referred to zonal hospital.

Conclusion :

In Nepal, at PHC level, though there are facilities for basic health services, which is not adequate for diagnosis and treatment of a case of Leismaniasis, the number of cases along with mortality was found very high because of lack of knowledge to people and health workers for diagnosis and treatment of cases of Leismaniasis. Some times, a case of Leismaniasis was confused with Malignancy, and was found treated improperly, leading to death and disabilities. PHC has no transportation facility, hence, referral was some times seen as a problem to reach district hospital in time. So, stress has been given

to early case detection and prompt treatment, through mobilization of CHWS and developing a reliable referral system to reduce mortality from Leismaniasis.